

BASELINE ECOLOGICAL HABITAT ASSESSMENT

FOR THE DEVELOPMENT OF VEHICLE DEALERSHIPS AND FACILITIES ON PORTION 59 OF THE FARM BULTFONTEIN 533 JQ

Proponent:
4 Wheel Drive Property Holdings (Pty) Ltd
Project Reference:
21860 – Portion 59 Bultfontein 533
Report Date:
October 2020
Report Reference:
21860_Ecol_1

DOCUMENT CONTROL

Project Name	Portion 59 Bultfontein 533
Report Title	Baseline Ecological Habitat Status Assessment Report
Authority Reference Number	GAUT 002/20-21/E2591
Report Status	Final

Applicant Name	4 Wheel Drive Property Holdings (Pty) Ltd.

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DOCUMENT PROGRESS

Distribution List

Date	Report Reference Number	Document Distribution	Number of Copies
30/09/20	21860_Ecol_0	Internal	Word Doc

Amendments on Document

Date	Report Reference Number		Description of Amendment
30/09/20	21860_Ecol_0 21860_Ecol_00		Minor Changes

DECLARATION OF INDEPENDENCE

Specialist Name	Mr. A.E. van Wyk	
Declaration Independence of Independence	declare, as a specialist appointed in terms of the National Environment Management Act (Act No 108 of 1998) and the associated 20° Environmental Impact Assessment (EIA) Regulations, that I: I act as the independent specialist in this application; I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant; I declare that there are no circumstances that may compromise my objectivity in performing such work; I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity; I will comply with the Act, Regulations and all other applicable legislation; I have no, and will not engage in, conflicting interests in the undertaking of the activity; I undertake to disclose to the applicant and the competent authori all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority; All the particulars furnished by me in this form are true and correct and I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.	
Date	20201007	

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EXECUTIVE SUMMARY

Prism Environmental Management Services was appointed by 4 Wheels Drive Property Holdings (Pty) Ltd to undertake an Ecological Habitat Assessment to determine the impacts of proposed development of Portion 59 Bultfontein 533 JQ and associated services and roads on surrounding properties on the terrestrial ecology of the area linked to the. This is to specifically inform the Basic Assessment (BA) process and Water Use License Application (WULA) for the mentioned development.

The proposed development is located at 25° 57′50.69" S: 27°55′25.12" E in Portion 59 Bultfontein within the City of Johannesburg, Gauteng Province.

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1 INTRODUCTION

Prism Environmental Management Services was appointed by 4 Wheel Drive Property Holdings (Pty) Ltd to undertake an Ecological Habitat Assessment to determine the impacts of proposed development of Portion 59 Bultfontein 533 JQ and associated services and roads on surrounding properties on the terrestrial ecology. This is to specifically inform the Basic Assessment (BA) process and Water Use License Application (WULA) for the mentioned development.

1.1 Project Description

4 Wheel Drive Property Holdings (Pty) Ltd is intending to develop a truck dealership and facilities on Part of 59 of the Farm Bultfontein No. 533 J.Q.

In addition, the proposed development also involves the provision of all necessary services to the development including water, sanitation, stormwater and internal roads.

1.2 Study Site Location

The proposed development is located at 25° 57'50.69" S: 27°55'25.12" E in Portion 59 of the Farm Bultfontein within the City of Johannesburg, Gauteng Province (here after referred to as the study site/s).

(Figure 1-1: Locality Map of study area for the proposed development and Figure 1-2: Aerial Map of study area for the proposed development.

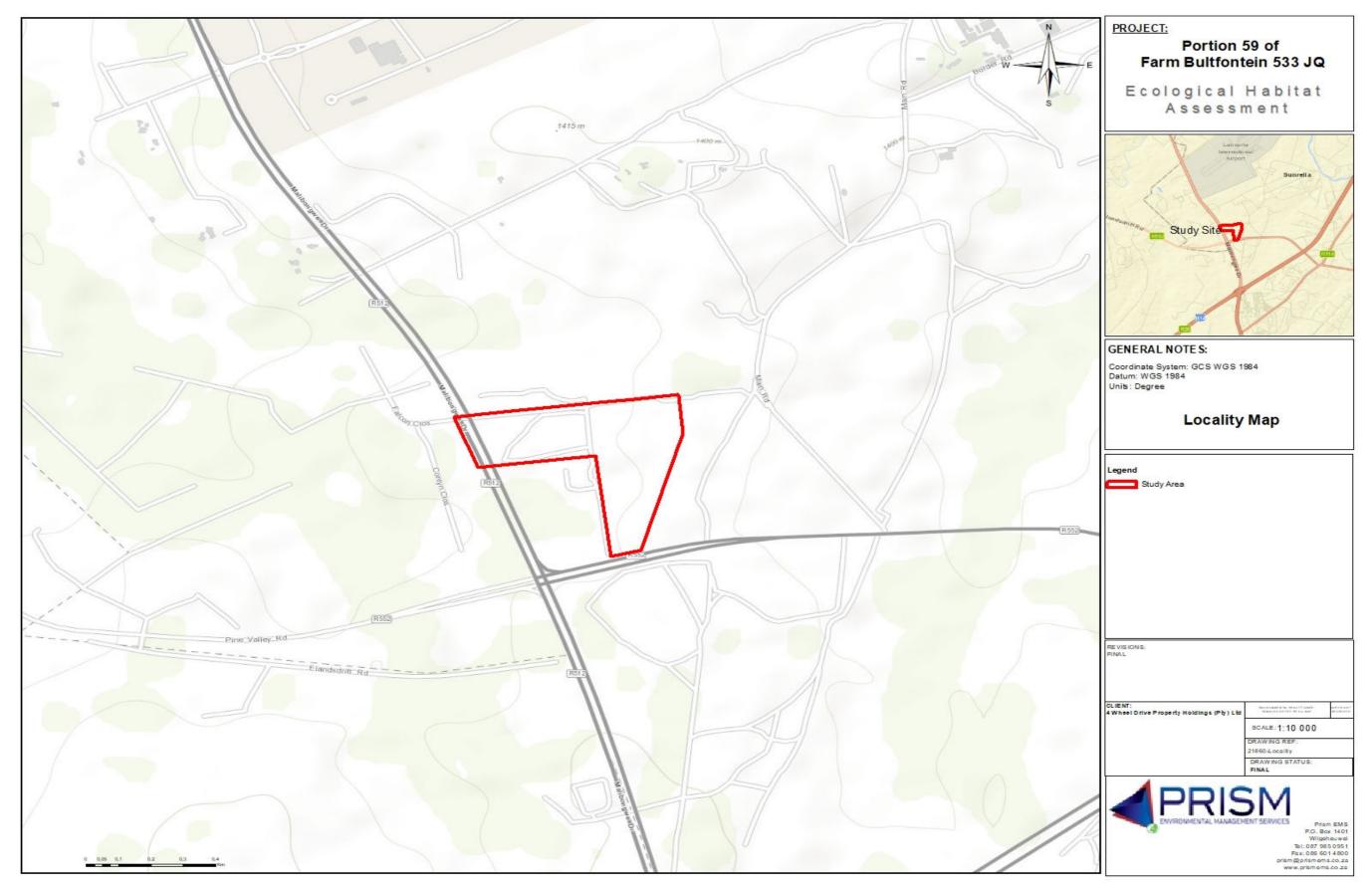


Figure 1-1: Locality Map of study area for the proposed development

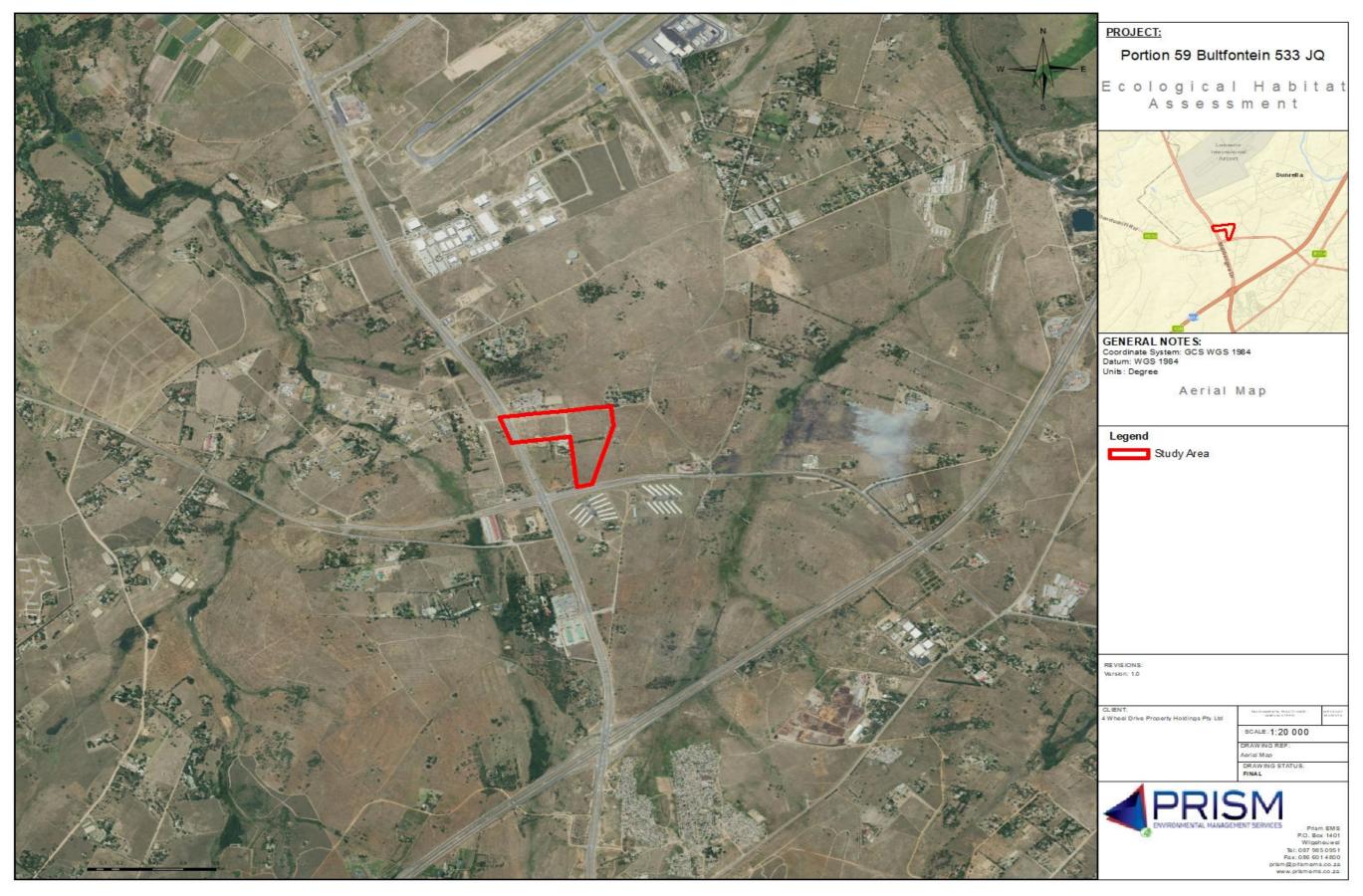


Figure 1-2: Aerial Map of study area for the proposed development

1.3 Study Limitations

All information acquired for the Ecological Habitat Assessment was assumed to be correct. This includes all GIS data and website information used to determine all previous recordings of Fauna and Flora species possible to be found on site. The study was limited to a snapshot view during one site visit and aimed only to confirm the desktop assessment. No detailed plant species lists, or faunal trapping was therefore undertaken as the site is disturbed, and alterations has impacted the site.

1.4 Scope and Purpose

The aim of this study was to undertake a desktop description of the baseline receiving environment to identify and potentially sensitive receptors from an ecological perspective. This was followed by a short site assessment to confirm desktop information. This, specifically to inform the BA process and Water Use Registration for the proposed activities.

1.5 Overview of Specialist

Prism EMS has conducted the required ecological habitat assessment report to inform the BA Process and Water Use Registration for the proposed activities. The team under lead of Mr D. Botha has conducted the assessment. The details of the team are tabularised in **Table 1-1**.

Table 1-1: Details of Specialist

Specialist Team				
Designation	Name	Qualification	Professional	Role
			Registration	
Ecologist	Mr. A.E. van Wyk	B.Sc. Hons. Zoology (current) B.Sc. Environmental & Biological Sciences 5 Years' Experience	Cand.Sci.Nat.	Field Assessment and Reporting
Principle EAP and Biodiversity and Wetland Specialist	Mr. D. Botha	M.A. Environmental Management B.A. Hons. Geography & Environmental Management, B.A. Humanities Post Higher Education Diploma Wetland and Riparian Delineation (DWAF Accredited Short Course) Soil Classification and Wetland Delineation - Short Course – Terrasoil Science Tools for Wetland Assessment – Rhodes University SASS5 Aquatic Biomonitoring Training – Department of Water Affairs, Ground Truth Wetland Plant Taxonomy – Water Research Commission Hydropedology and Wetland Functioning – Water Business Academy / Terra Soil Science 17 Years' Experience	Pr.Sci.Nat. (119979)	Peer Review
Senior Environmental Practitioner	Ms. V Stippel	MSc. Animal, Plant and Environmental Sciences BSc. Honours. Ecology, Environment and Conservation BSc. Zoology and Archaeology South African Council for Natural Scientific Professions (SACNASP) registered Scientist Pr.Sci.Nat. (116621) Registered Member of Environmental Assessment Practitioners Association of South Africa (EAPASA)(2019/175) Member of the International Association for Impact Assessors (IAIAsa) (1653) 9 years' experience	Pr.Sci.Nat. (116221)	Peer Reviewer

2 REPORT OUTLINE

Appendix 6 of GN 982 of 4 December 2014 provides the requirements for specialist reports undertaken as part of the environmental authorisation process. In line with this, Table 2-1 provides an overview of Appendix 6 together with information on how these requirements have been met.

Table 2-1: Specialist Report Requirements.

Requirement from Appendix 6 of GN 982 of 4 December 2014	Chapter
(a) Details of -	
(i) the specialist who prepared the report; and	Section 1.5
(ii) the expertise of that specialist to compile a specialist report	
(b) Declaration that the specialist is independent in a form as may be specified	Declaration of
by the competent authority	Independence
(c) Indication of the scope of, and the purpose for which, the report was	Executive Summary
prepared	
(d) Date and season of the site investigation and the relevance of the season	Section 4.3
to the outcome of the assessment	
(e) Description of the methodology adopted in preparing the report or carrying	Section 4
out the specialised process	
(f) Specific identified sensitivity of the site related to the activity and its	Section 9
associated structures and infrastructure	
(g) Identification of any areas to be avoided, including buffers	Section 9
(h) Map superimposing the activity including the associated structures and	Section 8
infrastructure on the environmental sensitivities of the site including areas to	
be avoided, including buffers	
(I) Description of any assumptions made and any uncertainties or gaps in	Section 1.3
knowledge	
(j) Description of the findings and potential implications of such findings on	Section 8
the impact of the proposed activity, including identified alternatives on the	
environment	
(k) Mitigation measures for inclusion in the EMPr	Section 10
(I) Conditions for inclusion in the environmental authorisation	Section 10
(m) Monitoring requirements for inclusion in the EMPr or environmental	Section 10
authorisation	
(n) Reasoned opinion -	Section 11
(i) as to whether the proposed activity or portions thereof should be	
authorised; and	

Requirement from Appendix 6 of GN 982 of 4 December 2014	Chapter
(ii)if the opinion is that the proposed activity or portions thereof should	
be authorised, any avoidance, management and mitigation measures	
that should be included in the EMPr, and where applicable, the	
closure plan	
(o) Description of any consultation process that was undertaken during the	Section 4.5
course of preparing the specialist report	
(p) A summary and copies of any comments received during any consultation process	(N/A)
and where applicable all responses thereto; and	
(q) Any other information requested by the competent authority	(N/A)

3 LEGISLATION AND GUIDELINES

A summary of the applicable legislation and guidelines that have guided this ecological assessment are provided below. Please note that this list is not exhaustive but aims to provide a summary of the most pertinent legislative aspects.

- The National Environmental Management Act (NEMA) No. 107 of 1998): Environmental Impact Assessment Regulations, 2014.
- The National Environmental Management: Biodiversity Act (NEM:BA) No. 10 of 2004: specifically, the management and conservation of biological diversity within the RSA and of the components of such biological diversity;
- Alien and Invasive Species Regulations, 2014 (GN.R. 598 of 1 August 2014)
- Alien and Invasive Species Lists, 2016 (GN 864 of 29 July 2016)
- National Environmental Management: Protected Areas Act, 2003 (Act 57 of 2003);
- National Environmental Management: Waste Act, 2008 (Act 59 of 2008);
- National Water Act, 1998 (Act 36 of 1998);
- National Veld and Forest Fire Act (101 of 1998);
- Environmental Conservation Act, 1989 (ECA), (Act no. 73 of 1989);
- National Forests Act, 1998 (Act 84 of 1998), specifically with reference to Protected Tree species.
- National Protected Areas Expansion Strategy (NPAES)
- South Africa's National Biodiversity Strategy and Action Plan (NBSAP);
- National Spatial Biodiversity Assessment (NSBA); and
- National Biodiversity Assessment (NBA)
- GDARD Conservation Plan (C-Plan) Version 3.3.
- GDARD Requirements for Biodiversity Assessments (Version 3, 2014a)
- Gauteng Department of Agriculture and Rural Development (GDARD): Checklist for Biodiversity Assessments.

4 METHODOLOGY

4.1 Desktop Assessment

4.1.1 Geographic Information System

In order to determine the potential environmental sensitive's, a desktop GIS exercise was undertaken, and existing data layers were incorporated into a GIS for the study. All Mapping was performed using open source GIS software (Arc GIS).

4.1.2 Desktop Assessment of Species of Conservation Concern

The current literature was utilised to gain an understanding of the environmental influences presently affecting the site. General information on the veld type, climate, geology and soils and current activity on the site was acquired prior to the field assessment of the property.

A literature review on the habitat of red data listed species with a potential distribution on site was conducted prior to the field assessment to gain a thorough understanding of the habitat type occupied for these species. In addition, a list of potential sensitive species located on the site was requested by the GDARD Biodiversity section.

In addition, the National Screening Tool was also utilized to determine any potential sensitivities in the study site.

4.2 Literature Review

Flora Assessment

The South African National Biodiversity Institute (SANBI) provides a database, namely the Botanical Database of Southern Africa (BODATSA). The database was used to access distribution records on southern African plants. A list of flora species that could potentially occur within the study area was compiled using historically recorded data. The same method was used for any expected red data and species of conservation concern (SCC).

Relevant field guides were used for other required information with regards to the Flora found on the study site.

Mucina and Rutherford (2018) was used to provide information on the vegetation type and the SANBI website (SANBI, 2017) was consulted to provide the current conservation status of each South African plant species.

Avifauna Assessment

A desktop study was undertaken to determine which bird species could potentially occur in the proposed study area, using data from the South African Bird Atlas Project (SABAP2). SABAP 2 maps the distribution and relative abundance of birds in Southern Africa which includes South Africa and other neighboring countries. Data of bird species are recorded based on records per geographical pentad (5-minute X 5 minute). A list of bird species potentially occurring within specific pentad (2555_2755) in which the study area falls was obtained from SABAP 2 data. This approach was used to ensure that all species potentially occurring on site are identified, whether, resident, vagrant or migratory.

Mammal Assessment

A list of mammal species potentially occurring on site was created using their known distributions and habitat suitability, sourced from online, literature sources and the Gauteng Department of Agriculture and Rural development (GDARD) Biodiversity section. The species list was generated as per the Quarter Degree Grid Cell (QDGC- 2527DD) and obtained from the Virtual Museum website. This also includes the expectancy of red data and species of conservation concern (SCC).

Herpetofauna Assessment

The online FitzPatrick Institute of African Ornithology - Virtual Museum website was used to determine potential reptiles and amphibian observations within the 2527DD QDGC.

4.3 Site Investigation

The details of the site investigation undertaken are provided in Table 4-1.

Table 4-1: Site Investigation Details

	Site Investigation
Date	September 2020
Season	Summer

4.4 Impact Assessment Methodology

As standardized impact assessment methodology was utilized to determine the impacts associated with the proposed development. A summary of this methodology is provided below.

The **significance** of an impact is defined as the combination of the **consequence** of the impact occurring and the **probability** that the impact will occur. The nature and type of impact may be direct or indirect and may also be positive or negative, refer to w for the specific definitions.

Table 4-2: below for the specific definitions.

Table 4-2: Nature and type of impact.

	Nature and Type of Impact:					
	Direct	Impacts that are caused directly by the activity and generally occur at the same				
time and place as the activity						
T:	Indirect or induced changes that may occur as a result of the activity. These include all impacts that do not manifest immediately when the activity is undertaken, or which occur at a different place as a result of the activity					
IMPACT	Cumulative	Those impacts associated with the activity which add to, or interact synergistically with existing impacts of past or existing activities, and include direct or indirect impacts which accumulate over time and space				
	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes will benefit significantly, and includes neutral impacts (those that are not considered to be negative					
Negative Impacts affect the environment in such a way that natural, cultural						
	functions and processes will be comprised					

Table 4-3: presents the defined criteria used to determine the **consequence** of the impact occurring which incorporates the extent, duration and intensity (severity) of the impact.

Table 4-3: Consequence of the Impact occurring.

	Extent of Impact:				
	Site	Impact is limited to the site and immediate surroundings, within the study site boundary or property (immobile impacts)			
	Neighbouring	Impact extends across the site boundary to adjacent properties (mobile impacts)			
	Local	Impact occurs within a 5km radius of the site			
	Regional	Impact occurs within a provincial boundary			
	National	Impact occurs across one or more provincial boundaries			
		Duration of Impact:			
	Incidental	The impact will cease almost immediately (within weeks) if the activity is stopped, or may occur during isolated or sporadic incidences			
NCE	Short-term	The impact is limited to the construction phase, or the impact will cease within 1 - 2 years if the activity is stopped			
CE	Medium-term	The impact will cease within 5 years if the activity is stopped			
CONSEQUENCE	Long-term	The impact will cease after the operational life of the activity, either by natural processes or by human intervention			
COV	Permanent	Where mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient			
	Intensity or Severity of Impact:				
	Low	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are not affected			
	Low-Medium	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are modified insignificantly			
	Medium	Impacts affect the environment in such a way that natural, cultural and/or social functions and processes are altered			
	Medium-High	Impacts affect the environment in such a way that natural, cultural and / or social functions and processes are severely altered			
	High Impacts affect the environment in such a way that natural, cultural and / o social functions and processes will permanently cease				

The probability of the impact occurring is the likelihood of the impacts actually occurring, and is determined based on the classification provided in Table 4-4.

Table 4-4: Probability and confidence of impact prediction.

	Probability of Potential Impact Occurrence:				
_	The possibility of the impact materialising is very low either because of design				
PROBABILIT	or historic experience				
B	Possible	The possibility of the impact materialising is low either because of design or			
historic experience					
20	Likely	There is a possibility that the impact will occur			
PF	Highly Likely There is a distinct possibility that the impact will occur				
Definite The impact will occur regardless of any prevention measures					

The **significance** of the impact is determined by considering the consequence and probability without taking into account any mitigation or management measures and is then ranked according to the ratings listed in Table 4-5:

Table 4-5: Significance rating of the impact.

	Significance Ratings:						
	Low	Neither environmental nor social and cultural receptors will be adversely affected					
		by the impact. Management measures are usually not provided for low impacts					
	Low-	Management measures are usually encouraged to ensure that the impacts					
3	Medium	remain of Low-Medium significance. Management measures may be proposed					
≥		to ensure that the significance ranking remains low-medium					
્ટ્ર	Medium	Natural, cultural and/or social functions and processes are altered by the					
Medium remain of Low-Medium significance. Management measures may be to ensure that the significance ranking remains low-medium Medium Natural, cultural and/or social functions and processes are altered by tactivities, and management measures must be provided to reduce the significance rating Medium-Natural, cultural and/or social functions and processes are altered significance. Management measures may be to ensure that the significance ranking remains low-medium Natural, cultural and/or social functions and processes are altered significance.							
\ <u>\(\C_1\)</u>	significance rating						
SK	Medium- Natural, cultural and/or social functions and processes are altered significan						
	High the activities, although management measures may still be feasible						
	High Natural, cultural, and/or social functions and processes are adversely affected						
the activities. The precautionary approach will be adopted for all high							
	impacts and all possible measures must be taken to reduce the impact						

The level of confidence associated with the impact prediction is also considered as low, medium or high (Table 4-6:).

Table 4-6: Level of confidence of the impact prediction.

ш	Level of Confidence in the Impact Prediction:		
\mathbf{z}	Low	Less than 40% sure of impact prediction due to gaps in specialist knowledge	
DEN		and/or availability of information	
Medium Between 40 and 70% sure of impact prediction due to limited s			
×	knowledge and/or availability of information		
High Greater than 70% sure of impact prediction due to outcome of speci			
0	knowledge and/or availability of information		

Once significance rating has been determined for each impact, management and mitigation measures must be determined for all impacts that have a significance ranking of Medium and higher in order to attempt to reduce the level of significance that the impact may reflect.

The EIA Regulations, 2014 specifically require a description is provided of the degree to which these impacts:

can be reversed;

- · may cause irreplaceable loss of resources; and
- can be avoided, managed or mitigated.

Based on the proposed mitigation measures, the mitigation efficiency is also determined (Table 4-7:) whereby the initial significance is re-evaluated and ranked again to effect a significance that incorporates the mitigation based on its effectiveness. The overall significance is then re-ranked, and a final significance rating is determined.

Table 4-7: Mitigation efficiency.

	Mitigation Efficiency				
	None	Not applicable			
l ≳ ≿	Very	Where the significance rating stays the same, but where mitigation will reduce			
	Low	the intensity of the impact. Positive impacts will remain the same			
%	Low	Where the significance rating reduces by one level, after mitigation			
MITIGATION	Medium	Where the significance rating reduces by two levels, after mitigation			
N N	High	Where the significance rating reduces by three levels, after mitigation			
	Very High	Where the significance rating reduces by more than three levels, after mitigation			

The reversibility is directly proportional the "Loss of Resource" where no loss of resource is experienced, the impact is completely reversible; where a substantial "Loss of resource" is experienced there is a medium degree of reversibility; and an irreversible impact relates to a complete loss of resources, i.e. irreplaceable (Table 4-8:).

Table 4-8: Degree of reversibility and loss of resources.

S		Loss of Resources:				
RESOURCE	No Loss	No loss of social, cultural and/or ecological resource(s) are experienced. Positive impacts will not experience resource loss				
ESO	Partial	The activity results in an insignificant or partial loss of social, cultural and/or ecological resource(s)				
OF	Substantial	The activity results in a significant loss of social, cultural and/or ecological resource(s)				
SSO.	Irreplaceable	The activity results in the complete and irreplaceable social, cultural and/or ecological loss of resource(s)				
7 %	Reversibility:					
REVERSABILITY	Irreversible	Impacts on natural, cultural and/or social functions and processes are irreversible to the pre-impacted state in such a way that the application of resources will not cause any degree of reversibility				
	Medium Degree	Impacts on natural, cultural and/or social functions and processes are partially reversible to the pre-impacted state if less than 50% resources are applied				
	High Degree	Impacts on natural, cultural and/or social functions and processes are partially reversible to the pre-impacted state if more than 50% resources are applied				
DEGREE	Reversible	Impacts on natural, cultural and/or social functions and processes are fully reversible to the pre-impacted state if adequate resources are applied				

4.5 Consultation Process

Consultation is being undertaken by Prism EMS (EAP) as part of the overall environmental authorization process. In addition, as part of this study, the Ecological Specialist consulted with:

- The EAP:
- GDARD Biodiversity Section; and

5 FIELD SURVEY METHODS

5.1 Flora

A site assessment was conducted on the 18th of September 2020 where the fauna and flora aspects were evaluated. As per GDARD minimum requirements for Biodiversity studies, survey was conducted during the summer.

A site reconnaissance was done, and photos were taken of the current status of the study area in terms of vegetation and type of habitat. During the site assessment, a focus was placed on the presence or observations of species of conservation concern, threatened and protected species.

5.2 Avifauna

During the site assessment in September 2020, bird species were identified and recorded using observation, sound and signs such as nests, eggs and fallen off feathers.

5.3 Mammals

The method used to record possible sighting or presence of mammal species on site, was done by visual and indirect observations, such as footprints, droppings, and sculls. Photographs were taken to identify any potential habitat suitable for certain mammal species.

5.4 Herpetofauna

As per the mammal survey, visual and indirect observations were used to determine potential species on site (such as shed skins). Photos were taken if anything was found. No species were caught and removed from the surveyed site. No trapping methods were used for reptile/amphibian records because of the limited timeframe for the specific survey.

6 SPECIES OF CONSERVATION CONCERN

Species of conservation concern are species that have a high conservation importance in terms of preserving South Africa's high floristic diversity and include not only threatened species, but also those classified in the categories Extinct (EX) Extinct in the Wild (EW), Regionally Extinct (RE), Near Threatened (NT), Critically Rare, Rare, Declining and Data Deficient - Insufficient Information (DDD).

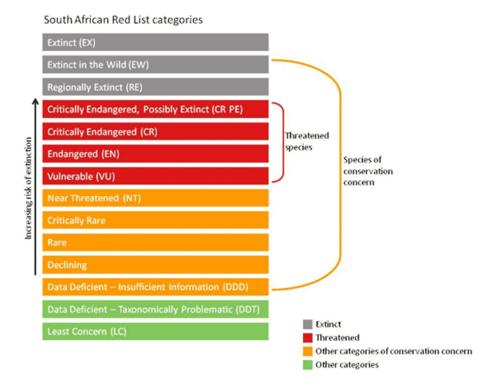


Figure 6-1: Species of Conservation Concern categories

The Red lists of threatened species are provided by the International Union for Conservation of Nature (IUCN), which provides the global conservation status of terrestrial fauna and flora. The regional conservation status is more recent than the global status; therefore, different sources were used for each group study.

The conservation status categories defined by the IUCN are the "threatened" and "near-threatened" categories defined as follows:

Threatened

• Critically Endangered (CR):

Critically Endangered refers to species facing an **extreme high** risk of extinction in the wild.

Endangered (EN)

Endangered species facing a very high risk of extinction in the wild.

Vulnerable (VU)

Vulnerable species facing a **high** risk of extinction in the wild.

❖ Near Threatened

Near Threatened species close to qualify for or is likely to qualify for a threatened category in the near future.

7 RESULTS AND FINDINGS

7.1 Desktop Assessment

7.1.1 Geographical Information System and Literature

After determining the potential environmental sensitive's, using a desktop GIS exercise, and existing data layers, the following GIS Maps where compiled; Figure 7-1: Gauteng Conservation Plan and Hydrological Map, Figure 7-2: Important Bird and Protected Areas Map and lastly Figure 7-3: Vegetation Map.

a) Gauteng Conservation Plan and Hydrological features

The Gauteng Conservation Plan v3.3 (GDARD, 2011) was used to determine the conservation status the study site falls under. According to Figure 7-1: Gauteng Conservation Plan and Hydrological Map, Portion 59 of the Farm Bultfontein 533 JQ fall within an Important Area of the Gauteng C-Plan. The site is not situated within close proximity of a river, dam or any other watercourse. The closest river (Crocodile River) is situated about 3km north-west from the site.

b) Protected Areas & Important Bird Areas

Protected Areas are those areas included in the South African Protected Areas Database (SAPAD). This database is maintained by the Department of Environment, Forestry and Fisheries (DEFF) as required by the National Environmental Management: Protected Areas Act (Act 57 of 2003). Important Bird and Biodiversity Areas (IBAs), as defined by BirdLife International, 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 nationally through multi-stakeholder processes using globally standardised, quantitative, and scientifically agreed criteria. Essentially, these are the most important sites for conserving.

The study area does not fall within a Protected Area. However, it does fall within one of the Important Bird Area as seen in Figure 7-2: Important Bird and Protected Areas Map). The site falls within the Malgaliesberg IBA. The Protected Area and IBA found in and around the study site are as follows (Figure 7-2: Important Bird and Protected Areas Map)

Protected Areas

- The Fossil Hominid Sites of South Africa: Cradle of Humankind (Approximately 6km from the study site).
- The Diepsloot (Northern Farm) Nature Reserve (Approximately 3km from study site)

Important Bird Area

Magaliesberg

Although the study area falls within the Important Area, the study area might not pose no threat linked to the IBA area itself. Mucina & Rutherford (2010:69) mentions that the most triggered bird species in this area is the globally threatened (Regional – Vulnerable) Cape Vulture (*Gyps coprotheres*), which relies on the Magaliesberg mountain range as nesting habitat. Species of conservation concern (SCC) also found in this IBA includes; Secretary Bird (*Sagittarius serpentarius*), Lanner Falcon (*Falco biarmicus*), Half-collared Kingfisher (*Alcedo semitorquata*), African Grass Owl (*Tyto capensis*), African Finfoot (*Podica senegalensis*) and the Verreauxs' Eagle (*Aquila verreauxii*).

c) Vegetation type

Figure 7-3: Vegetation Map, indicates that the study area in situated within an endangered vegetation type called the Egoli Granite Grassland (Mucina & Rutherford, 2010).

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The Egoli Granite Grassland is described as a moderate undulating landscape on the Highveld plateau supporting tall and usually dominated by species such as *Hyparrhenia hirta*. Some wood like species occurs on rocky outcrops areas which also includes a high diversity of other wood like species in the form of scattered shrubs and individual small trees (Musina & Rutherford, 2010).

Table 7-1: Attributes of the Egoli Granite Grassland regional vegetation unit

Name of vegetation type	Egoli Granite Grassland
Code as used in the Book (Mucina & Rutherford, 2010)	Gm10
Conservation Target (percent of area) from NSBA	24%
Protected/Conserved (percent of area) from NSBA	3%
Remaining Natural Area (percent of area) from NSBA	38%
Description of conservation status from NSBA	Endangered
Description of the Protection Status from NSBA	Hardly Protected
Area (km²) of the full extent of the Vegetation Type	1090
Name of the Biome	Grassland Biome

Table 7-2: Characteristic Plant Species of the Egoli Granite Grassland

Plant Form	Species
Graminoids	Aristida canescens, A. congesta, Cynodon dactylon, Digitaria
	monodactyla, Eragrostis capensis, E. chloromelas, E. curvula, E.
	racemosa, Heteropogon contorus, Hyparrhenia hirta, Melinis repens
	subsp. repens, Monocymbium ceresiifrome, Setaria sphacelata, Themeda
	triandra, Tristachya leucothrix, Andropogon eucomus, Aristida
	aequiglumis, A. diffusa, A. scabrivalvis subsp. Borumensis, Bewsia biflora,

	Brachiaria serrate, Bulbostylis burchellii, Cymbopogon caesius, Digitaria					
tricholaenoides, Diheteropogon amplectens, Eragrostis gu						
	sclerantha, Panicum natalense, Schizachyrium sanguineum, Setaria					
	nigrirostris, Tristachya rehmannii, Urelytrum agropyroides.					
Herbs	Acalypha angustata, A. peduncularis, Becium obovatum, Berkheya					
	insignis, Crabbea hirsute, Cyanotis speciosa, Dicoma anomala,					
	Helichrysum rugulosum, Justicia anagalloides, Kohautia amatymbica,					
	Nidorella hottentotica, Pentanisia prunelloides subsp. latifolia,					
	Pseudognaphallium luteo-album, Senecio venosus.					
Geophytic Herbs	Cheilanthes deltoidea, C. hirta					
Small Tree	Vangueria infausta					
Tall Shrub	Rhus pyroides					
Low Shrub	Anthospermum hispidulum, A. rigidum subsp. pumilum, Gnidia capitata,					
	Helichrysum kraussii, Ziziphus zeyheriana					
Succulent Shrub	Lopholaena coriifolia					

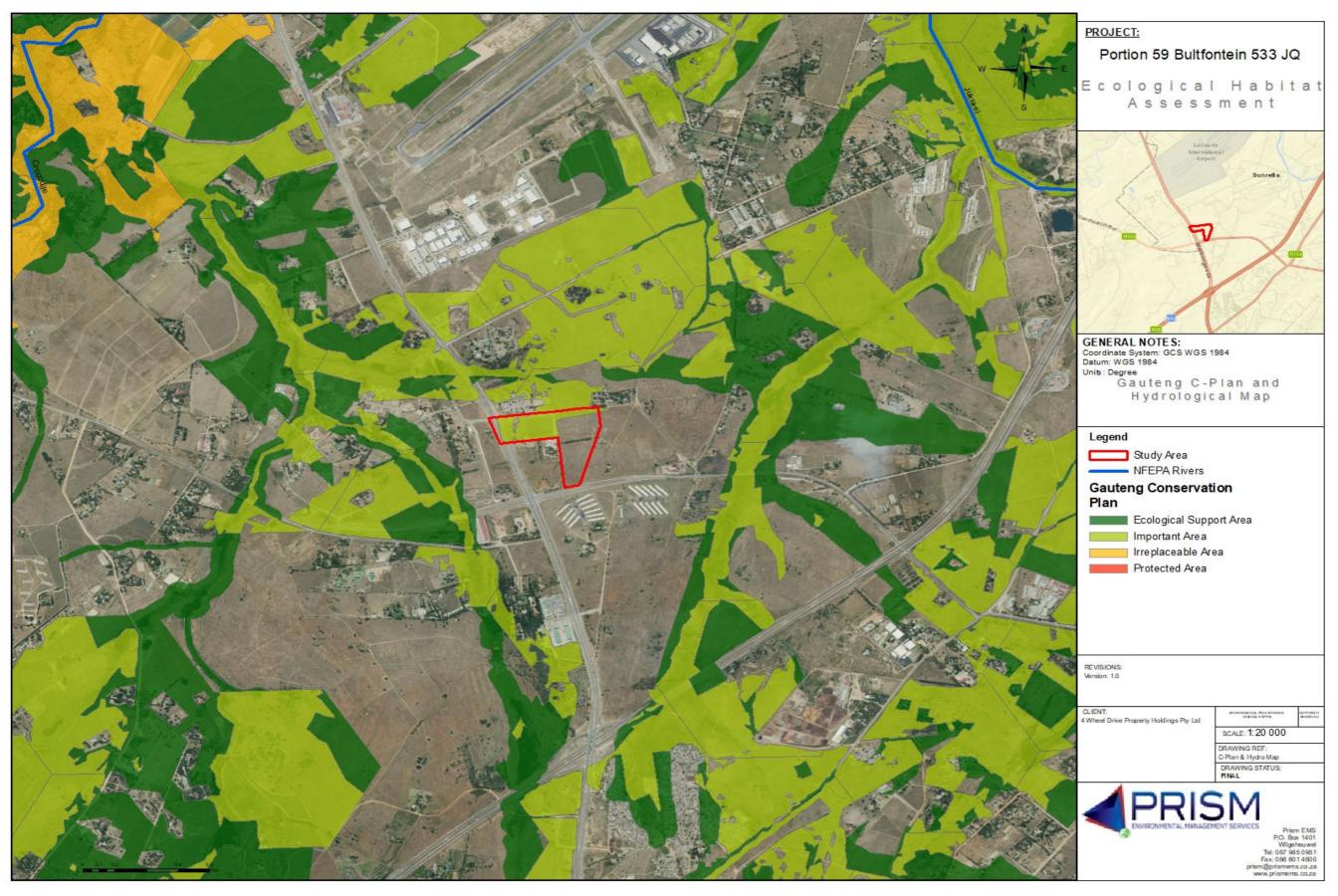


Figure 7-1: Gauteng Conservation Plan and Hydrological Map

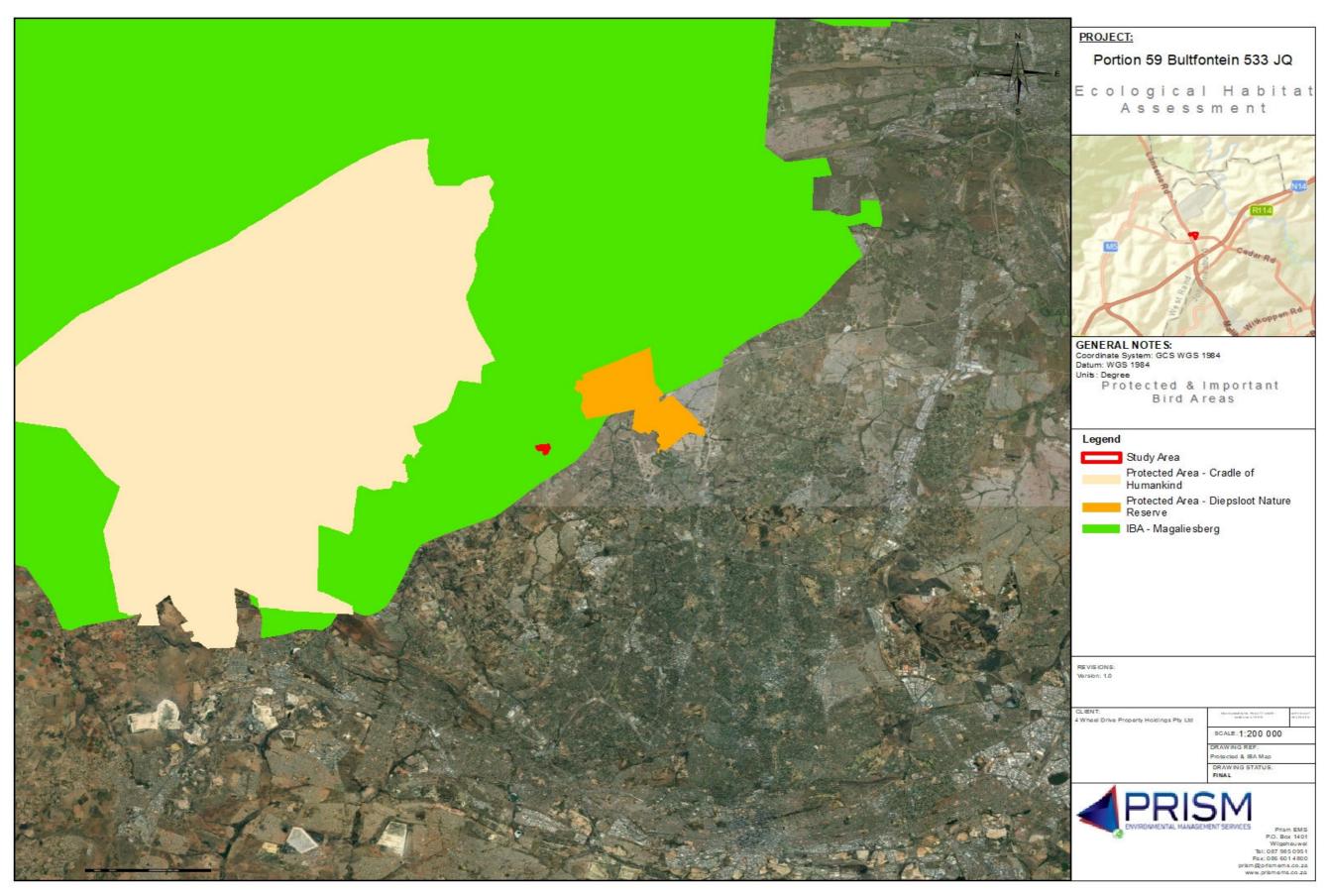


Figure 7-2: Important Bird and Protected Areas Map

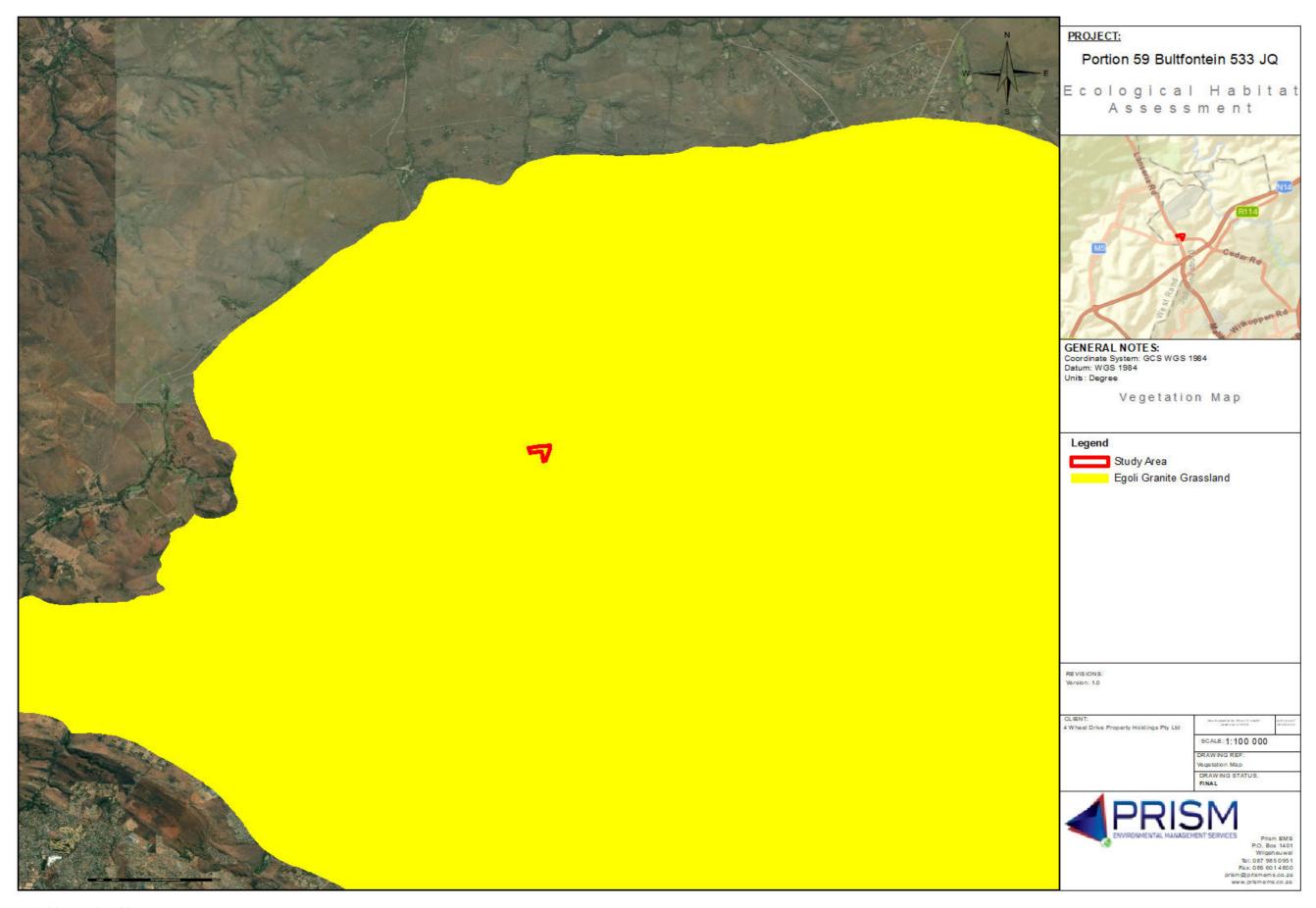


Figure 7-3: Vegetation Map

7.1.2 Desktop Assessment of Species of Conservation Concern (SCC)

7.1.2.1 Flora

Based on the listed of plant species obtained from the database of BODATSA, a total of 862 plants species are expected to occur in or around the study area. The expected plant species are listed in APPENDIX B: EXPECTED FLORA LIST. Only five (5) species from the expected flora list are listed as SCC. See Table below:

Table 7-3: Species of Conservation Concern included within Appendix B – Expected Flora List

Scientific Name	Conservation Status (Regional – SANBI, 2016)	Author	Habitat
Adromischus umbraticola subsp. umbraticola	NT	C.A.Sm.	Savanna, South-facing rock crevices on ridges
Cleome conrathii	NT	Burtt Davy	Stony quartzite slopes, usually in red sandy soil, grassland or woodlands.
Delosperma leendertziae	NT	N.E.Br.	Steep, south-facing slopes of quartzite in mountain grassland
Melolobium subspicatum	VU	Conrath	Grassland
Pearsonia bracteata	NT	(Benth.) Polhill	Plateau grassland

7.1.2.2 **Avifauna**

Based on the findings as per the database of the SABAP2, a total of 335 bird species are expected to occur in and around the study area (pentad 2555_2755). A full list of bird species to potentially occur in the pentad is provided in APPENDIX C: EXPECTED AVIFAUNA LIST:

Of the total bird species listed in Appendix B, 21 species (6.27%) are listed as SCC. The SCC are either listed on a global or regional scale

The SCC are listed as followed on a regional scale:

- 4 species listed as endangered
- 8 species listed as vulnerable
- 7 species listed as near threatened

Table 7-4: List of SCC that are expected to occur in the study area

Common Name	Species Name	Conservation Status (Regional – SANBI, 2016)	Preferred Habitat	Potential occurrence in the study area
Abdim's Stork	Ciconia abdimii	NT	Grassland, savanna woodland and cultivated lands.	Low, due to lack of habitat.
African Finfoot	Podica senegalensis	VU	Favours slow flowing streams with overhanging branches	Low, due to the lack of habitat
African Grass- owl	Tyto capensis	VU	Favours tall rank or dense short grassland.	Low, due to the lack of preferred habitat.
African Marsh- harrier	Circus ranivorus	EN	Inland and coastal wetlands, and adjacent moist grasslands.	Low, due to the lack of habitat
Black Stork	Ciconia nigra	VU	Usually associated with mountainous regions, but not restricted to them.	Low, due to lack of habitat

Cape Vulture	Gyps coprotheres	EN	Linked to cliff breeding sites in mountain areas but ranges widely in surrounding areas.	Low, due to lack of habitat. May be seen foraging
Caspian Tern	Sterna caspia	VU	Predominantly marine or estuarine species; also occurs inland	Low, due to the lack of habitat.
European Roller	Coracias garrulus	NT	Closed to very open savanna. Most common in open woodlands with grassy clearings; least common in areas with less-developed woody cover.	Moderate, due to the favourable habitat for foraging.
Greater Flamingo	Phoenicopterus ruber	NT	Favours saline or brackish shallow water bodies such as saltpans, large dams, and coastal mudflats.	Low, due to the lack of habitat.
Greater Painted- snipe	Rostratula benghalensis	NT	Favours vegetated waterside habitat with exposed mud	Low, due to the lack of habitat
Half-collared Kingfisher	Alcedo semitorquata	NT	Mostly found along clear and well vegetated fast flowing streams	Low, due to the lack of habitat
Lanner Flacon	Falco biarmicus	VU	Favours open grassland or woodland near cliff or electricity pylon breeding sites	Moderate, due to the favourable hunting habitat.
Martial Eagle	Polemaetus bellicosus	EN	Mostly open savanna and woodland, semi-arid shrublands and rare in mountainous areas.	Low, due to the lack of habitat.
Moccoa Duck	Oxyura maccoa	NT	Deep inland water bodies with emerged vegetation	Low, due to the lack of habitat.
Red-footed Falcon	Falco vespertinus	NT	Open semi- arid and savannas.	Moderate, due to the favourable foraging habitat.
Secretarybird	Sagittarius serpentarius	VU	Favours open grassland with scattered trees or shrubs.	Low, due to the lack of habitat
Southern Bald Ibis	Geronticus calvus	VU	Favours high-altitude short grassland; also cultivated areas.	Low, due to the lack of habitat.
Verreaux's Eagle	Aquila verreauxii	VU	Mountains and rocky areas with large cliffs	Low, due to lack of habitat
Yellow-billed Stork	Mycteria ibis	EN	Shoreline of most inland freshwater bodies, also occasionally in estuaries.	Low, due to the lack of preferred habitat

7.1.2.3 Mammals

As per the Spatial Red Data list of IUCN, a total of 80 mammal species has the probability of occurring in and around the study area. The list of mammal species is available in APPENDIX D: EXPECTED MAMMAL SPECIES LIST. Of the species listed in Appendix D, 11 are SCC.

- 2 species are listed as endangered
- 9 species are listed as Near Threatened

Table 7-5: List of SCC mammal species potentially occurring in and around the study area.

Common Name	Species Name	Conservation Status (Regional – SANBI, 2016)	Preferred Habitat	Potential occurrence in the study area
African Clawless Otter	Aonyx capensis	NT	Species of otter widely distributed and seldom found far from water	Low, due to the lack of preferred habitat
Southern African Hedgehog	Atelerix frontalis	NT	Occurs in wide variety of habitats, including semi-arid and subtemperate.	Moderate, due to some suitable habitat.
Short-eared Trident Bat	Cloeotis percivali	EN	Roosts on caves and mine-shafts	Low, due to the lack of habitat.
Brown Hyena	Parahyaena brunnea	NT	Drier parts of South Africa, open scrub and open woodland savanna.	Low, due to lack of preferred foraging habitat.

Serval	Leptailuris serval	NT	Environments with water, adjacent tall grassland, and other vegetation.	Low, due to the lack of habitat.
Schreibers's Long- fingered Bat	Miniopterus schreibersii	NT	Roosts in caves, mine-shafts and sometimes trees	Low, due to the lack of roosting area
Southern African Vlei Rat	Otomys auratus	NT	Moist marshy habitat with grassy hillsides	Low, due to the lack of preferred habitat
African Striped Weasel	Poecilogale albinucha	NT	Wide habitat tolerance, mostly grassland areas.	Low, due to the lack of habitat
Mountain Reedbuck	Redunca fulvorufula	EN	Mountainous and rocky areas with scattered bush, trees or grassy slopes.	Low, due to the lack of preferred habitat.
Blasius's Horseshoe Bat	Rhinolophus blasii	NT	Mostly savanna	Low, due to the lack of roosting areas.
Hildebrandt's Horseshoe Bat	Rhinolophus hildebrandtii	NT	Mostly savanna	Low, due to the lack of roosting areas.

7.1.2.4 Herpetofauna (Reptiles and Amphibians)

Based on the ReptileMap database obtained from the Virtual Museum website, a total of 50 reptile species has the possibility to occur within and around the study area. The full list of reptile species is available in APPENDIX E: EXPECTED HERPETOFAUNA LIST. Only one (1) reptile SCC has the possibility to occur within or around the study area (Table 7-6: Herpetofauna SCC potentially to occur in the study area)

As per the database obtained from the Virtual Museum website, a total of 14 amphibian species has the possibility to occur within and around the study area. The full list of amphibian species is available in APPENDIX F: EXPECTED AMPHIBIAN LIST. As per the above-mentioned reference, no amphibians SCC were recorded within or around the study area.

Table 7-6: Herpetofauna SCC potentially to occur in the study area

		Conservation		Potential
Common Name	Scientific Name	Status (Regional	Preferred Habitat	occurrence in
		– SANBI, 2016)		the study area
Striped Harlequin Snake	Homoroselaps dorsalis	NT	Fossorial, and known to inhabit old termite nests in high altitude grassland habitat.	Low, due to the lack of preferred habitat

8 Site inspection Results and Findings

8.1 Flora

8.1.1 Flora Habitats

The vegetation assessment was conducted throughout the entire Project area as well as associated areas outside the study site and a habitat map was compiled based on the findings (Figure 8-6: Habitat Assessment Map). Several habitats were identified and are described in more detail in the subsections that follow. These include:

- Transformed;
- · Degraded; and
- Grassland.

i. Transformed Areas

The transformed areas are areas where the previous habitat has been transformed in the past either through construction features, such as buildings and other infrastructure or through habitat loss by human activity such as road passes, vegetation clearing and dumping. The sensitivity of this area was identified as "low".



Figure 8-1: Transformed areas identified on the study area

ii. Degraded Areas

The degraded areas on site are areas that have change due to disturbance in the past. The changed habitat is still within a recovering state and mainly consists of pioneer and alien invasive species. The sensitivity of this area was identified as "low".



Figure 8-2: Degraded areas identified on the study area

iii. Grassland Areas

The Grassland area is an area were the current habitat is functioning naturally, and the vegetation itself is either in a natural state or in some areas semi-natural. Several flora species were recorded during the site visit including some individual *Hypoxis hemerocallidea* (Declining) were recorded during the site visit (Table 8-1: Some of the flora species found on site). The sensitivity of this area was identified as "low-medium".



Figure 8-3: Grassland areas identified on the study area

Table 8-1: Some of the flora species found on site

Species Name	Common Name	Threat Status (SANBI, 2017)	Endemic to South Africa	Alien Category (NEMBA, 2016)
Agave americana	Spreading century plant			Category 3
Albuca setosa	Small white albuca	LC	Not Endemic	
Aloe greatheadii davyana	Spotted aloe	LC		
Argemone mexicana	Prickly Poppies			Category 1b
Aristida congesta subsp. barbicollis	Spreading Three-awn	LC	Not Endemic	
Campuloclinium macrocephalum	Pom Pom Weed			Category 1b
Combretum erythrophyllum	River bushwillow	LC	Not Endemic	
Conyza bonariensis	Hairy fleabane			Not indigenous
Datura ferox	Large Thorn Apple			Category 1b
Dimorphotheca spectabilis	Bietou	LC	Indigenous	
Diospyros lycioides	Bluebush, star-apple	LC	Indigenous	
Felicia muricata	Fine-leaved aster	LC	Not Endemic	
Gazania krebsiana serrulata		LC	Not Endemic	
Glandularia aristigera	Roadside Verbena			Not indigenous
Gnidia caffra	Gifbossie	LC	Not Endemic	
Gomphocarpus fruticosus	Milkweed, wild cotton	LC	Not Endemic	
Graderia subintegra	Wild penstemon	LC	Not Endemic	
Hermannia depressa	Rooiopslag	LC	Not Endemic	
Hilliardiella oligocephala	Bicoloured-leaved Vernonia	LC	Not Endemic	
Hypoxis hemerocallidea	Star-flower	LC - Protected	Not Endemic	
Hypoxis iridifolia	Star lily	LC	Not Endemic	
Ledebouria ovatifolia	Flat-leaved African hyacinth	LC	Not Endemic	
Melia azedarach	Syringa			Category 1b
Moraea stricta	Bloutulp	LC	Not Endemic	
Ocinum obovatum	Cat's whiskers	LC	Not Endemic	
Rhynchosia totta		LC	Not Endemic	
Searsia lancea	Karee	LC	Not Endemic	
Searsia pyroides	Common wild currant	LC	Not Endemic	
Senecio gregatus		LC	Not Endemic	
Solanum mauritianum	Bugweed			Category 1b
Vachellia robusta subsp. robusta	Broadpod robust thorn	LC	Not Endemic	
Vachellia sieberiana	Paperbark thorn	LC	Not Endemic	



Figure 8-4: Some of the flora species observed on the study area

Orange List Species

It should be noted however that one (1) medicinal plant species, were observed in this habitat type during the site visit, namely *Hypoxis hemerocallidea* (Figure 8-7: Sensitivity Map).

This species is classified as "Least Concern" (but with population trend "decreasing") on the SANBI Red List of South African Plants. Species classified as having a national status of 'Least Concern' are considered at low risk of extinction, as they are widespread and abundant (SANBI, 2017). However, GDARD has indicated these species must remain classified as Orange List species. This is because Gauteng has a unique situation where habitats and species are being depleted rapidly due to urbanisation. Please refer to APPENDIX A: PROPOSED RESCUE AND RELOCATION PLAN FOR THE RED DATA LISTED PLANT SPECIES, HYPOXIS HEMEROCALLIDEA FOUND ON THE PROPOSED DEVELOPMENT SITE for the species relocation plan that is recommended.

8.1.2 Alien invasive species

The study area also had sections of scattered alien invasive species. These included species such as: Agave americana (Category 3), Argemone Mexicana (Category 1b), Campuloclinium macrocephalum (Category 1b), Datura ferox (Category 1b), Melia azedarach (Category 1b) and Solanum mauritianum (Category 1b).



Figure 8-5: Alien Invasive species observed on the study area

Alien invasive species has the ability to spread and eventually dominate and replace the existing vegetation of a natural ecosystem. It is very important that all alien invasive species found and observed on the study area should be controlled and a remediated by means of a monitoring plan.

An alien invasive species list was published by the National Environmental Management: Biodiversity Act (Act 10 of 2004) in August 2014. The Act clearly states the importance in terms of controlling and the removing of alien invasive species – Category 1: Declared weeds (Bromilow, 2010).

According to the National Water Act, 1998 (Act No. 36 of 1998), no Category 2 (Declared invader plants with a commercial or utility value) or Category 3 (Mostly ornamental plants) (Bromilow, 2010) alien

invasive species are allowed to grow within 30m of a 1:50 year flood line of river. This also includes other watercourses such as streams, springs, natural channels, lake, dam or wetland.

The National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA) provides a brief explanation of the three (3) Categories of listed invasive species below:

- Category 1a: Alien invasive species that needs to be removed from a specific area immediately.
- Category 1b: Alien invasive species that needs to be controlled.
- Category 2: Alien invasive species listed within the notice as species which require a permit to carry out a restricted activity within a specified area.
- Category 3: Alien invasive species that are listed in the notice, as species which are subject to exemptions and prohibitions.

Category 1b and 3 invasive species were recorded within the project area and must therefore be removed and controlled before and during the construction phase. This can be done by implementing an alien invasive plant management programme in compliance of section 75 of the Act as stated above.

8.1.3 Vegetation Type – Egoli Granite Grassland

The site assessment undertaken indicated that whilst from a desktop perspective, the site falls within this endangered vegetation type. The vegetation found on site is not representative of the Egoli Granite Grassland and therefore does not hold any conservational value for this vegetation type.

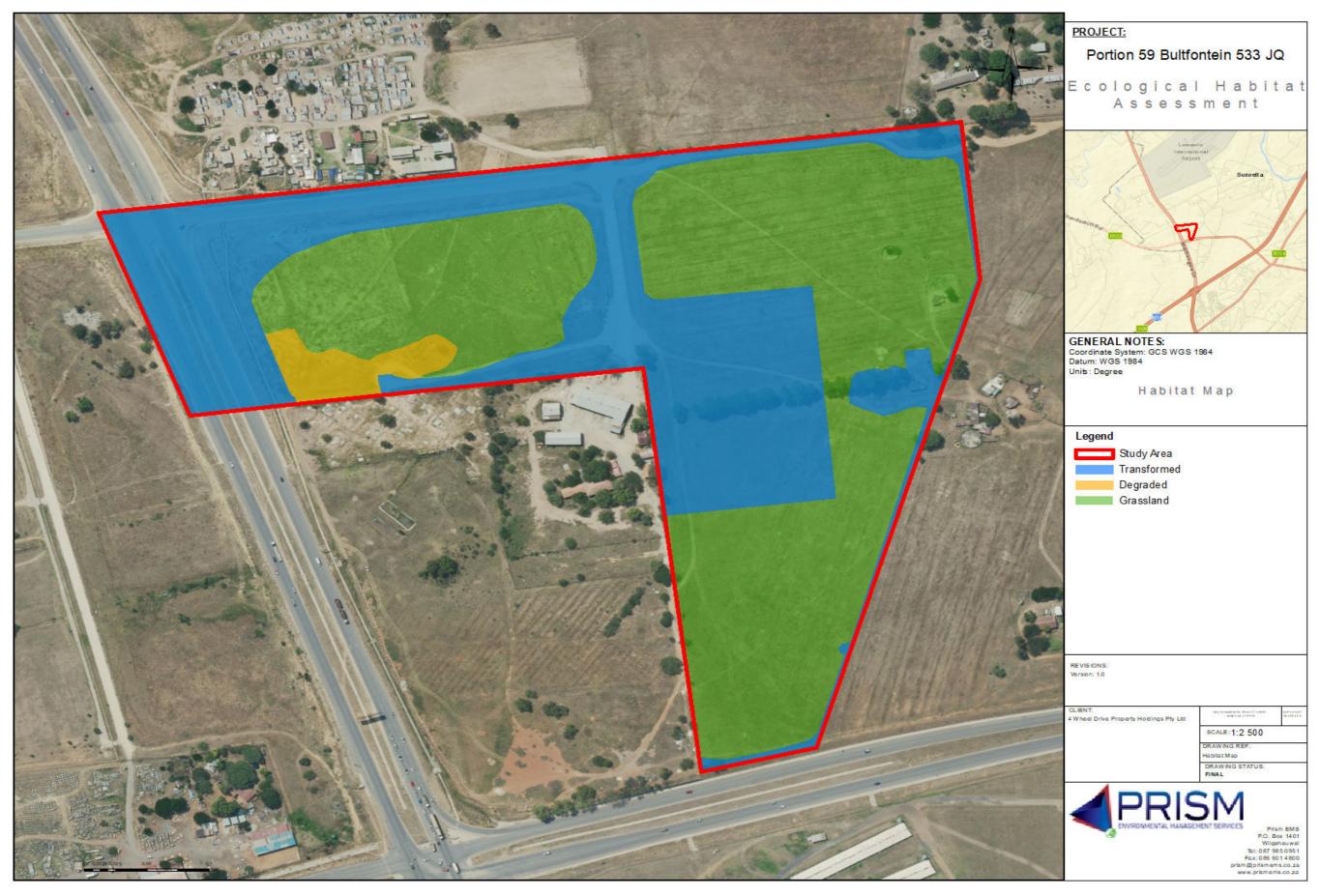


Figure 8-6: Habitat Assessment Map

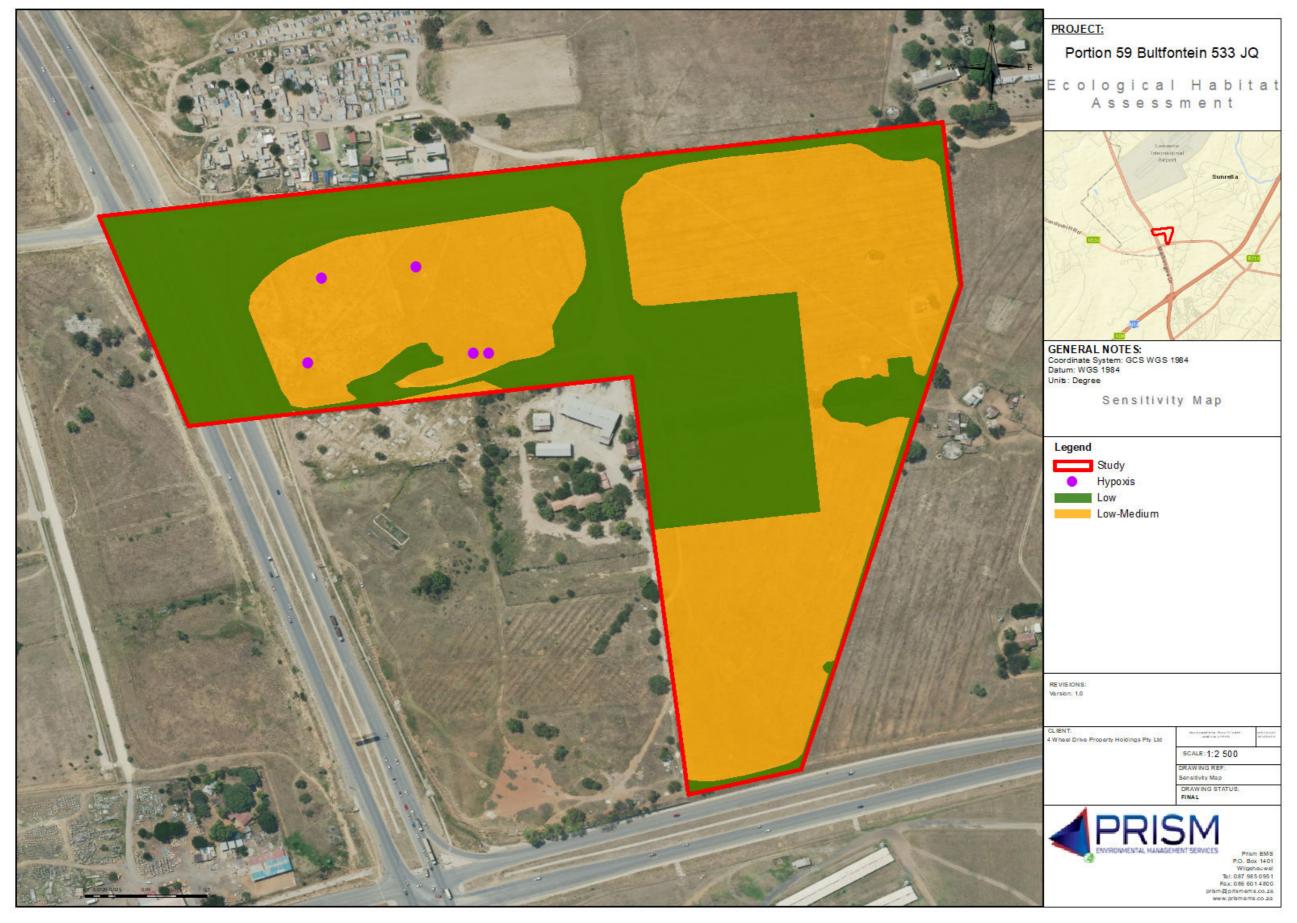


Figure 8-7: Sensitivity Map

8.2 Avifauna

A total of twenty-one (21) Species of Conservation Concern (SCC) formed part of the list that was previously recorded. None of these species was observed during the site visit. However, this does not exclude the possibility for them some of them to occur in the area. A total of 13 bird species were recorded during the site survey. This is a relatively low number and could be because of the human disturbance and lack of habitat diversity.

Table 8-2:	Rird	snecies	observed	during t	the site	SIIIVAV
I able 0-2.	Dilu	3DECIES	ODSEI VEU	uuiiiiu i	เมษ อเเซ	5 Sui vev.

Species Name	Common Name	Conservation Status (SANBI, 2016)
Arcidotheres tristis	Common Myna	LC
Ardea melanocephala	Black-headed Heron	LC
Burhinus capensis	Spotted Thick-knee	LC
Columba livia	Rock Dove	LC
Lanius collaris	Southern Fiscal	LC
Passer domesticus	House Sparrow	LC
Phoeniculus purpureus	Green Wood-Hoopoe	LC
Ploceus velatus	Southern Masked Weaver	LC
Saxicola torquatus	African Stonechat	LC
Streptopelia semitorquata	Red-eyed Dove	LC
Streptopelia senegalensis	Laughing Dove	LC
Vanellus armatus	Blacksmith Lapwing	LC



Figure 8-8: Some of the bird species observed during the site survey

8.3 Mammals

There were no mammal recordings during the site survey. The entire site is fenced for security reasons. This makes it impossible for most mammal species to occurring within the study area. Only some of the smaller mammals and bat species might me seen inside the fenced of site.

8.4 Herpetofauna

No reptile or amphibian species were recorded during the site survey. With the site being fenced of and the surrounding human settlements, it limits the possibility for some species to occur within the study area.

8.5 Invertebrates

The invertebrate was not actively surveyed and were therefore recorded due to accidental sightings. They play a very important role in the ecosystem such as flora pollinators and food for other species. The two species observed during the site survey are *Aloeides trimeni trimeni* (Photo on the left) and *Pontia helice* (Photo on the right).



Figure 8-9: Invertebrate species observed during the site survey

9 SITE SENSITIVITY

A desktop assessment of the site sensitivity has been undertaken Figure 7-1: Gauteng Conservation Plan and Hydrological Map, Figure 7-2: Important Bird and Protected Areas Map, Figure 7-3: Vegetation Map, Figure 8-6: Habitat Assessment Map, Figure 8-7: Sensitivity Map together with site assessment and the following should be noted:

- The north west section of the site falls within a Gauteng Conservation Plan: Important area. As per the findings during the site survey, this section can not be classified as CBA due to a various amount of impacts.
- The site does not fall within a National Protected Area Expansion Strategy Focus Area nor Gauteng Protected Area Expansion Priority Area;
- The site is not protected in terms of any international convention.
- The site is not declared as a nature reserve.
- The site is not zoned for conservation or public open space.
- The site does fall within an Important Bird Area: Magaliesberg. The bird sightings during the site survey was very low due to the surrounding human settlements and lack habitat diversity. The most important bird species in the IBA is the globally threatened Cape Vulture which has a very low possibility of occurring within the study area due to the lack of preferred habitat. Other species might use the study area for foraging purposes

From a desktop perspective, the site falls within Egoli Granite Grassland and CBA area. However, the site visit confirmed that the site is not representative of the vegetation due to a variety of historic disturbance such as developments, infrastructure and occurrence of numerous alien invasive species.

The study area has been severely altered both historically and currently. Factors such as human presence, presence of alien invasive species and the compacting of soil. It is, however, recommended that all *Hypoxis hemerocallidea* on the study area should be removed from the study area and relocated.

10 IMPACT ASSESSMENT

Table 10-1: Impacts and Mitigation Measures during the Construction and Operational Phase

		IMPACTS												D	EGREE
	TYPE	DESCRIPTION	CUMULATIVE	NATURE		CONSEQUENC	E	PROBABI LITY	SIGNIFICANC E (WOM)	CONFIDE NCE	MANAGEMENT & MITIGATION MEASURES	MITIGATION EFFICIENCY	SIGNIFICANCE (WM)	LOSS RESOURCE	REVERSABILITY
					Extent (A)	Duration (B)	Intensity (C)	Probability (P)	Significance (A + B + C) X P						
	CONSTRUCTION PHASE														
							Lo	oss of Habita	at due to loss o	of vegetation	n				
	Direct	Clearing due to digging and laying foundations	Yes	Negative	Site	Permanent	Low-Medium	Definite	Medium	High	It is recommended that all <i>Hypoxis hemerocallidea</i> species should be removed prior to construction activities and either relocated to a similar type of environment or implemented within the landscaping plan of the proposed development.	High	Low	Partial	High Degree
	Direct	Construction camps & lay down areas	Yes	Negative	Site	Medium-term	Medium-High	Likely	Medium	Medium	It is recommended that the construction camp should not be in the low-medium sensitivity area. If not possible, Hypoxis species should be removed prior to clearing of vegetation.	High	Low	Partial	High Degree
	Direct	Stochastic events such as fire	Yes	Negative	Site	Incidental	Medium-High	Likely	Low	Medium	Fires shall only be permitted in specially designated areas and under controlled circumstances.	High	Low	Partial	High Degree
								Direct mor	tality of fauna	and flora					
	Direct	Staff or construction workers poaching and hunting	No	Negative	Site	Short-term	Low-Medium	Possible	Low	Medium	Snaring and hunting of fauna by construction workers on or adjacent to the study area are strictly prohibited.	High	Low	Partial	High Degree
	Direct	Intentional killing of fauna	No	Negative	Site	Incidental	Low-Medium	Likely	Low	Medium	Killing of fauna on or adjacent to the study area are strictly prohibited. Should any fauna species be found on site, the ECO should be conducted asap to provide recommendation or mitigation measures.	High	Low	Partial	High Degree
Impacts to Biodiversity	Direct	Vegetation and ground clearing resulting in loss of sensitive species	Yes	Negative	Site	Long-term	Medium-High	Definite	Medium	Medium	It is recommended that all <i>Hypoxis hemerocallidea species</i> should be removed prior to construction activities and either relocated to a similar type of environment or implemented within the landscaping plan of the proposed development.	High	Low	Partial	High Degree
						Disru	ption of ecologi	ical life cycle	es due to the r	estriction of	f species movement				
	Direct	Open trenches and other linear barriers	Yes	Negative	Site	Short-term	Low-Medium	Highly Likely	Low	Medium	Trenches and other linear barriers should not be kept open for too long, especially not staying open overnight.	High	Low	No Loss	Reversible
	Direct	Infrastructure	Yes	Negative	Site	Permanent	Low-Medium	Definite	Medium	Medium	Stormwater, sewer and road infrastructure should be designed in such a way that it will have minimal impact on the environmental	Medium	Low	No Loss	High Degree
							Disruption of	of ecological	l life cycles du	e to noise a	nd lighting				
	Direct	Noise during construction	No	Negative	Site	Short-term	Low-Medium	Highly Likely	Low	Medium	Construction must be restricted to hours of 07:00 and 17:00. Should construction activities need to continue over a weekend/pubic holiday or is expected to be excessively noisy, all Interested and Affected Parties and the ECO must be notified in advance.	Medium	Low	No Loss	Reversible

	Direct	Lighting during construction	Yes	Negative	Site	Short-term	Medium-High	Highly Likely	Low- Medium	Medium	Construction must be restricted to hours of 07:00 and 17:00. Should construction activities need to continue after hours is, all Interested and Affected Parties and the ECO must be notified in advance. Excessive lighting during construction should be avoided.	Medium	Low	No Loss	Reversible
	Introduction of alien flora affecting native faunal assemblages														
	Direct	Vehicles and machinery	Yes	Negative	Site	Short-term	Medium	Likely	Low	Medium	Alien, invasive species found within the construction area should be eradicated as far as possible and disposed of at a registered site.	High	Low	No Loss	Reversible
	Direct	Soil Disturbance	Yes	Negative	Site	Short-term	Medium-High	Highly Likely	Low- Medium	Medium	Soil disturbance should be kept to a minimum during the construction phase.	High	Low	No Loss	Reversible
OPERATIONAL PHASE	OPERATIONAL PHASE														
	Loss of existing habitat due to loss of vegetation														
	Direct	Stochastic events such as fire	No	Negative	Site	Incidental	Medium	Possible	Low	Medium	Fire extinguishers must be placed on the property.	High	Low	No Loss	Reversible
								Direc	t mortality of fa	aun					
Impacts to Biodiversity	Direct	Intentional killing of fauna	No	Negative	Site	Incidental	Low	Improbab le	Low	Medium	It is not expected that any fauna will be found on site during operation. The Applicant must include the requirement that should any be found that the relevant organisation be called to safely remove the species.	High	Low	No Loss	Reversible
						Disru	uption of ecolog	ical life cycl	es due to the r	estriction o	of species movemen				
	Direct	Infrastructure	No	Negative	Site	Permanent	Low	Highly Likely	Low- Medium	Medium	Stormwater, sewer and road infrastructure should be designed in such a way that it will have minimal impact on the environmental features,	High	Low	No Loss	Reversible

11 REASONED OPINION AND RECOMMENDATIONS

From a desktop perspective, the proposed development occurs within the Egoli Granite Grassland (Endangered) vegetation type. According to the Gauteng Conservation Plan, the proposed development development footprint also occurs in a CBA area. As per the protected and conservation area map, the Cradle of Humankind is situated about 6 km northwest of the study area. The development also falls within the Magaliesberg IBA.

The site was actively surveyed to determine the current status of the habitats on site. Three main habitat types were identified within the study site, namely, transformed, degraded and grassland habitat. The Grassland area is an area were the current habitat is functioning naturally, and the vegetation itself is either in a natural state or in some areas semi-natural. It has however been impacted by historical use (including ploughing) and is no longer representative of the Egoli Granite Grassland and therefore does not hold any conservational value for this vegetation type. The sensitivity of the main habitat types were identified as "low" to "low-medium".

One (1) SCC was identified on site, namely *Hypoxis hemerocallidea*. Whilst this species is classified as "Least Concern" in terms of Red Data List, GDARD has confirmed that they should be considered as "Orange List" species in Gauteng due to provincial level pressures. Therefore, in order to mitigate impacts to these species, a Search and Rescue and Relocation Plan has been devised and included in Appendix E. Impacts to these species are expected to be low with the implementation of the necessary mitigation.

Due to the ongoing anthropogenic activities in and around the study area, lack of habitat and breeding ground and presence of feral animals, the possibility for any of these species to be found on site is low.

Most of the impacts on flora and fauna are considered low to moderate. Most of the impacts on the fauna and flora can be mitigated, following the mitigation measures listed in the EMPr. These mitigation measures can lower the impacts to low and in some cases to very low. Direct impacts, such as habitat loss, cannot be fully mitigated.

11.1 MITIGATION AND MONITORING REQUIREMENTS

All mitigations and monitoring requirements must be adhered to as per the Impact Assessment in Section 10. All alien invasive species should be removed from site and disposed of at a registered landfill site. APPENDIX A: PROPOSED RESCUE AND RELOCATION PLAN FOR THE RED DATA LISTED PLANT SPECIES, HYPOXIS HEMEROCALLIDEA FOUND ON THE PROPOSED DEVELOPMENT SITE also provides a rescue and relocation plan for *Hypoxis* species on site and should be implemented prior to construction.

11.2 CONCLUSION

The proposed development is unlikely to have a high impact on the study site due to low to low-medium sensitivity on site. Aspects such as human activities in and around the study site, presence of alien invasive species on site, lack of habitat for most fauna species and the presence of feral animals in the area have impacted on the existing sensitivity. All recommendations and mitigation measures, with regards to the fauna and flora on site, should be well managed pre -, during and post of the construction activities.

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13 APPENDICES

13.1 APPENDIX A: PROPOSED RESCUE AND RELOCATION PLAN FOR THE RED DATA LISTED PLANT SPECIES, HYPOXIS HEMEROCALLIDEA FOUND ON THE PROPOSED DEVELOPMENT SITE

General information

Hypoxis hemerocallidea falls within the botanical family Hypoxidaceae. The members of this family are fairly small to medium-sized herbaceous plants, with grass-like leaves and an invisible stem which is modified into a corm or rhizome (a rounded underground storage organ resembling a bulb). The flowers are borne on leafless shoots known as scrapes and are trimerous (arranged in whorls of three) and radically symmetric. The plant is easily recognizable by its yellow star-shaped flowers and strap-like leaves. Hypoxis hemerocallidea favours grassland, preferring full sunlight, although it is known to occur in other habitat types. The leaves of Hypoxis hemerocallidea are distinctly three-ranked and arching and are densely covered with hairs.

Hypoxis hemerocallidea is one of the most commonly used species in the traditional medicinal plant trade and is currently also used in primary health care as an immune booster for patients with HIV/AIDS. The rootstock is used in the treatment of urinary infections, heart weakness, internal tumours and nervous disorders. The plant is also currently used to alleviate many immune related ailments, such as colds, flu, arthritis tumours and cancers (www.plantzafrica.com).

As Hypoxis hemerocallidea is a relatively hardy bulbous plant, with a shallow root structure, it is suitable for relocation to areas of similar habitat. A "rescue and relocation" plan is therefore proposed for these individuals. This is perceived to be a viable mitigation measure for ensuring the ongoing survival of this species in the area, as an area is already designated for conservation on the site.

The "rescue and relocation" plan must be undertaken prior to the onset of the construction phase of the development and must be completed by an appropriate service provider.

Proposed "Rescue and Relocation" Plan

Step 1:

An appropriate service provider must be appointed to conduct and manage the operation.

Step 2:

Each individual plant located outside the areas of medium ecological sensitivity needs to be located, correctly identified (Hypoxis hemerocallidea is sometimes confused with other species of Hypoxis, such as Hypoxis iridifolia) and marked, using a brightly coloured marker to ensure visual location later.

Step 3:

To safely remove each individual plant, minimal damage to the corm must be ensured. The hole must be dug approximately 30 cm from the base of the plant and at least 30 cm deep to ensure minimal damage. Removal of the plant from its site should be done with care, pushing the plant up from the corm/rootstock. The plant should not be pulled from the soil using the leaves.

Step 4:

Once removed, the plants must be placed in appropriately sized propagating bags (dependent on each individual plant), utilising soil directly from the site. Should the soil prove to be of poor quality, organic fertilizer or compost must be added to the soil. These plants must be cared for until completion of the construction phase of the development. As these plants can tolerate moderate bouts of water stress, caution must be taken not to over-water or drown the individuals. Over-watering would also cause leeching of the soil, reducing nutrients available to the plants.

Step 5:

Once the construction phase is complete, the plants must be relocated on the property. Plants can either be transferred to an existing Hypoxis hemerocallidea community or may be incorporated into the cultivated gardens of the development. Should plants be transferred to the existing community, caution must be taken not to damage other species of plant in the area. Holes must be dug prior to transfer of plants and must be large enough to ensure plants do not become dislodged during heavy rainfall.

13.2 APPENDIX B: EXPECTED FLORA LIST

Family	Species	Author	IUC N	Ecology
Cyperaceae	Abildgaardia ovata	(Burm.f.) Kral	LC	Indigenous
Malvaceae	Abutilon piloso-cinereum	A.Meeuse	LC	Indigenous
Malvaceae	Abutilon pycnodon	Hochr.	LC	Indigenous
Malvaceae	Abutilon sonneratianum	(Cav.) Sweet	LC	Indigenous
Fabaceae	Acacia dealbata	Link	NE	Not indigenous; Naturalised; Invasive
Euphorbiaceae	Acalypha angustata	Sond.	L	Indigenous
Euphorbiaceae	Acalypha glabrata	Thunb.	LC	Indigenous
Euphorbiaceae	Acalypha glabrata	Thunb.	LC	Indigenous
Euphorbiaceae	Acalypha villicaulis	Hochst.	LC	Indigenous
Asteraceae	Acanthospermum australe	(Loefl.) Kuntze		Not indigenous; Naturalised
Asteraceae	Acanthospermum hispidum	DC.		Not indigenous; Naturalised
Amaranthaceae	Achyranthes aspera	L.		Not indigenous; Naturalised
Apocynaceae	Acokanthera oppositifolia	(Lam.) Codd	LC	Indigenous
Lamiaceae	Acrotome hispida	Benth.	L	Indigenous
Asteraceae	Adenostemma caffrum	DC.	L	Indigenous
Pteridaceae	Adiantum capillus-veneris	L.	LC	Indigenous
Crassulaceae	Adromischus umbraticola	C.A.Sm.	NT	Indigenous; Endemic
Asteraceae	Afroaster serrulatus	(Harv.) J.C.Manning & Goldblatt	LC	Indigenous
Rubiaceae	Afrocanthium gilfillanii	(N.E.Br.) Lantz	LC	Indigenous
Apiaceae	Afrosciadium magalismontanum	(Sond.) P.J.D.Winter	LC	Indigenous
Loranthaceae	Agelanthus natalitius	(Meisn.) Polhill & Wiens	LC	Indigenous
Asteraceae	Ageratina adenophora	(Spreng.) R.M.King & H.Rob.		Not indigenous; Naturalised; Invasive
Rosaceae	Agrimonia procera	Wallr.	LC	Not indigenous; Naturalised; Invasive
Poaceae	Agrostis lachnantha	Nees	LC	Indigenous
Hyacinthaceae	Albuca setosa	Jacq.	LC	Indigenous
Hyacinthaceae	Albuca sp.			
Hyacinthaceae	Albuca virens	(Ker Gawl.) J.C.Manning & Goldblatt	LC	Indigenous
Orobanchaceae	Alectra orobanchoides	Benth.	LC	Indigenous
Apiaceae	Alepidea setifera	N.E.Br.	LC	Indigenous
Poaceae	Alloteropsis semialata	(R.Br.) Hitchc.	LC	Indigenous
Poaceae	Alloteropsis semialata	(R.Br.) Hitchc.	LC	Indigenous
Asphodelaceae	Aloe davyana	Schonland		Indigenous; Endemic

Asphodelaceae	Aloe marlothii	A.Berger	LC	Indigenous
Amaranthaceae	Alternanthera pungens	Kunth		Not indigenous; Naturalised
Fabaceae	Alysicarpus zeyheri	Harv.	LC	Indigenous
Asteraceae	Ambrosia artemisiifolia	L.		Not indigenous; Naturalised; Invasive
Amaryllidaceae	Ammocharis coranica	(Ker Gawl.) Herb.	LC	Indigenous
Anacampserotace ae	Anacampseros subnuda	Poelln.	LC	Indigenous
Apocynaceae	Ancylobotrys capensis	(Oliv.) Pichon	LC	Indigenous
Poaceae	Andropogon schirensis	Hochst. ex A.Rich.	LC	Indigenous
Apiaceae	Annesorhiza flagellifolia	Burtt Davy	LC	Indigenous; Endemic
Poaceae	Anthephora pubescens	Nees	LC	Indigenous
Rubiaceae	Anthospermum hispidulum	E.Mey. ex Sond.	LC	Indigenous
Rubiaceae	Anthospermum rigidum	Eckl. & Zeyh.	LC	Indigenous
Rubiaceae	Anthospermum rigidum	Eckl. & Zeyh.	LC	Indigenous
Menispermaceae	Antizoma angustifolia	(Burch.) Miers ex Harv.	LC	Indigenous
Icacinaceae	Apodytes dimidiata	E.Mey. ex Arn.	LC	Indigenous
Poaceae	Aristida aequiglumis	Hack.	LC	Indigenous
Poaceae	Aristida bipartita	(Nees) Trin. & Rupr.	LC	Indigenous
Poaceae	Aristida canescens	Henrard	LC	Indigenous
Poaceae	Aristida congesta	Roem. & Schult.	LC	Indigenous
Poaceae	Aristida congesta	Roem. & Schult.	LC	Indigenous
Poaceae	Aristida diffusa	Trin.	LC	Indigenous
Poaceae	Aristida junciformis	Trin. & Rupr.	LC	Indigenous
Poaceae	Aristida scabrivalvis	Hack.	LC	Indigenous
Poaceae	Aristida spectabilis	Hack.	LC	Indigenous
Poaceae	Aristida stipitata	Hack.	LC	Indigenous
Poaceae	Aristida transvaalensis	Henrard	LC	Indigenous
Asteraceae	Artemisia afra	Jacq. ex Willd.	LC	Indigenous
Asteraceae	Artemisia vulgaris	L.		Not indigenous; Naturalised
Apocynaceae	Asclepias albens	(E.Mey.) Schltr.	LC	Indigenous
Apocynaceae	Asclepias brevipes	(Schltr.) Schltr.	LC	Indigenous; Endemic
Apocynaceae	Asclepias crispa	P.J.Bergius	LC	Indigenous; Endemic
Apocynaceae	Asclepias eminens	(Harv.) Schltr.	LC	Indigenous
Asparagaceae	Asparagus angusticladus	(Jessop) J P.Lebrun & Stork	LC	Indigenous
Asparagaceae	Asparagus asparagoides	(L.) Druce	LC	Indigenous
Asparagaceae	Asparagus cooperi	Baker	LC	Indigenous

Asparagaceae	Asparagus flavicaulis	(Oberm.) Fellingham & N.L.Mey.	LC	Indigenous
Asparagaceae	Asparagus setaceus	(Kunth) Jessop	LC	Indigenous
Asparagaceae	Asparagus suaveolens	Burch.	LC	Indigenous
Asparagaceae	Asparagus transvaalensis	(Oberm.) Fellingham & N.L.Mey.	LC	Indigenous
Asparagaceae	Asparagus virgatus	Baker	LC	Indigenous
Apocynaceae	Aspidoglossum biflorum	E.Mey.	LC	Indigenous
Aspleniaceae	Asplenium aethiopicum	(Burm.f.) Bech.	LC	Indigenous
Aspleniaceae	Asplenium capense	(Kunze) Bir, Fraser-Jenk. & Lovis	LC	Indigenous
Aspleniaceae	Asplenium varians	Wall. ex Hook. & Grev.	LC	Indigenous
Asteraceae	Athrixia elata	Sond.	LC	Indigenous
Erpodiaceae	Aulacopilum trichophyllum	Angstr.		Indigenous
Pottiaceae	Barbula bolleana	(Mull.Hal.) Broth.		Indigenous
Acanthaceae	Barleria macrostegia	Nees	LC	Indigenous
Acanthaceae	Barleria obtusa	Nees	LC	Indigenous
Acanthaceae	Barleria pretoriensis	C.B.Clarke	LC	Indigenous
Rhamnaceae	Berchemia zeyheri	(Sond.) Grubov	LC	Indigenous
Asteraceae	Berkheya carlinopsis	Welw. ex O.Hoffm.	LC	Indigenous; Endemic
Asteraceae	Berkheya zeyheri	Oliv. & Hiern	LC	Indigenous
Apiaceae	Berula repanda	(Hiern) Spalik & S.R.Downie	LC	Indigenous
Apiaceae	Berula thunbergii	(DC.) H.Wolff	LC	Indigenous
Poaceae	Bewsia biflora	(Hack. ex Schinz) Gooss.	LC	Indigenous
Asteraceae	Bidens bipinnata	L.		Not indigenous; Naturalised
Asteraceae	Bidens pilosa	L.		Not indigenous; Naturalised
Acanthaceae	Blepharis innocua	C.B.Clarke	LC	Indigenous; Endemic
Acanthaceae	Blepharis squarrosa	(Nees) T.Anderson	LC	Indigenous; Endemic
Orchidaceae	Bonatea antennifera	Rolfe	LC	Indigenous
Orchidaceae	Bonatea polypodantha	(Rchb.f.) L.Bolus	LC	Indigenous
Capparaceae	Boscia albitrunca	(Burch.) Gilg & Gilg-Ben.	LC	Indigenous
Poaceae	Bothriochloa bladhii	(Retz.) S.T.Blake	LC	Indigenous
Poaceae	Bothriochloa insculpta	(Hochst. ex A.Rich.) A.Camus	LC	Indigenous
Poaceae	Brachiaria brizantha	(A.Rich.) Stapf	LC	Indigenous

Poaceae	Brachiaria nigropedata	(Ficalho & Hiern) Stapf	LC	Indigenous
Poaceae	Brachiaria serrata	(Thunb.) Stapf	LC	Indigenous
Asteraceae	Brachylaena rotundata	S.Moore	LC	Indigenous
Apocynaceae	Brachystelma oianthum	Schltr.	LC	Indigenous; Endemic
Brachytheciaceae	Brachythecium ruderale	(Brid.) W.R.Buck		Indigenous
Phyllanthaceae	Bridelia mollis	Hutch.	LC	Indigenous
Poaceae	Briza minor	L.	NE	Not indigenous; Naturalised; Invasive
Poaceae	Bromus sp.			
Amaryllidaceae	Brunsvigia natalensis	Baker	LC	Indigenous
Amaryllidaceae	Brunsvigia radulosa	Herb.	LC	Indigenous
Bryaceae	Bryum argenteum	Hedw.		Indigenous
Bryaceae	Bryum pycnophyllum	(Dixon) Mohamed		Indigenous
Scrophulariaceae	Buddleja saligna	Willd.	LC	Indigenous
Scrophulariaceae	Buddleja salviifolia	(L.) Lam.	LC	Indigenous
Asphodelaceae	Bulbine capitata	Poelln.	LC	Indigenous
Asphodelaceae	Bulbine lagopus	(Thunb.) N.E.Br.	LC	Indigenous
Cyperaceae	Bulbostylis burchellii	(Ficalho & Hiern) C.B.Clarke	LC	Indigenous
Cyperaceae	Bulbostylis humilis	(Kunth) C.B.Clarke	LC	Indigenous
Cyperaceae	Bulbostylis oritrephes	(Ridl.) C.B.Clarke	LC	Indigenous
Fabaceae	Burkea africana	Hook.	LC	Indigenous
Asteraceae	Callilepis leptophylla	Harv.	LC	Indigenous
Asteraceae	Callilepis salicifolia	Oliv.	LC	Indigenous
Rutaceae	Calodendrum capense	(L.f.) Thunb.	LC	Indigenous
Leucobryaceae	Campylopus robillardei	Besch.		Indigenous
Cannabaceae	Cannabis sativa	L.	NE	Not indigenous; Naturalised
Cyperaceae	Carex acutiformis	Ehrh.		Not indigenous; Naturalised
Cyperaceae	Carex cognata	Kunth	LC	Indigenous
Cyperaceae	Carex rhodesiaca	Nelmes	LC	Indigenous
Cyperaceae	Carex spartea	Wahlenb.		Indigenous
Cyperaceae	Carex uhligii	K.Schum. ex C.B.Clarke		Indigenous
Apocynaceae	Carissa bispinosa	(L.) Desf. ex Brenan	LC	Indigenous
Icacinaceae	Cassinopsis ilicifolia	(Hochst.) Kuntze	LC	Indigenous
Cannabaceae	Celtis africana	Burm.f.	LC	Indigenous
Apiaceae	Centella asiatica	(L.) Urb.	LC	Indigenous
Dipsacaceae	Cephalaria zeyheriana	Szabo	LC	Indigenous
Apocynaceae	Ceropegia multiflora	Baker	LC	Indigenous
Scrophulariaceae	Chaenostoma floribundum	Benth.	LC	Indigenous

Scrophulariaceae	Chaenostoma leve	(Hiern) Kornhall	LC	Indigenous
Fabaceae	Chamaecrista biensis	(Steyaert) Lock	LC	Indigenous
Fabaceae	Chamaecrista mimosoides	(L.) Greene	LC	Indigenous
Fabaceae	Chamaecrista stricta	E.Mey.	LC	Indigenous
Verbenaceae	Chascanum hederaceum	(Sond.) Moldenke	LC	Indigenous
Verbenaceae	Chascanum pinnatifidum	(L.f.) E.Mey.	LC	Indigenous
Pteridaceae	Cheilanthes dolomiticola	(Schelpe) Schelpe & N.C.Anthony	LC	Indigenous; Endemic
Pteridaceae	Cheilanthes eckloniana	(Kunze) Mett.	LC	Indigenous
Pteridaceae	Cheilanthes hirta	Sw.	LC	Indigenous
Pteridaceae	Cheilanthes inaequalis	(Kunze) Mett.	LC	Indigenous
Pteridaceae	Cheilanthes involuta	(Sw.) Schelpe & N.C.Anthony	LC	Indigenous
Pteridaceae	Cheilanthes marlothii	(Hieron.) Domin	LC	Indigenous
Pteridaceae	Cheilanthes pentagona	Schelpe & N.C.Anthony	LC	Indigenous
Pteridaceae	Cheilanthes viridis	(Forssk.) Sw.		Indigenous
Pteridaceae	Cheilanthes viridis	(Forssk.) Sw.	LC	Indigenous
Pteridaceae	Cheilanthes viridis	(Forssk.) Sw.	LC	Indigenous
Gentianaceae	Chironia palustris	Burch.	LC	Indigenous
Gentianaceae	Chironia palustris	Burch.	LC	Indigenous
Agavaceae	Chlorophytum bowkeri	Baker	LC	Indigenous
Agavaceae	Chlorophytum cooperi	(Baker) Nordal	LC	Indigenous
Agavaceae	Chlorophytum fasciculatum	(Baker) Kativu	LC	Indigenous
Agavaceae	Chlorophytum trichophlebium	(Baker) Nordal	LC	Indigenous; Endemic
Thelypteridaceae	Christella dentata	(Forssk.) Brownsey & Jermy	LC	Indigenous
Asteraceae	Chrysocoma sp.			
Poaceae	Chrysopogon serrulatus	Trin.	LC	Indigenous
Asteraceae	Cineraria aspera	Thunb.	LC	Indigenous
Asteraceae	Cineraria sp.			
Vitaceae	Cissus sp.			
Cyperaceae	Cladium mariscus	(L.) Pohl	LC	Indigenous
Ranunculaceae	Clematis brachiata	Thunb.	LC	Indigenous
Ranunculaceae	Clematis sp.			
Cleomaceae	Cleome conrathii	Burtt Davy	NT	Indigenous
Cleomaceae	Cleome gynandra	L.	LC	Indigenous
Cleomaceae	Cleome maculata	(Sond.) Szyszyl.	LC	Indigenous
Cleomaceae	Cleome monophylla	L.	LC	Indigenous
Peraceae	Clutia pulchella	L.	LC	Indigenous
Combretaceae	Combretum apiculatum	Sond.	LC	Indigenous

Combretaceae	Combretum erythrophyllum	(Burch.) Sond.	LC	Indigenous
Combretaceae	Combretum molle	R.Br. ex G.Don	LC	Indigenous
Combretaceae	Combretum sp.			
Combretaceae	Combretum zeyheri	Sond.	LC	Indigenous
Commelinaceae	Commelina africana	L.	LC	Indigenous
Commelinaceae	Commelina africana	L.	LC	Indigenous
Commelinaceae	Commelina modesta	Oberm.	LC	Indigenous
Convolvulaceae	Convolvulus ocellatus	Hook.	LC	Indigenous
Convolvulaceae	Convolvulus sagittatus	Thunb.	LC	Indigenous
Convolvulaceae	Convolvulus thunbergii	Roem. & Schult.	LC	Indigenous
Asteraceae	Conyza podocephala	DC.		Indigenous
Asteraceae	Conyza scabrida	DC.		Indigenous
Malvaceae	Corchorus asplenifolius	Burch.	LC	Indigenous
Malvaceae	Corchorus confusus	Wild	LC	Indigenous
Malvaceae	Corchorus trilocularis	L.	NE	Not indigenous; Cultivated; Naturalised
Boraginaceae	Cordia caffra	Sond.	LC	Indigenous
Rubiaceae	Cordylostigma virgata	(Willd.) Groeninckx & Dessein		Indigenous
Asteraceae	Cotula anthemoides	L.	LC	Indigenous
Asteraceae	Cotula nigellifolia	(DC.) K.Bremer & Humphries	LC	Indigenous; Endemic
Acanthaceae	Crabbea angustifolia	Nees	LC	Indigenous; Endemic
Crassulaceae	Crassula lanceolata	(Eckl. & Zeyh.) Endl. ex Walp.	LC	Indigenous
Crassulaceae	Crassula setulosa	Harv.	NE	Indigenous
Crassulaceae	Crassula setulosa	Harv.	NE	Indigenous; Endemic
Fabaceae	Crotalaria barkae	Schweinf.	LC	Indigenous
Fabaceae	Crotalaria lotoides	Benth.	LC	Indigenous
Fabaceae	Crotalaria magaliesbergensis	A.S.Flores & Sch.Rodr.	LC	Indigenous; Endemic
Fabaceae	Crotalaria sphaerocarpa	Perr. ex DC.	LC	Indigenous
Euphorbiaceae	Croton gratissimus	Burch.	LC	Indigenous
Apocynaceae	Cryptolepis cryptolepioides	(Schltr.) Bullock	LC	Indigenous
Apocynaceae	Cryptolepis oblongifolia	(Meisn.) Schltr.	LC	Indigenous
Cucurbitaceae	Cucumis africanus	L.f.	LC	Indigenous
Cucurbitaceae	Cucumis anguria	L.	LC	Indigenous
Cucurbitaceae	Cucumis myriocarpus	Naudin	LC	Indigenous
Cucurbitaceae	Cucumis sp.			
Cucurbitaceae	Cucumis zeyheri	Sond.	LC	Indigenous
Convolvulaceae	Cuscuta campestris	Yunck.		Not indigenous; Naturalised; Invasive
Araliaceae	Cussonia paniculata	Eckl. & Zeyh.	LC	Indigenous

Commelinaceae	Cyanotis speciosa	(L.f.) Hassk.	LC	Indigenous
Apiaceae	Cyclospermum leptophyllum	(Pers.) Sprague ex Britton & P.Wilson		Not indigenous; Naturalised
Orobanchaceae	Cycnium adonense	E.Mey. ex Benth.	LC	Indigenous
Orobanchaceae	Cycnium tubulosum	(L.f.) Engl.	LC	Indigenous
Poaceae	Cymbopogon caesius	(Hook. & Arn.) Stapf	LC	Indigenous
Poaceae	Cymbopogon nardus	(L.) Rendle	LC	Indigenous
Apocynaceae	Cynanchum ellipticum	(Harv.) R.A.Dyer	LC	Indigenous
Poaceae	Cynodon dactylon	(L.) Pers.	LC	Indigenous
Cyperaceae	Cyperus albostriatus	Schrad.	LC	Indigenous
Cyperaceae	Cyperus austro-africanus	C.Archer & Goetgh.	LC	Indigenous
Cyperaceae	Cyperus congestus	Vahl	LC	Indigenous
Cyperaceae	Cyperus denudatus	L.f.	LC	Indigenous
Cyperaceae	Cyperus esculentus	L.	LC	Indigenous
Cyperaceae	Cyperus fastigiatus	Rottb.	LC	Indigenous
Cyperaceae	Cyperus leptocladus	Kunth	LC	Indigenous
Cyperaceae	Cyperus longus	L.	NE	Indigenous
Cyperaceae	Cyperus margaritaceus	Vahl	LC	Indigenous
Cyperaceae	Cyperus marginatus	Thunb.	LC	Indigenous
Cyperaceae	Cyperus obtusiflorus	Vahl	LC	Indigenous
Cyperaceae	Cyperus rupestris	Kunth	LC	Indigenous
Cyperaceae	Cyperus sexangularis	Nees	LC	Indigenous
Cyperaceae	Cyperus sp.			
Cyperaceae	Cyperus uitenhagensis	(Steud.) C.Archer & Goetgh.	LC	Indigenous
Lobeliaceae	Cyphia persicifolia	C.Presl	LC	Indigenous; Endemic
Lobeliaceae	Cyphia stenopetala	Diels	LC	Indigenous
Vitaceae	Cyphostemma lanigerum	(Harv.) Desc. ex Wild & R.B.Drumm.	LC	Indigenous
Vitaceae	Cyphostemma sandersonii	(Harv.) Desc.	LC	Indigenous
Vitaceae	Cyphostemma sulcatum	(C.A.Sm.) J.J.M.van der Merwe	LC	Indigenous; Endemic
Amaryllidaceae	Cyrtanthus tuckii	Baker	LC	Indigenous; Endemic
Solanaceae	Datura sp.			
Aizoaceae	Delosperma leendertziae	N.E.Br.	NT	Indigenous; Endemic
Asteraceae	Denekia capensis	Thunb.	LC	Indigenous
Caryophyllaceae	Dianthus mooiensis	F.N.Williams	NE	Indigenous; Endemic
Convolvulaceae	Dichondra micrantha	Urb.		Not indigenous; Naturalised
Acanthaceae	Dicliptera eenii	S.Moore	LC	Indigenous
Scrophulariaceae	Diclis petiolaris	Benth.	LC	Indigenous

Asteraceae	Dicoma anomala	Sond.	LC	Indigenous
Pottiaceae	Didymodon tophaceus	(Brid.) Lisa		Indigenous
Poaceae	Digitaria brazzae	(Franch.) Stapf	LC	Indigenous
Poaceae	Digitaria diagonalis	(Nees) Stapf	LC	Indigenous
Poaceae	Digitaria eriantha	Steud.	LC	Indigenous
Poaceae	Digitaria longiflora	(Retz.) Pers.	LC	Indigenous
Poaceae	Digitaria monodactyla	(Nees) Stapf	LC	Indigenous
Poaceae	Digitaria sp.			
Poaceae	Digitaria ternata	(A.Rich.) Stapf	LC	Indigenous
Poaceae	Digitaria tricholaenoides	Stapf	LC	Indigenous
Poaceae	Diheteropogon amplectens	(Nees) Clayton	LC	Indigenous
Asteraceae	Dimorphotheca spectabilis	Schltr.	LC	Indigenous; Endemic
Ebenaceae	Diospyros lycioides	Desf.	LC	Indigenous
Ebenaceae	Diospyros lycioides	Desf.	LC	Indigenous
Ebenaceae	Diospyros whyteana	(Hiern) F.White	LC	Indigenous
Hyacinthaceae	Dipcadi marlothii	Engl.	LC	Indigenous
Hyacinthaceae	Dipcadi viride	(L.) Moench	LC	Indigenous
Brassicaceae	Diplotaxis muralis	(L.) DC.		Not indigenous; Naturalised; Invasive
Orchidaceae	Disa aconitoides	Sond.	LC	Indigenous
Sapindaceae	Dodonaea viscosa	Jacq.	LC	Indigenous
Fabaceae	Dolichos angustifolius	Eckl. & Zeyh.	LC	Indigenous
Malvaceae	Dombeya rotundifolia	(Hochst.) Planch.	LC	Indigenous
Pteridaceae	Doryopteris concolor	(Langsd. & Fisch.) Kuhn	LC	Indigenous
Salicaceae	Dovyalis zeyheri	(Sond.) Warb.	LC	Indigenous
Hyacinthaceae	Drimia calcarata	(Baker) Stedje	LC	Indigenous
Hyacinthaceae	Drimia elata	Jacq.	DD	Indigenous
Dryopteridaceae	Dryopteris athamantica	(Kunze) Kuntze	LC	Indigenous
Dryopteridaceae	Dryopteris inaequalis	(Schltdl.) Kuntze	LC	Indigenous
Verbenaceae	Duranta erecta	L.		Not indigenous; Naturalised; Invasive
Acanthaceae	Dyschoriste burchellii	(Nees) Kuntze	LC	Indigenous
Acanthaceae	Dyschoriste costata	(Nees) Kuntze	LC	Indigenous; Endemic
Acanthaceae	Dyschoriste setigera	(Pers.) J.C.Manning & Goldblatt	LC	Indigenous
Amaranthaceae	Dysphania carinata	(R.Br.) Mosyakin & Clemants		Not indigenous; Naturalised; Invasive
Poaceae	Echinochloa colona	(L.) Link	LC	Indigenous
Poaceae	Echinochloa jubata	Stapf	LC	Indigenous
Boraginaceae	Ehretia rigida	(Thunb.) Druce	LC	Indigenous

Poaceae	Ehrharta erecta	Lam.	LC	Indigenous
Fabaceae	Elephantorrhiza elephantina	(Burch.) Skeels	LC	Indigenous
Poaceae	Elionurus muticus	(Spreng.) Kunth	LC	Indigenous
Rubiaceae	Empogona lanceolata	(Sond.) Tosh & Robbr.		Indigenous
Sapotaceae	Englerophytum magalismontanum	(Sond.) T.D.Penn.	LC	Indigenous
Poaceae	Enneapogon pretoriensis	Stent	LC	Indigenous
Poaceae	Enneapogon scoparius	Stapf	LC	Indigenous
Entodontaceae	Entodon cymbifolius	Wager & Dixon		Indigenous
Entodontaceae	Entodon macropodus	(Hedw.) Mull.Hal.		Indigenous
Onagraceae	Epilobium hirsutum	L.	LC	Indigenous
Equisetaceae	Equisetum ramosissimum	Desf.	LC	Indigenous
Poaceae	Eragrostis barbinodis	Hack.	LC	Indigenous
Poaceae	Eragrostis capensis	(Thunb.) Trin.	LC	Indigenous
Poaceae	Eragrostis chloromelas	Steud.	LC	Indigenous
Poaceae	Eragrostis curvula	(Schrad.) Nees	LC	Indigenous
Poaceae	Eragrostis gummiflua	Nees	LC	Indigenous
Poaceae	Eragrostis heteromera	Stapf	LC	Indigenous
Poaceae	Eragrostis lehmanniana	Nees	LC	Indigenous
Poaceae	Eragrostis nindensis	Ficalho & Hiern	LC	Indigenous
Poaceae	Eragrostis patentipilosa	Hack.	LC	Indigenous
Poaceae	Eragrostis planiculmis	Nees	LC	Indigenous
Poaceae	Eragrostis racemosa	(Thunb.) Steud.	LC	Indigenous
Poaceae	Eragrostis rigidior	Pilg.	LC	Indigenous
Poaceae	Eragrostis sclerantha	Nees	LC	Indigenous
Poaceae	Eragrostis sp.			
Poaceae	Eragrostis superba	Peyr.	LC	Indigenous
Ericaceae	Erica woodii	Bolus	LC	Indigenous
Poaceae	Eriochloa fatmensis	(Hochst. & Steud.) Clayton	LC	Indigenous
Fabaceae	Eriosema burkei	Benth. ex Harv.	LC	Indigenous
Fabaceae	Eriosema cordatum	E.Mey.	LC	Indigenous
Ruscaceae	Eriospermum cooperi	Baker	LC	Indigenous
Ruscaceae	Eriospermum flagelliforme	(Baker) J.C.Manning	LC	Indigenous
Erpodiaceae	Erpodium coronatum	(Hook.f. & Wilson) Mitt.		Indigenous
Fabaceae	Erythrina lysistemon	Hutch.	LC	Indigenous
Ebenaceae	Euclea crispa	(Thunb.) Gurke	LC	Indigenous
Ebenaceae	Euclea natalensis	A.DC.	LC	Indigenous
Ebenaceae	Euclea sp.			

Hyacinthaceae	Eucomis autumnalis	(Mill.) Chitt.	NE	Indigenous
Orchidaceae	Eulophia ovalis	Lindl.	LC	Indigenous
Orchidaceae	Eulophia streptopetala	Lindl.	LC	Indigenous
Euphorbiaceae	Euphorbia cooperi	N.E.Br. ex A.Berger		Indigenous
Euphorbiaceae	Euphorbia hirsuta	L.		Not indigenous; Naturalised; Invasive
Euphorbiaceae	Euphorbia inaequilatera	Sond.	LC	Indigenous
Euphorbiaceae	Euphorbia inaequilatera	Sond.	NE	Indigenous
Euphorbiaceae	Euphorbia indica	Lam.	NE	Not indigenous; Naturalised
Euphorbiaceae	Euphorbia natalensis	Bernh. ex Krauss	LC	Indigenous
Euphorbiaceae	Euphorbia pseudotuberosa	Pax	LC	Indigenous
Euphorbiaceae	Euphorbia schinzii	Pax	LC	Indigenous
Euphorbiaceae	Euphorbia spartaria	N.E.Br.	LC	Indigenous
Poaceae	Eustachys paspaloides	(Vahl) Lanza & Mattei	LC	Indigenous
Convolvulaceae	Evolvulus alsinoides	(L.) L.	LC	Indigenous
Gentianaceae	Exochaenium grande	(E.Mey.) Griseb.	LC	Indigenous
Exormothecaceae	Exormotheca holstii	Steph.		Indigenous
Fabroniaceae	Fabronia pilifera	Hornsch.		Indigenous
Fabroniaceae	Fabronia sp.			
Proteaceae	Faurea saligna	Harv.	LC	Indigenous
Asteraceae	Felicia fascicularis	DC.	LC	Indigenous
Asteraceae	Felicia muricata	(Thunb.) Nees	LC	Indigenous
Moraceae	Ficus abutilifolia	(Miq.) Miq.	LC	Indigenous
Moraceae	Ficus ingens	(Miq.) Miq.	LC	Indigenous
Moraceae	Ficus ingens	(Miq.) Miq.		Indigenous
Moraceae	Ficus salicifolia	Vahl	LC	Indigenous
Moraceae	Ficus thonningii	Blume		Indigenous
Cyperaceae	Fimbristylis dichotoma	(L.) Vahl	LC	Indigenous
Poaceae	Fingerhuthia africana	Lehm.	LC	Indigenous
Fissidentaceae	Fissidens bogosicus	Mull.Hal.		Indigenous
Fissidentaceae	Fissidens palmifolius	(P.Beauv.) Broth.		Indigenous
Fissidentaceae	Fissidens rufescens	Hornsch.		Indigenous
Fissidentaceae	Fissidens sp.			
Fissidentaceae	Fissidens submarginatus	Bruch		Indigenous
Asteraceae	Flaveria bidentis	(L.) Kuntze		Not indigenous; Naturalised; Invasive
Fossombroniaceae	Fossombronia gemmifera	Perold		Indigenous
Iridaceae	Freesia grandiflora	(Baker) Klatt	LC	Indigenous
Frullaniaceae	Frullania ericoides	(Nees) Mont.		Indigenous
Cyperaceae	Fuirena pubescens	(Poir.) Kunth	LC	Indigenous
Cyperaceae	Fuirena stricta	Steud.	LC	Indigenous
Funariaceae	Funaria hygrometrica	Hedw.		Indigenous

Asteraceae	Galinsoga parviflora	Cav.		Not indigenous; Naturalised
Asteraceae	Garuleum woodii	Schinz	LC	Indigenous
Asteraceae	Gazania krebsiana	Less.	LC	Indigenous
Asteraceae	Geigeria burkei	Harv.	NE	Indigenous
Asteraceae	Geigeria burkei	Harv.	NE	Indigenous
Asteraceae	Geigeria sp.			
Asteraceae	Gerbera ambigua	(Cass.) Sch.Bip.	LC	Indigenous
Asteraceae	Gerbera piloselloides	(L.) Cass.	LC	Indigenous
Gisekiaceae	Gisekia pharnaceoides	L.	LC	Indigenous
Iridaceae	Gladiolus permeabilis	D.Delaroche	LC	Indigenous
Iridaceae	Gladiolus pretoriensis	Kuntze	LC	Indigenous; Endemic
Iridaceae	Gladiolus sericeovillosus	Hook.f.	LC	Indigenous
Verbenaceae	Glandularia aristigera	(S.Moore) Tronc.		Not indigenous; Naturalised; Invasive
Colchicaceae	Gloriosa modesta	(Hook.) J.C.Manning & Vinn.	LC	Indigenous
Thymelaeaceae	Gnidia nodiflora	Meisn.	LC	Indigenous; Endemic
Apocynaceae	Gomphocarpus fruticosus	(L.) W.T.Aiton	LC	Indigenous
Apocynaceae	Gomphocarpus glaucophyllus	Schltr.	LC	Indigenous
Scrophulariaceae	Gomphostigma virgatum	(L.f.) Baill.	LC	Indigenous
Amaranthaceae	Gomphrena celosioides	Mart.		Not indigenous; Naturalised
Orobanchaceae	Graderia subintegra	Mast.	LC	Indigenous
Malvaceae	Grewia flava	DC.	LC	Indigenous
Malvaceae	Grewia monticola	Sond.	LC	Indigenous
Malvaceae	Grewia occidentalis	L.	LC	Indigenous
Celastraceae	Gymnosporia buxifolia	(L.) Szyszyl.	LC	Indigenous
Celastraceae	Gymnosporia polyacantha	(Sond.) Szyszyl.	LC	Indigenous; Endemic
Celastraceae	Gymnosporia sp.			
Celastraceae	Gymnosporia tenuispina	(Sond.) Szyszyl.	LC	Indigenous
Orchidaceae	Habenaria nyikana	Rchb.f.	LC	Indigenous
Orchidaceae	Habenaria schimperiana	Hochst. ex A.Rich.	LC	Indigenous
Orchidaceae	Habenaria tridens	Lindl.	LC	Indigenous
Amaryllidaceae	Haemanthus humilis	Jacq.	LC	Indigenous
Stilbaceae	Halleria lucida	L.	LC	Indigenous
Pedaliaceae	Harpagophytum zeyheri	Decne.	LC	Indigenous
Orobanchaceae	Harveya pumila	Schltr.	LC	Indigenous
Lythraceae	Heimia myrtifolia	Cham. & Schltdl.		Not indigenous; Naturalised; Invasive
Asteraceae	Helichrysum caespititium	(DC.) Harv.	LC	Indigenous
Asteraceae	Helichrysum callicomum	Harv.	LC	Indigenous
Asteraceae	Helichrysum cerastioides	DC.	LC	Indigenous

Asteraceae	Helichrysum chionosphaerum	DC.	LC	Indigenous
Asteraceae	Helichrysum harveyanum	Wild	LC	Indigenous
Asteraceae	Helichrysum nudifolium	(L.) Less.	LC	Indigenous
Asteraceae	Helichrysum nudifolium	(L.) Less.	LC	Indigenous
Asteraceae	Helichrysum rugulosum	Less.	LC	Indigenous
Asteraceae	Helichrysum setosum	Harv.	LC	Indigenous
Asteraceae	Helichrysum stenopterum	DC.	LC	Indigenous
Rhamnaceae	Helinus integrifolius	(Lam.) Kuntze	LC	Indigenous
Boraginaceae	Heliotropium amplexicaule	Vahl		Not indigenous; Naturalised; Invasive
Boraginaceae	Heliotropium ciliatum	Kaplan	LC	Indigenous
Poaceae	Hemarthria altissima	(Poir.) Stapf & C.E.Hubb.	LC	Indigenous
Malvaceae	Hermannia boraginiflora	Hook.	LC	Indigenous
Malvaceae	Hermannia burkei	Burtt Davy	LC	Indigenous
Malvaceae	Hermannia cordata	(E.Mey. ex E.Phillips) De Winter	LC	Indigenous; Endemic
Malvaceae	Hermannia depressa	N.E.Br.	LC	Indigenous
Malvaceae	Hermannia floribunda	Harv.	LC	Indigenous
Malvaceae	Hermannia grandifolia	N.E.Br.	LC	Indigenous
Malvaceae	Hermannia lancifolia	Szyszyl.	LC	Indigenous; Endemic
Iridaceae	Hesperantha longicollis	Baker	LC	Indigenous
Apiaceae	Heteromorpha arborescens	(Spreng.) Cham. & Schltdl.	LC	Indigenous
Poaceae	Heteropogon contortus	(L.) Roem. & Schult.	LC	Indigenous
Malvaceae	Hibiscus aethiopicus	L.	LC	Indigenous
Malvaceae	Hibiscus calyphyllus	Cav.	LC	Indigenous
Malvaceae	Hibiscus engleri	K.Schum.	LC	Indigenous
Malvaceae	Hibiscus microcarpus	Garcke	LC	Indigenous
Malvaceae	Hibiscus subreniformis	Burtt Davy	LC	Indigenous
Malvaceae	Hibiscus trionum	L.		Not indigenous; Naturalised
Asteraceae	Hilliardiella aristata	(DC.) H.Rob.	LC	Indigenous
Asteraceae	Hilliardiella elaeagnoides	(DC.) Swelank. & J.C.Manning		Indigenous
Asteraceae	Hilliardiella sutherlandii	(Harv.) H.Rob.		Indigenous
Poaceae	Hyparrhenia hirta	(L.) Stapf	LC	Indigenous
Poaceae	Hyparrhenia tamba	(Steud.) Stapf	LC	Indigenous
Hypericaceae	Hypericum aethiopicum	Thunb.	LC	Indigenous
Hypoxidaceae	Hypoxis argentea	Harv. ex Baker	LC	Indigenous
Hypoxidaceae	Hypoxis hemerocallidea	Fisch., C.A.Mey. & Ave-Lall.	LC	Indigenous
Hypoxidaceae	Hypoxis iridifolia	Baker	LC	Indigenous

Hypoxidaceae	Hypoxis rigidula	Baker	LC	Indigenous
Hypoxidaceae	Hypoxis rigidula	Baker	LC	Indigenous
Poaceae	Imperata cylindrica	(L.) P.Beauv.		Indigenous
Fabaceae	Indigastrum burkeanum	(Benth. ex Harv.) Schrire	LC	Indigenous
Fabaceae	Indigofera comosa	N.E.Br.	LC	Indigenous
Fabaceae	Indigofera confusa	Prain & Baker f.	LC	Indigenous
Fabaceae	Indigofera frondosa	N.E.Br.	LC	Indigenous
Fabaceae	Indigofera hedyantha	Eckl. & Zeyh.	LC	Indigenous
Fabaceae	Indigofera heterotricha	DC.	LC	Indigenous
Fabaceae	Indigofera hilaris	Eckl. & Zeyh.	LC	Indigenous
Fabaceae	Indigofera hilaris	Eckl. & Zeyh.		Indigenous
Fabaceae	Indigofera melanadenia	Benth. ex Harv.	LC	Indigenous
Fabaceae	Indigofera oxalidea	Welw. ex Baker	LC	Indigenous
Fabaceae	Indigofera sp.			
Convolvulaceae	Ipomoea bathycolpos	Hallier f.	LC	Indigenous; Endemic
Convolvulaceae	Ipomoea bolusiana	Schinz	LC	Indigenous
Convolvulaceae	Ipomoea crassipes	Hook.	LC	Indigenous
Convolvulaceae	Ipomoea gracilisepala	Rendle	LC	Indigenous
Convolvulaceae	Ipomoea oblongata	E.Mey. ex Choisy	LC	Indigenous
Convolvulaceae	Ipomoea obscura	(L.) Ker Gawl.	LC	Indigenous
Convolvulaceae	Ipomoea ommanneyi	Rendle	LC	Indigenous
Convolvulaceae	Ipomoea transvaalensis	A.Meeuse	LC	Indigenous
Iridaceae	Iris pseudacorus	L.		Not indigenous; Cultivated; Naturalised; Invasive
Acanthaceae	Isoglossa woodii	C.B.Clarke	LC	Indigenous; Endemic
Cyperaceae	Isolepis cernua	(Vahl) Roem. & Schult.	LC	Indigenous
Scrophulariaceae	Jamesbrittenia atropurpurea	(Benth.) Hilliard	LC	Indigenous
Scrophulariaceae	Jamesbrittenia sp.			
Oleaceae	Jasminum quinatum	Schinz	LC	Indigenous; Endemic
Juncaceae	Juncus effusus	L.	LC	Indigenous
Juncaceae	Juncus exsertus	Buchenau	LC	Indigenous
Juncaceae	Juncus punctorius	L.f.	LC	Indigenous
Acanthaceae	Justicia sp.			
Crassulaceae	Kalanchoe paniculata	Harv.	LC	Indigenous
Crassulaceae	Kalanchoe rotundifolia	(Haw.) Haw.	LC	Indigenous
Crassulaceae	Kalanchoe thyrsiflora	Harv.	LC	Indigenous
Achariaceae	Kiggelaria africana	L.	LC	Indigenous
Poaceae	Koeleria capensis	(Steud.) Nees	LC	Indigenous
Rubiaceae	Kohautia amatymbica	Eckl. & Zeyh.	LC	Indigenous
Rubiaceae	Kohautia caespitosa	Schnizl.	LC	Indigenous
Rubiaceae	Kohautia cynanchica	DC.	LC	Indigenous

Cyperaceae	Kyllinga alba	Nees	LC	Indigenous
Cyperaceae	Kyllinga melanosperma	Nees	LC	Indigenous
Fabaceae	Lablab purpureus	(L.) Sweet	LC	Indigenous
Asteraceae	Lactuca inermis	Forssk.	LC	Indigenous
Asteraceae	Laggera decurrens	(Vahl) Hepper & J.R.I.Wood	LC	Indigenous
Anacardiaceae	Lannea discolor	(Sond.) Engl.	LC	Indigenous
Anacardiaceae	Lannea edulis	(Sond.) Engl.	LC	Indigenous
Verbenaceae	Lantana rugosa	Thunb.	LC	Indigenous
Thymelaeaceae	Lasiosiphon capitatus	(L.f.) Burtt Davy	LC	Indigenous
Thymelaeaceae	Lasiosiphon microcephalus	(Meisn.) J.C.Manning & Magee		Indigenous
Thymelaeaceae	Lasiosiphon sericocephalus	(Meisn.) J.C.Manning & Boatwr.	LC	Indigenous
Hyacinthaceae	Ledebouria confusa	S.Venter	LC	Indigenous
Hyacinthaceae	Ledebouria cooperi	(Hook.f.) Jessop	LC	Indigenous
Hyacinthaceae	Ledebouria inquinata	(C.A.Sm.) Jessop	LC	Indigenous
Hyacinthaceae	Ledebouria luteola	Jessop	LC	Indigenous
Hyacinthaceae	Ledebouria marginata	(Baker) Jessop	LC	Indigenous
Hyacinthaceae	Ledebouria ovatifolia	(Baker) Jessop		Indigenous
Poaceae	Leersia hexandra	Sw.	LC	Indigenous
Araceae	Lemna gibba	L.	LC	Indigenous
Fabaceae	Leobordea divaricata	Eckl. & Zeyh.	LC	Indigenous
Fabaceae	Leobordea eriantha	(Benth.) B E.van Wyk & Boatwr.	LC	Indigenous
Fabaceae	Leobordea pulchra	(Dummer) B E.van Wyk & Boatwr.	LC	Indigenous
Lamiaceae	Leonotis martinicensis	(Jacq.) J.C.Manning & Goldblatt	LC	Indigenous
Brassicaceae	Lepidium africanum	(Burm.f.) DC.	LC	Indigenous
Brassicaceae	Lepidium bonariense	L.		Not indigenous; Naturalised
Brassicaceae	Lepidium transvaalense	Marais	LC	Indigenous
Fabaceae	Lessertia frutescens	(L.) Goldblatt & J.C.Manning	LC	Indigenous
Scrophulariaceae	Limosella sp.			
Linaceae	Linum thunbergii	Eckl. & Zeyh.	LC	Indigenous
Verbenaceae	Lippia javanica	(Burm.f.) Spreng.	LC	Indigenous
Fabaceae	Listia heterophylla	E.Mey.	LC	Indigenous
Lobeliaceae	Lobelia erinus	L.	LC	Indigenous
Lobeliaceae	Lobelia thermalis	Thunb.	LC	Indigenous

Fabaceae	Lotononis sp.			
Fabaceae	Lotononis tenella	(E.Mey.) Eckl. & Zeyh.	LC	Indigenous; Endemic
Poaceae	Loudetia flavida	(Stapf) C.E.Hubb.	LC	Indigenous
Poaceae	Loudetia simplex	(Nees) C.E.Hubb.	LC	Indigenous
Solanaceae	Lycium cinereum	Thunb.	LC	Indigenous
Asteraceae	Macledium zeyheri	(Sond.) S.Ortiz	LC	Indigenous
Capparaceae	Maerua cafra	(DC.) Pax	LC	Indigenous
Capparaceae	Maerua juncea	Pax	LC	Indigenous
Aytoniaceae	Mannia capensis	(Steph.) S.W.Arnell		Indigenous
Marchantiaceae	Marchantia debilis	K.I.Goebel		Indigenous
Celastraceae	Maytenus undata	(Thunb.) Blakelock	LC	Indigenous
Malvaceae	Melhania transvaalensis	Szyszyl.	LC	Indigenous; Endemic
Poaceae	Melica racemosa	Thunb.	LC	Indigenous
Poaceae	Melinis nerviglumis	(Franch.) Zizka	LC	Indigenous
Poaceae	Melinis repens	(Willd.) Zizka	LC	Indigenous
Fabaceae	Melolobium subspicatum	Conrath	VU	Indigenous; Endemic
Oleaceae	Menodora africana	Hook.	LC	Indigenous
Convolvulaceae	Merremia verecunda	Rendle	LC	Indigenous
Aizoaceae	Mesembryanthemum cordifolium	L.f.		Indigenous; Endemic
Poaceae	Microchloa caffra	Nees	LC	Indigenous
Sapotaceae	Mimusops zeyheri	Sond.	LC	Indigenous
Anemiaceae	Mohria vestita	Baker	L	Indigenous
Geraniaceae	Monsonia angustifolia	E.Mey. ex A.Rich.	LC	Indigenous
Geraniaceae	Monsonia burkeana	Planch. ex Harv.	LC	Indigenous
Geraniaceae	Monsonia grandifolia	R.Knuth	LC	Indigenous; Endemic
Iridaceae	Moraea stricta	Baker	LC	Indigenous
Myricaceae	Morella serrata	(Lam.) Killick	LC	Indigenous
Moraceae	Morus sp.			
Fabaceae	Mundulea sericea	(Willd.) A.Chev.	LC	Indigenous
Myrothamnaceae	Myrothamnus flabellifolius	Welw.	DD	Indigenous
Myrsinaceae	Myrsine africana	L.	LC	Indigenous
Celastraceae	Mystroxylon aethiopicum	(Thunb.) Loes.	LC	Indigenous; Endemic
Hydrocharitaceae	Najas horrida	A.Braun ex Rendle		Indigenous
Brassicaceae	Nasturtium officinale	W.T.Aiton		Not indigenous; Naturalised; Invasive
Scrophulariaceae	Nemesia rupicola	Hilliard	LC	Indigenous
Scrophulariaceae	Nemesia sp.			

Fabaceae	Neonotonia wightii	(Wight ex Arn.) J.A.Lackey	LC	Indigenous
Fabaceae	Neorautanenia ficifolia	(Benth.) C.A.Sm.	LC	Indigenous
Amaryllidaceae	Nerine sp.			
Solanaceae	Nicotiana glauca	Graham		Not indigenous; Naturalised; Invasive
Asteraceae	Nidorella hottentotica	DC.	LC	Indigenous
Asteraceae	Nolletia rarifolia	(Turcz.) Steetz	LC	Indigenous; Endemic
Stilbaceae	Nuxia congesta	R.Br. ex Fresen.	LC	Indigenous
Stilbaceae	Nuxia glomerulata	(C.A.Sm.) I.Verd.	LC	Indigenous; Endemic
Urticaceae	Obetia tenax	(N.E.Br.) Friis	LC	Indigenous
Ochnaceae	Ochna pulchra	Hook.f.	LC	Indigenous
Lamiaceae	Ocimum angustifolium	Benth.	LC	Indigenous
Lamiaceae	Ocimum obovatum	E.Mey. ex Benth.	NE	Indigenous
Onagraceae	Oenothera affinis	Cambess.		Not indigenous; Naturalised; Invasive
Onagraceae	Oenothera rosea	L'Her. ex Aiton		Not indigenous; Naturalised; Invasive
Onagraceae	Oenothera tetraptera	Cav.		Not indigenous; Naturalised; Invasive
Rubiaceae	Oldenlandia herbacea	(L.) Roxb.	LC	Indigenous
Oleaceae	Olea europaea	L.		Indigenous
Oleandraceae	Oleandra distenta	Kunze	LC	Indigenous
Oliniaceae	Olinia emarginata	Burtt Davy	LC	Indigenous
Asteraceae	Oocephala staehelinoides	(Harv.) H.Rob. & Skvarla		Indigenous; Endemic
Ophioglossaceae	Ophioglossum polyphyllum	A.Braun	LC	Indigenous
Fabaceae	Ophrestia oblongifolia	(E.Mey.) H.M.L.Forbes	LC	Indigenous
Apocynaceae	Orbea lutea	(N.E.Br.) Bruyns	LC	Indigenous
Colchicaceae	Ornithoglossum viride	(L.f.) Aiton	LC	Indigenous; Endemic
Colchicaceae	Ornithoglossum vulgare	B.Nord.	LC	Indigenous
Asteraceae	Osteospermum muricatum	E.Mey. ex DC.	LC	Indigenous
Asteraceae	Osteospermum scariosum	DC.	NE	Indigenous
Santalaceae	Osyris lanceolata	Hochst. & Steud.	LC	Indigenous
Rubiaceae	Otiophora calycophylla	(Sond.) Schltr. & K.Schum.	LC	Indigenous; Endemic
Oxalidaceae	Oxalis corniculata	L.		Not indigenous; Naturalised; Invasive
Oxalidaceae	Oxalis depressa	Eckl. & Zeyh.	LC	Indigenous
Oxalidaceae	Oxalis latifolia	Kunth		Not indigenous; Naturalised; Invasive
Oxalidaceae	Oxalis obliquifolia	Steud. ex A.Rich.	LC	Indigenous

Polygonaceae	Oxygonum dregeanum	Meisn.	NE	Indigenous
Anacardiaceae	Ozoroa paniculosa	(Sond.) R.Fern. & A.Fern.	LC	Indigenous
Anacardiaceae	Ozoroa paniculosa	(Sond.) R.Fern. & A.Fern.	LC	Indigenous
Anacardiaceae	Ozoroa sphaerocarpa	R.Fern. & A.Fern.	LC	Indigenous
Apocynaceae	Pachycarpus schinzianus	(Schltr.) N.E.Br.	LC	Indigenous
Poaceae	Panicum coloratum	L.	LC	Indigenous
Poaceae	Panicum maximum	Jacq.	LC	Indigenous
Poaceae	Panicum natalense	Hochst.	LC	Indigenous
Poaceae	Panicum schinzii	Hack.	LC	Indigenous
Papaveraceae	Papaver aculeatum	Thunb.	LC	Indigenous
Sapindaceae	Pappea capensis	Eckl. & Zeyh.	LC	Indigenous
Chrysobalanaceae	Parinari capensis	Harv.	LC	Indigenous
Poaceae	Paspalum distichum	L.	LC	Not indigenous; Naturalised; Invasive
Poaceae	Paspalum scrobiculatum	L.	LC	Indigenous
Poaceae	Paspalum urvillei	Steud.	NE	Not indigenous; Naturalised; Invasive
Apiaceae	Pastinaca sativa	L.		Not indigenous; Naturalised
Rubiaceae	Pavetta gardeniifolia	A.Rich.	LC	Indigenous
Rubiaceae	Pavetta gardeniifolia	A.Rich.	LC	Indigenous
Rubiaceae	Pavetta zeyheri	Sond.	LC	Indigenous
Malvaceae	Pavonia burchellii	(DC.) R.A.Dyer	LC	Indigenous
Fabaceae	Pearsonia bracteata	(Benth.) Polhill	NT	Indigenous; Endemic
Fabaceae	Pearsonia cajanifolia	(Harv.) Polhill	LC	Indigenous; Endemic
Fabaceae	Pearsonia sessilifolia	(Harv.) Dummer	LC	Indigenous
Fabaceae	Pearsonia uniflora	(Kensit) Polhill	LC	Indigenous
Geraniaceae	Pelargonium luridum	(Andrews) Sweet	LC	Indigenous
Thuidiaceae	Pelekium versicolor	(Hornsch. ex Mull.Hal.) Touw		Indigenous
Pteridaceae	Pellaea calomelanos	(Sw.) Link	LC	Indigenous
Rubiaceae	Pentanisia angustifolia	(Hochst.) Hochst.	LC	Indigenous
Apocynaceae	Pentarrhinum insipidum	E.Mey.	LC	Indigenous
Asteraceae	Pentzia monocephala	S.Moore	LC	Indigenous
Bartramiaceae	Philonotis dregeana	(Mull.Hal.) A.Jaeger		Indigenous
Bartramiaceae	Philonotis falcata	(Hook.) Mitt.		Indigenous
Bartramiaceae	Philonotis hastata	(Duby) Wijk & Margad.		Indigenous
Poaceae	Phragmites australis	(Cav.) Steud.	LC	Indigenous
Phyllanthaceae	Phyllanthus incurvus	Thunb.	LC	Indigenous

Phyllanthaceae	Phyllanthus parvulus	Sond.	LC	Indigenous
Phyllanthaceae	Phyllanthus parvulus	Sond.	LC	Indigenous
Asteraceae	Phymaspermum athanasioides	(S.Moore) Kallersjo	LC	Indigenous
Phytolaccaceae	Phytolacca heptandra	Retz.	LC	Indigenous
Pittosporaceae	Pittosporum viridiflorum	Sims	LC	Indigenous
Aytoniaceae	Plagiochasma appendiculatum	Lehm. & Lindenb.		Indigenous
Aytoniaceae	Plagiochasma microcephalum	(Steph.) Steph.		Indigenous
Aytoniaceae	Plagiochasma rupestre	(J.R.Forst. & G.Forst.) Steph.		Indigenous
Aytoniaceae	Plagiochasma rupestre	(J.R.Forst. & G.Forst.) Steph.		Indigenous
Plantaginaceae	Plantago major	L.		Not indigenous; Naturalised
Plantaginaceae	Plantago sp.			
Lamiaceae	Plectranthus grallatus	Briq.	LC	Indigenous
Lamiaceae	Plectranthus hereroensis	Engl.	LC	Indigenous
Lamiaceae	Plectranthus montanus	Benth.		Indigenous
Lamiaceae	Plectranthus ramosior	(Benth.) Van Jaarsv.	LC	Indigenous; Endemic
Plumbaginaceae	Plumbago zeylanica	L.		Not indigenous; Naturalised
Poaceae	Pogonarthria squarrosa	(Roem. & Schult.) Pilg.	LC	Indigenous
Polygalaceae	Polygala albida	Schinz	LC	Indigenous
Polygalaceae	Polygala hottentotta	C.Presl	LC	Indigenous
Polygalaceae	Polygala krumanina	Burch. ex Ficalho & Hiern	LC	Indigenous; Endemic
Polygalaceae	Polygala producta	N.E.Br.	LC	Indigenous
Polygalaceae	Polygala serpentaria	Eckl. & Zeyh.	LC	Indigenous
Polygalaceae	Polygala transvaalensis	Chodat	LC	Indigenous
Pontederiaceae	Pontederia cordata	L.		Not indigenous; Naturalised
Portulacaceae	Portulaca pilosa	L.	LC	Indigenous
Potamogetonacea e	Potamogeton pusillus	L.	LC	Indigenous
Potamogetonacea e	Potamogeton schweinfurthii	A.Benn.	LC	Indigenous
Rosaceae	Potentilla indica	(Andrews) Th.Wolf		Not indigenous; Cultivated; Naturalised; Invasive
Urticaceae	Pouzolzia mixta	Solms	LC	Indigenous
Verbenaceae	Priva meyeri	Jaub. & Spach	LC	Indigenous
Proteaceae	Protea gaguedi	J.F.Gmel.	LC	Indigenous
Molluginaceae	Psammotropha mucronata	(Thunb.) Fenzl	LC	Indigenous
Molluginaceae	Psammotropha myriantha	Sond.	LC	Indigenous

Asteraceae	Pseudognaphalium oligandrum	(DC.) Hilliard & B.L.Burtt	LC	Indigenous
Leskeaceae	Pseudoleskea leskeoides	(Paris) Mull.Hal.		Indigenous
Asteraceae	Pseudopegolettia tenella	(DC.) H.Rob., Skvarla & V.A.Funk		Indigenous
Asteraceae	Psiadia punctulata	(DC.) Vatke	LC	Indigenous
Pteridaceae	Pteris cretica	L.	LC	Indigenous
Pteridaceae	Pteris vittata	L.	LC	Indigenous
Celastraceae	Pterocelastrus echinatus	N.E.Br.	LC	Indigenous
Cyperaceae	Pycreus unioloides	(R.Br.) Urb.	LC	Indigenous
Rubiaceae	Pygmaeothamnus zeyheri	(Sond.) Robyns	LC	Indigenous
Racopilaceae	Racopilum capense	Mull.Hal. ex Broth.		Indigenous
Ranunculaceae	Ranunculus multifidus	Forssk.	LC	Indigenous
Apocynaceae	Raphionacme galpinii	Schltr.	LC	Indigenous
Apocynaceae	Raphionacme hirsuta	(E.Mey.) R.A.Dyer	LC	Indigenous
Apocynaceae	Raphionacme sp.			
Apocynaceae	Rauvolfia caffra	Sond.	LC	Indigenous
Rhamnaceae	Rhamnus prinoides	L'Her.	LC	Indigenous
Vitaceae	Rhoicissus tridentata	(L.f.) Wild & R.B.Drumm.	NE	Indigenous
Fabaceae	Rhynchosia caribaea	(Jacq.) DC.	LC	Indigenous
Fabaceae	Rhynchosia minima	(L.) DC.	NE	Indigenous
Fabaceae	Rhynchosia nervosa	Benth. ex Harv.	LC	Indigenous
Fabaceae	Rhynchosia nitens	Benth. ex Harv.	LC	Indigenous
Fabaceae	Rhynchosia totta	(Thunb.) DC.		Indigenous
Fabaceae	Rhynchosia totta	(Thunb.) DC.	LC	Indigenous
Ricciaceae	Riccia albolimbata	S.W.Arnell		Indigenous
Ricciaceae	Riccia atropurpurea	Sim		Indigenous
Ricciaceae	Riccia congoana	Steph.		Indigenous
Ricciaceae	Riccia okahandjana	S.W.Arnell		Indigenous
Ricciaceae	Riccia simii	Perold		Indigenous
Rubiaceae	Richardia brasiliensis	Gomes	NE	Not indigenous; Naturalised
Euphorbiaceae	Ricinus communis	L.	NE	Not indigenous; Cultivated; Naturalised; Invasive
Apocynaceae	Riocreuxia polyantha	Schltr.	LC	Indigenous
Lamiaceae	Rotheca hirsuta	(Hochst.) R.Fern.	LC	Indigenous
Lamiaceae	Rotheca louwalbertsii	(P.P.J.Herma n) P.P.J.Herman & Retief	LC	Indigenous
Rubiaceae	Rubia horrida	(Thunb.) Puff	LC	Indigenous
Rubiaceae	Rubia petiolaris	DC.	LC	Indigenous

Rosaceae	Rubus rigidus	Sm.	LC	Indigenous
Acanthaceae	Ruellia cordata	Thunb.	LC	Indigenous
Acanthaceae	Ruellia patula	Jacq.	LC	Indigenous
Celastraceae	Salacia rehmannii	Schinz	LC	Indigenous; Endemic
Salicaceae	Salix babylonica	L.		Not indigenous; Naturalised
Salicaceae	Salix mucronata	Thunb.	LC	Indigenous
Lamiaceae	Salvia reflexa	Hornem.		Not indigenous; Naturalised; Invasive
Lamiaceae	Salvia repens	Burch. ex Benth.	LC	Indigenous
Lamiaceae	Salvia runcinata	L.f.	LC	Indigenous
Lamiaceae	Satureja biflora	(BuchHam. ex D.Don) Briq.	LC	Indigenous
Dipsacaceae	Scabiosa columbaria	L.	LC	Indigenous
Amaryllidaceae	Scadoxus puniceus	(L.) Friis & Nordal	LC	Indigenous
Asteraceae	Schistostephium crataegifolium	(DC.) Fenzl ex Harv.	LC	Indigenous
Poaceae	Schizachyrium sanguineum	(Retz.) Alston	LC	Indigenous
Hyacinthaceae	Schizocarphus nervosus	(Burch.) Van der Merwe	LC	Indigenous
Apocynaceae	Schizoglossum nitidum	Schltr.	LC	Indigenous
Asteraceae	Schkuhria pinnata	(Lam.) Kuntze ex Thell.		Not indigenous; Naturalised
Cyperaceae	Schoenoplectus brachyceras	(Hochst. ex A.Rich.) Lye	LC	Indigenous
Cyperaceae	Schoenoplectus muricinux	(C.B.Clarke) J.Raynal	LC	Indigenous
Cyperaceae	Scleria bulbifera	Hochst. ex A.Rich.	LC	Indigenous
Cyperaceae	Scleria dregeana	Kunth	LC	Indigenous
Salicaceae	Scolopia zeyheri	(Nees) Harv.	LC	Indigenous
Lamiaceae	Scutellaria racemosa	Pers.		Not indigenous; Naturalised
Anacardiaceae	Searsia dentata	(Thunb.) F.A.Barkley	LC	Indigenous
Anacardiaceae	Searsia discolor	(E.Mey. ex Sond.) Moffett	LC	Indigenous
Anacardiaceae	Searsia lancea	(L.f.) F.A.Barkley	LC	Indigenous
Anacardiaceae	Searsia leptodictya	(Diels) T.S.Yi, A.J.Mill. & J.Wen	NE	Indigenous
Anacardiaceae	Searsia magalismontana	(Sond.) Moffett	LC	Indigenous
Anacardiaceae	Searsia pallens	(Eckl. & Zeyh.) Moffett	LC	Indigenous
Anacardiaceae	Searsia pyroides	(Burch.) Moffett	LC	Indigenous
Anacardiaceae	Searsia pyroides	(Burch.) Moffett	LC	Indigenous
Anacardiaceae	Searsia rigida	(Mill.) F.A.Barkley	LC	Indigenous; Endemic

Anacardiaceae	Searsia rigida	(Mill.) F.A.Barkley	LC	Indigenous; Endemic
Anacardiaceae	Searsia rigida	(Mill.) F.A.Barkley	LC	Indigenous; Endemic
Anacardiaceae	Searsia undulata	(Jacq.) T.S.Yi, A.J.Mill. & J.Wen	LC	Indigenous
Anacardiaceae	Searsia zeyheri	(Sond.) Moffett	LC	Indigenous; Endemic
Gentianaceae	Sebaea sedoides	Gilg	LC	Indigenous
Apocynaceae	Secamone alpini	Schult.	LC	Indigenous
Selaginellaceae	Selaginella caffrorum	(Milde) Hieron.	LC	Indigenous
Selaginellaceae	Selaginella mittenii	Baker	LC	Indigenous
Scrophulariaceae	Selago densiflora	Rolfe	LC	Indigenous
Scrophulariaceae	Selago sp.			
Asteraceae	Senecio affinis	DC.	LC	Indigenous
Asteraceae	Senecio albanensis	DC.	LC	Indigenous
Asteraceae	Senecio barbertonicus	Klatt	LC	Indigenous
Asteraceae	Senecio coronatus	(Thunb.) Harv.	LC	Indigenous
Asteraceae	Senecio erubescens	Aiton	NE	Indigenous; Endemic
Asteraceae	Senecio hieracioides	DC.	LC	Indigenous
Asteraceae	Senecio lydenburgensis	Hutch. & Burtt Davy	LC	Indigenous
Asteraceae	Senecio oxyriifolius	DC.	LC	Indigenous
Asteraceae	Senecio pentactinus	Klatt	LC	Indigenous
Asteraceae	Senecio sp.			
Asteraceae	Senecio striatifolius	DC.	LC	Indigenous
Asteraceae	Senecio venosus	Harv.	LC	Indigenous
Fabaceae	Senegalia ataxacantha	(DC.) Kyal. & Boatwr.	LC	Indigenous
Fabaceae	Senegalia caffra	(Thunb.) P.J.H.Hurter & Mabb.	LC	Indigenous
Fabaceae	Senna italica	Mill.	LC	Indigenous
Asteraceae	Seriphium plumosum	L.		Indigenous
Pedaliaceae	Sesamum triphyllum	Welw. ex Asch.	LC	Indigenous
Fabaceae	Sesbania punicea	(Cav.) Benth.	NE	Not indigenous; Naturalised; Invasive
Poaceae	Setaria incrassata	(Hochst.) Hack.	LC	Indigenous
Poaceae	Setaria lindenbergiana	(Nees) Stapf	LC	Indigenous
Poaceae	Setaria megaphylla	(Steud.) T.Durand & Schinz	LC	Indigenous
Poaceae	Setaria plicatilis	(Hochst.) Hack. ex Engl.	LC	Indigenous
Poaceae	Setaria pumila	(Poir.) Roem. & Schult.	LC	Indigenous

Poaceae	Setaria sphacelata	(Schumach.) Stapf & C.E.Hubb. ex M.B.Moss	LC	Indigenous
Malvaceae	Sida chrysantha	Ulbr.	LC	Indigenous
Malvaceae	Sida dregei	Burtt Davy	LC	Indigenous
Malvaceae	Sida rhombifolia	L.	LC	Indigenous
Malvaceae	Sida spinosa	L.	LC	Indigenous
Malvaceae	Sida ternata	L.f.	LC	Indigenous
Brassicaceae	Sisymbrium officinale	(L.) Scop.		Not indigenous; Naturalised
Solanaceae	Solanum campylacanthum	Hochst. ex A.Rich.		Indigenous
Solanaceae	Solanum chenopodioides	Lam.		Not indigenous; Naturalised; Invasive
Solanaceae	Solanum humile	Lam.		Indigenous
Solanaceae	Solanum lichtensteinii	Willd.	LC	Indigenous
Solanaceae	Solanum retroflexum	Dunal	LC	Indigenous
Solanaceae	Solanum sisymbriifolium	Lam.		Not indigenous; Naturalised; Invasive
Asteraceae	Sonchus dregeanus	DC.	LC	Indigenous
Poaceae	Sorghum versicolor	Andersson	LC	Indigenous
Rubiaceae	Spermacoce senensis	(Klotzsch) Hiern	LC	Indigenous
Malpighiaceae	Sphedamnocarpus pruriens	(A.Juss.) Szyszyl.	LC	Indigenous
Malpighiaceae	Sphedamnocarpus pruriens	(A.Juss.) Szyszyl.	LC	Indigenous
Fabaceae	Sphenostylis angustifolia	Sond.	LC	Indigenous
Araceae	Spirodela punctata	(G.Mey.) C.H.Thomps.	LC	Indigenous
Poaceae	Sporobolus discosporus	Nees	LC	Indigenous
Poaceae	Sporobolus fimbriatus	(Trin.) Nees	LC	Indigenous
Poaceae	Sporobolus nitens	Stent	LC	Indigenous
Poaceae	Sporobolus sp.			
Poaceae	Sporobolus stapfianus	Gand.	LC	Indigenous
Lamiaceae	Stachys natalensis	Hochst.	LC	Indigenous
Lamiaceae	Stachys natalensis	Hochst.	LC	Indigenous
Apocynaceae	Stapelia gigantea	N.E.Br.	LC	Indigenous
Poaceae	Stipa dregeana	Steud.	LC	Indigenous
Poaceae	Stipagrostis uniplumis	(Licht.) De Winter	LC	Indigenous
Poaceae	Stipagrostis zeyheri	(Nees) De Winter	LC	Indigenous
Orobanchaceae	Striga asiatica	(L.) Kuntze	LC	Indigenous
Orobanchaceae	Striga elegans	Benth.	LC	Indigenous
Orobanchaceae	Striga gesnerioides	(Willd.) Vatke	LC	Indigenous
Loganiaceae	Strychnos pungens	Soler.	LC	Indigenous
Loganiaceae	Strychnos usambarensis	Gilg	LC	Indigenous
Fabaceae	Stylosanthes fruticosa	(Retz.) Alston	LC	Indigenous

Myrtaceae	Syzygium sp.			
Asteraceae	Tagetes minuta	L.		Not indigenous; Naturalised; Invasive
Loranthaceae	Tapinanthus quequensis	(Weim.) Polhill & Wiens	LC	Indigenous
Loranthaceae	Tapinanthus rubromarginatus	(Engl.) Danser	LC	Indigenous
Asteraceae	Tarchonanthus camphoratus	L.	LC	Indigenous
Asteraceae	Tarchonanthus parvicapitulatus	P.P.J.Herman	LC	Indigenous
Targioniaceae	Targionia hypophylla	L.		Indigenous
Fabaceae	Tephrosia elongata	E.Mey.	LC	Indigenous
Fabaceae	Tephrosia multijuga	R.G.N.Young	LC	Indigenous
Fabaceae	Tephrosia rhodesica	Baker f.	LC	Indigenous
Fabaceae	Tephrosia rhodesica	Baker f.	LC	Indigenous
Fabaceae	Tephrosia semiglabra	Sond.	LC	Indigenous
Fabaceae	Teramnus labialis	(L.f.) Spreng.	LC	Indigenous
Combretaceae	Terminalia sericea	Burch. ex DC.	LC	Indigenous
Lamiaceae	Tetradenia brevispicata	(N.E.Br.) Codd	LC	Indigenous
Lamiaceae	Teucrium trifidum	Retz.	LC	Indigenous
Thelypteridaceae	Thelypteris confluens	(Thunb.) C.V.Morton	LC	Indigenous
Poaceae	Themeda triandra	Forssk.	LC	Indigenous
Santalaceae	Thesium costatum	A.W.Hill	LC	Indigenous
Santalaceae	Thesium sp.			
Santalaceae	Thesium transvaalense	Schltr.	LC	Indigenous; Endemic
Santalaceae	Thesium utile	A.W.Hill	LC	Indigenous
Acanthaceae	Thunbergia atriplicifolia	E.Mey. ex Nees	LC	Indigenous
Timmiellaceae	Timmiella pelindaba	Magill		Indigenous
Asteraceae	Tolpis capensis	(L.) Sch.Bip.	LC	Indigenous
Pottiaceae	Tortella humilis	(Hedw.) Jenn.		Indigenous
Pottiaceae	Tortella xanthocarpa	(Schimp. ex Mull.Hal.) Broth.		Indigenous
Asphodelaceae	Trachyandra asperata	Kunth	LC	Indigenous
Asphodelaceae	Trachyandra saltii	(Baker) Oberm.	LC	Indigenous
Poaceae	Trachypogon spicatus	(L.f.) Kuntze	LC	Indigenous
Euphorbiaceae	Tragia rupestris	Sond.	LC	Indigenous
Poaceae	Tragus berteronianus	Schult.	LC	Indigenous
Zygophyllaceae	Tribulus terrestris	L.	LC	Indigenous
Poaceae	Trichoneura grandiglumis	(Nees) Ekman	LC	Indigenous
Pottiaceae	Trichostomum brachydontium	Bruch		Indigenous
Fabaceae	Trifolium repens	L.	NE	Not indigenous; Naturalised

Poaceae	Tripogon minimus	(A.Rich.) Steud.	LC	Indigenous
Poaceae	Triraphis andropogonoides	(Steud.) E.Phillips	LC	Indigenous
Poaceae	Tristachya rehmannii	Hack.	LC	Indigenous
Iridaceae	Tritonia nelsonii	Baker	LC	Indigenous
Malvaceae	Triumfetta sonderi	Ficalho & Hiern	LC	Indigenous; Endemic
Meliaceae	Turraea obtusifolia	Hochst.	LC	Indigenous
Typhaceae	Typha capensis	(Rohrb.) N.E.Br.	LC	Indigenous
Poaceae	Urelytrum agropyroides	(Hack.) Hack.	LC	Indigenous
Poaceae	Urochloa panicoides	P.Beauv.	LC	Indigenous
Fabaceae	Vachellia hebeclada	(DC.) Kyal. & Boatwr.	LC	Indigenous
Fabaceae	Vachellia karroo	(Hayne) Banfi & Galasso	LC	Indigenous
Fabaceae	Vachellia tortilis	(Forssk.) Galasso & Banfi	LC	Indigenous
Valerianaceae	Valeriana capensis	Thunb.	LC	Indigenous
Rubiaceae	Vangueria infausta	Burch.	LC	Indigenous
Rutaceae	Vepris lanceolata	(Lam.) G.Don	LC	Indigenous
Verbenaceae	Verbena officinalis	L.		Not indigenous; Naturalised
Plantaginaceae	Veronica anagallis- aquatica	L.	LC	Indigenous
Fabaceae	Vigna unguiculata	(L.) Walp.	LC	Indigenous
Fabaceae	Vigna vexillata	(L.) A.Rich.	LC	Indigenous
Santalaceae	Viscum combreticola	Engl.	LC	Indigenous
Santalaceae	Viscum rotundifolium	L.f.	LC	Indigenous
Santalaceae	Viscum verrucosum	Harv.	LC	Indigenous
Lamiaceae	Vitex zeyheri	Sond.	LC	Indigenous
Lamiaceae	Volkameria glabra	(E.Mey.) Mabb. & Y.W.Yuan	LC	Indigenous
Campanulaceae	Wahlenbergia banksiana	A.DC.	L	Indigenous
Campanulaceae	Wahlenbergia magaliesbergensis	Lammers	LC	Indigenous; Endemic
Campanulaceae	Wahlenbergia sp.			
Campanulaceae	Wahlenbergia undulata	(L.f.) A.DC.	LC	Indigenous
Tecophilaeaceae	Walleria nutans	J.Kirk	LC	Indigenous
Tecophilaeaceae	Walleria sp.			
Pottiaceae	Weissia sp.			
Solanaceae	Withania somnifera	(L.) Dunal	LC	Indigenous
Convolvulaceae	Xenostegia tridentata	(L.) D.F.Austin & Staples	LC	Indigenous
Velloziaceae	Xerophyta humilis	(Baker) T.Durand & Schinz	LC	Indigenous
Velloziaceae	Xerophyta retinervis	Baker	LC	Indigenous

Velloziaceae	Xerophyta viscosa	Baker	LC	Indigenous
Olacaceae	Ximenia caffra	Sond.	LC	Indigenous
Scrophulariaceae	Zaluzianskya elongata	Hilliard & B.L.Burtt	LC	Indigenous
Rutaceae	Zanthoxylum capense	(Thunb.) Harv.	LC	Indigenous
Cucurbitaceae	Zehneria marlothii	(Cogn.) R.Fern. & A.Fern.		Indigenous
Asteraceae	Zinnia peruviana	(L.) L.		Not indigenous; Naturalised; Invasive
Asteraceae	Zinnia sp.			
Rhamnaceae	Ziziphus mucronata	Willd.	LC	Indigenous
Rhamnaceae	Ziziphus zeyheriana	Sond.	LC	Indigenous
Fabaceae	Zornia linearis	E.Mey.	LC	Indigenous
Fabaceae	Zornia milneana	Mohlenbr.	LC	Indigenous

13.3 APPENDIX C: EXPECTED AVIFAUNA LIST

A list of avifauna species to potentially occur on the study area based on SABAP2 records. SCC has been highlighted in red and species observed during the site visit are highlighted in green.

	Common group	Common species	Genus	Species	Conservati on Status SANBI,) (2016
1	Apalis	Bar-throated	Apalis	thoracica	LC
2	Avocet	Pied	Recurvirostra	avosetta	LC
3	Babbler	Arrow-marked	Turdoides	jardineii	LC
4	Barbet	Acacia Pied	Tricholaema	leucomelas	LC
5	Barbet	Black-collared	Lybius	torquatus	LC
6	Barbet	Crested	Trachyphonus	vaillantii	LC
7	Batis	Chinspot	Batis	molitor	LC
8	Bee-eater	European	Merops	apiaster	LC
9	Bee-eater	Little	Merops	pusillus	LC
10	Bee-eater	White-fronted	Merops	bullockoides	LC
11	Bishop	Southern Red	Euplectes	orix	LC
12	Bishop	Yellow	Euplectes	capensis	LC
13	Bishop	Yellow-crowned	Euplectes	afer	LC
14	Bittern	Dwarf	Ixobrychus	sturmii	LC
15	Bittern	Little	Ixobrychus	minutus	LC
16	Bokmakierie	Bokmakierie	Telophorus	zeylonus	LC
17	Boubou	Southern	Laniarius	ferrugineus	LC

18	Brubru	Brubru	Nilaus	afer	LC
19	Bulbul	African Red-eyed	Pycnonotus	nigricans	LC
20	Bulbul	Dark-capped	Pycnonotus	tricolor	LC
21	Bunting	Cinnamon-breasted	Emberiza	tahapisi	LC
22	Bunting	Golden-breasted	Emberiza	flaviventris	LC
23	Bunting	Lark-like	Emberiza	impetuani	LC
24	Bush-shrike	Orange-breasted	Telophorus	sulfureopectus	LC
25	Buttonquail	Kurrichane	Turnix	sylvaticus	LC
26	Buzzard	Jackal	Buteo	rufofuscus	LC
27	Buzzard	Lizard	Kaupifalco	monogrammicus	LC
28	Buzzard	Steppe	Buteo	vulpinus	LC
29	Camaroptera	Grey-backed	Camaroptera	brevicaudata	LC
30	Canary	Black-throated	Crithagra	atrogularis	LC
31	Canary	Cape	Serinus	canicollis	LC
32	Canary	Yellow	Crithagra	flaviventris	LC
33	Canary	Yellow-fronted	Crithagra	mozambicus	LC
34	Chat	Anteating	Myrmecocichla	formicivora	LC
35	Chat	Familiar	Cercomela	familiaris	LC
36	Cisticola	Cloud	Cisticola	textrix	LC
37	Cisticola	Desert	Cisticola	aridulus	LC
38	Cisticola	Lazy	Cisticola	aberrans	LC
39	Cisticola	Levaillant's	Cisticola	tinniens	LC
40	Cisticola	Rattling	Cisticola	chiniana	LC
41	Cisticola	Wing-snapping	Cisticola	ayresii	LC
42	Cisticola	Zitting	Cisticola	juncidis	LC
43	Cliff-swallow	South African	Hirundo	spilodera	LC
44	Coot	Red-knobbed	Fulica	cristata	LC
45	Cormorant	Reed	Phalacrocorax	africanus	LC
46	Cormorant	White-breasted	Phalacrocorax	carbo	LC
47	Coucal	Burchell's	Centropus	burchellii	LC
48	Courser	Temminck's	Cursorius	temminckii	LC
49	Crake	African	Crecopsis	egregia	LC
50	Crake	Black	Amaurornis	flavirostris	LC
51	Crake	Corn	Crex	crex	LC
52	Crombec	Long-billed	Sylvietta	rufescens	LC
53	Crow	Cape	Corvus	capensis	LC
54	Crow	Pied	Corvus	albus	LC
55	Cuckoo	African	Cuculus	gularis	LC
56	Cuckoo	Black	Cuculus	clamosus	LC
57	Cuckoo	Common	Cuculus	canorus	LC
58	Cuckoo	Diderick	Chrysococcyx	caprius	LC
59	Cuckoo	Great Spotted	Clamator	glandarius	LC
60	Cuckoo	Jacobin	Clamator	jacobinus	LC

61	Cuckoo	Klaas's	Chrysococcyx	klaas	LC
62	Cuckoo	Levaillant's	Clamator	levaillantii	
63	Cuckoo	Red-chested	Cuculus	solitarius	LC LC
64	Cuckoo- shrike	Black	Campephaga	flava	LC
65	Darter	African	Anhinga	rufa	LC
66	Dove	Laughing	Streptopelia	senegalensis	LC
67	Dove	Namaqua	Oena	capensis	LC
68	Dove	Red-eyed	Streptopelia	semitorquata	LC
69	Dove	Rock	Columba	livia	LC
70	Drongo	Fork-tailed	Dicrurus	adsimilis	LC
71	Duck	African Black	Anas	sparsa	LC
72	Duck	Fulvous	Dendrocygna	bicolor	LC
73	Duck	Knob-billed	Sarkidiornis	melanotos	LC
74	Duck	Maccoa	Oxyura	maccoa	NT
75	Duck	Mallard	Anas	platyrhynchos	LC
76	Duck	Mandarin	Aix	galericulata	LC
77	Duck	White-backed	Thalassornis	leuconotus	LC
78	Duck	White-faced	Dendrocygna	viduata	LC
79	Duck	Wood	Aix	sponsa	LC
80	Duck	Yellow-billed	Anas	undulata	LC
81	Eagle	Booted	Aquila	pennatus	LC
82	Eagle	Long-crested	Lophaetus	occipitalis	LC
83	Eagle	Martial	Polemaetus	bellicosus	EN
84	Eagle	Verreaux's	Aquila	verreauxii	LC
85	Eagle-owl	Spotted	Bubo	africanus	LC
86	Egret	Cattle	Bubulcus	ibis	LC
87	Egret	Great	Egretta	alba	LC
88	Egret	Little	Egretta	garzetta	LC
89	Egret	Slaty	Egretta	vinaceigula	LC
90	Egret	Yellow-billed	Egretta	intermedia	LC
91	Eremomela	Burnt-necked	Eremomela	usticollis	LC
92	Falcon	Amur	Falco	amurensis	LC
93	Falcon	Lanner	Falco	biarmicus	VU
94	Falcon	Peregrine	Falco	peregrinus	LC
95	Falcon	Red-footed	Falco	vespertinus	NT
96	Finch	Cuckoo	Anomalospiza	imberbis	LC
97	Finch	Cut-throat	Amadina	fasciata	LC
98	Finch	Red-headed	Amadina	erythrocephala	LC
99	Finch	Scaly-feathered	Sporopipes	squamifrons	LC
100	Finfoot	African	Podica	senegalensis	VU
101	Firefinch	African	Lagonosticta	rubricata	LC
102	Firefinch	Jameson's	Lagonosticta	rhodopareia	LC
103	Firefinch	Red-billed	Lagonosticta	senegala	LC
	•	•	•	•	•

104	Fiscal	Common (Southern)	Lanius	collaris	LC
105	Fish-eagle	African	Haliaeetus	vocifer	
106	Flamingo	Greater	Phoenicopterus	ruber	LC NT
107	Flufftail	Red-chested	Sarothrura	rufa	LC
108	Flycatcher	Fairy	Stenostira	scita	LC
109	Flycatcher	Fiscal	Sigelus	silens	LC
110	Flycatcher	Marico	Bradornis	mariquensis	LC
111	Flycatcher	Spotted	Muscicapa	striata	LC
112	Francolin	Coqui	Peliperdix	coqui	LC
113	Francolin	Crested	Dendroperdix	sephaena	LC
114	Francolin	Orange River	Scleroptila	levaillantoides	LC
115	Francolin	Red-winged	Scleroptila	levaillantii	LC
116	Go-away-bird	Grey	Corythaixoides	concolor	LC
117	Goose	Egyptian	Alopochen	aegyptiacus	LC
118	Goose	Spur-winged	Plectropterus	gambensis	LC
119	Goshawk	Gabar	Melierax	gabar	LC
120	Grass-owl	African	Tyto	capensis	VU
121	Grassbird	Cape	Sphenoeacus	afer	LC
122	Grebe	Black-necked	Podiceps	nigricollis	LC
123	Grebe	Great Crested	Podiceps	cristatus	LC
124	Grebe	Little	Tachybaptus	ruficollis	LC
125	Green-	African	Treron	calvus	LC
	pigeon	_			LC
126	Greenshank	Common	Tringa	nebularia	LC
127	Guineafowl	Helmeted	Numida	meleagris	LC
128	Gull	Grey-headed	Larus	cirrocephalus	LC
129	Hamerkop	Hamerkop	Scopus	umbretta	LC
130	Harrier-Hawk	African	Polyboroides	typus	LC
131	Hawk	African Cuckoo	Aviceda	cuculoides	LC
132	Hawk-eagle	African	Aquila	spilogaster	LC
133	Helmet- shrike	White-crested	Prionops	plumatus	LC
134	Heron	Black	Egretta	ardesiaca	LC
135	Heron	Black-headed	Ardea	melanocephala	LC
136	Heron	Goliath	Ardea	goliath	LC
137	Heron	Green-backed	Butorides	striata	LC
138	Heron	Grey	Ardea	cinerea	LC
139	Heron	Purple	Ardea	purpurea	LC
140	Heron	Squacco	Ardeola	ralloides	LC
141	Hobby	Eurasian	Falco	subbuteo	LC
142	Honey- buzzard	European	Pernis	apivorus	LC
143	Honeybird	Brown-backed	Prodotiscus	regulus	LC
144	Honeyguide	Greater	Indicator	indicator	LC
145	Honeyguide	Lesser	Indicator	minor	LC

187	Mousebird	Red-faced	Urocolius	indicus	LC
186	Moorhen	Common	Gallinula	chloropus	LC
185	Masked- weaver	Southern	Ploceus	velatus	LC
184	Masked- weaver	Lesser	Ploceus	intermedius	LC
183	Martin	Sand	Riparia	riparia	LC
182	Martin	Rock	Hirundo	fuligula	LC
181	Martin	Brown-throated	Riparia	paludicola	LC
180	Martin	Banded	Riparia	cincta	LC
179	Marsh-harrier	African	Circus	ranivorus	EN
178	Mannikin	Bronze	Spermestes	cucullatus	LC
177	Longclaw	Cape	Macronyx	capensis	LC
176	Lark	Sabota	Calendulauda	sabota	LC
175	Lark	Rufous-naped	Mirafra	africana	LC
174	Lark	Red-capped	Calandrella	cinerea	LC
173	Lark	Pink-billed	Spizocorys	conirostris	LC
172	Lark	Melodious	Mirafra	cheniana	LC
171	Lark	Eastern Clapper	Mirafra	fasciolata	LC
170	Lapwing	Crowned	Vanellus	coronatus	LC
169	Lapwing	Blacksmith	Vanellus	armatus	LC
168	Lapwing	African Wattled	Vanellus	senegallus	LC
167	Korhaan	Northern Black	Afrotis	afraoides	LC
166	Kite	Yellow-billed	Milvus	aegyptius	LC
165	Kite	Black-shouldered	Elanus	caeruleus	LC
164	Kite	Black	Milvus	migrans	LC
163	Kingfisher	Woodland	Halcyon	senegalensis	LC
162	Kingfisher	Pied	Ceryle	rudis	LC
161	Kingfisher	Malachite	Alcedo	cristata	LC
160	Kingfisher	Half-collared	Alcedo	semitorquata	NT
159	Kingfisher	Giant	Megaceryle	maximus	LC
158	Kingfisher	Brown-hooded	Halcyon	albiventris	LC
157	Kestrel	Rock	Falco	rupicolus	LC
156	Kestrel	Lesser	Falco	naumanni	LC
155	Kestrel	Greater	Falco	rupicoloides	LC
154	Jacana	African	Actophilornis	africanus	LC
153	Indigobird	Purple	Vidua	purpurascens	LC
152	Ibis	Southern Bald	Geronticus	calvus	VU
151	Ibis	Hadeda	Bostrychia	hagedash	LC
150	Ibis	Glossy	Plegadis	falcinellus	LC
149	Ibis	African Sacred	Threskiornis	aethiopicus	LC
148	House-martin	Common	Delichon	urbicum	LC
147	Hornbill	African Grey	Upupa Tockus	nasutus	LC LC

188	Mousebird	Speckled	Colius	striatus	LC
189	Myna	Common	Acridotheres	tristis	LC
190	Neddicky	Neddicky	Cisticola	fulvicapilla	LC
191	Night-Heron	Black-crowned	Nycticorax	nycticorax	LC
192	Olive-pigeon	African	Columba	arquatrix	LC
193	Openbill	African	Anastomus	lamelligerus	LC
194	Oriole	Black-headed	Oriolus	larvatus	LC
195	Ostrich	Common	Struthio	camelus	LC
196	Owl	Barn	Tyto	alba	LC
197	Owl	Marsh	Asio	capensis	LC
198	Painted- snipe	Greater	Rostratula	benghalensis	NT
199	Palm-swift	African	Cypsiurus	parvus	LC
200	Paradise- flycatcher	African	Terpsiphone	viridis	LC
201	Parakeet	Rose-ringed	Psittacula	krameri	LC
202	Peacock	Common	Pavo	cristatus	LC
203	Pigeon	Speckled	Columba	guinea	LC
204	Pintail	Northern	Anas	acuta	LC
205	Pipit	African	Anthus	cinnamomeus	LC
206	Pipit	Buffy	Anthus	vaalensis	LC
207	Pipit	Nicholson's	Anthus	nicholsoni	LC
208	Pipit	Plain-backed	Anthus	leucophrys	LC
209	Plover	Three-banded	Charadrius	tricollaris	LC
210	Pochard	Red-crested	Netta	rufina	LC
211	Pochard	Southern	Netta	erythrophthalma	LC
212	Prinia	Black-chested	Prinia	flavicans	LC
213	Prinia	Tawny-flanked	Prinia	subflava	LC
214	Puffback	Black-backed	Dryoscopus	cubla	LC
215	Pytilia	Green-winged	Pytilia	melba	LC
216	Quail	Common	Coturnix	coturnix	LC
217	Quailfinch	African	Ortygospiza	atricollis	LC
218	Quelea	Red-billed	Quelea	quelea	LC
219	Rail	African	Rallus	caerulescens	LC
220	Reed-warbler	African	Acrocephalus	baeticatus	LC
221	Reed-warbler	Great	Acrocephalus	arundinaceus	LC
222	Robin-chat	Cape	Cossypha	caffra	LC
223	Roller	European	Coracias	garrulus	NT
224	Roller	Lilac-breasted	Coracias	caudatus	LC
225	Roller	Purple	Coracias	naevius	LC
226	Ruff	Ruff	Philomachus	pugnax	LC
227	Rush-warbler	Little	Bradypterus	baboecala	LC
228	Sandpiper	Common	Actitis	hypoleucos	LC
229	Sandpiper	Curlew	Calidris	ferruginea	LC

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230	Sandpiper	Green	Tringa	ochropus	LC
231	Sandpiper	Marsh	Tringa	stagnatilis	LC
232	Sandpiper	Wood	Tringa	glareola	LC
233	Scimitarbill	Common	Rhinopomastus	cyanomelas	LC
234	Scops-owl	Southern White-faced	Ptilopsis	granti	LC
235	Scrub-robin	White-browed	Cercotrichas	leucophrys	LC
236	Secretarybird	Secretarybird	Sagittarius	serpentarius	VU
237	Seedeater	Streaky-headed	Crithagra	gularis	LC
238	Shelduck	Ruddy	Tadorna	ferruginea	LC
239	Shelduck	South African	Tadorna	cana	LC
240	Shoveler	Cape	Anas	smithii	LC
241	Shrike	Crimson-breasted	Laniarius	atrococcineus	LC
242	Shrike	Lesser Grey	Lanius	minor	LC
243	Shrike	Magpie	Urolestes	melanoleucus	LC
244	Shrike	Red-backed	Lanius	collurio	LC
245	Snake-eagle	Black-chested	Circaetus	pectoralis	LC
246	Snake-eagle	Brown	Circaetus	cinereus	LC
247	Snipe	African	Gallinago	nigripennis	LC
248	Sparrow	Cape	Passer	melanurus	LC
249	Sparrow	Great	Passer	motitensis	LC
250	Sparrow	House	Passer	domesticus	LC
251	Sparrow	Southern Grey-	Passer	diffusus	
050		headed	DI		LC
252	Sparrow- weaver	White-browed	Plocepasser	mahali	LC
253	Sparrowhaw k	Black	Accipiter	melanoleucus	LC
254	Sparrowhaw k	Little	Accipiter	minullus	LC
255	Sparrowhaw k	Ovambo	Accipiter	ovampensis	LC
256	Sparrowlark	Chestnut-backed	Eremopterix	leucotis	LC
257	Spoonbill	African	Platalea	alba	LC
258	Spurfowl	Natal	Pternistis	natalensis	LC
259	Spurfowl	Swainson's	Pternistis	swainsonii	LC
260	Starling	Cape Glossy	Lamprotornis	nitens	LC
261	Starling	Common	Sturnus	vulgaris	LC
262	Starling	Pied	Spreo	bicolor	LC
263	Starling	Red-winged	Onychognathus	morio	LC
264	Starling	Wattled	Creatophora	cinerea	LC
265	Stilt	Black-winged	Himantopus	himantopus	LC
266	Stint	Little	Calidris	minuta	LC
267	Stonechat	African	Saxicola	torquatus	LC
268	Stork	Abdim's	Ciconia	abdimii	NT
269	Stork	Black	Ciconia	nigra	VU
270	Stork	White	Ciconia	ciconia	LC
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271	Stork	Yellow-billed	Mycteria	ibis	EN
272	Sunbird	Amethyst	Chalcomitra	amethystina	LC
273	Sunbird	Marico	Cinnyris	mariquensis	LC
274	Sunbird	White-bellied	Cinnyris	talatala	LC
275	Swallow	Barn	Hirundo	rustica	LC
276	Swallow	Greater Striped	Hirundo	cucullata	LC
277	Swallow	Lesser Striped	Hirundo	abyssinica	LC
278	Swallow	Pearl-breasted	Hirundo	dimidiata	LC
279	Swallow	Red-breasted	Hirundo	semirufa	LC
280	Swallow	White-throated	Hirundo	albigularis	LC
281	Swamp- warbler	Lesser	Acrocephalus	gracilirostris	LC
282	Swamphen	African Purple	Porphyrio	madagascariensis	
202	Swift	African Black	A 2011	la a what i va	LC
283			Apus	barbatus	LC
284	Swift	Alpine	Tachymarptis	melba	LC
285	Swift	Common	Apus	apus	LC
286	Swift	Horus	Apus	horus	LC
287	Swift	Little	Apus	affinis	LC
288	Swift	White-rumped	Apus	caffer	LC
289	Tchagra	Black-crowned	Tchagra	senegalus	LC
290	Tchagra	Brown-crowned	Tchagra	australis	LC
291	Teal	Cape	Anas	capensis	LC
292	Teal	Hottentot	Anas	hottentota	LC
293	Teal	Red-billed	Anas	erythrorhyncha	LC
294	Tern	Caspian	Sterna	caspia	VU
295	Tern	Whiskered	Chlidonias	hybrida	LC
296	Tern	White-winged	Chlidonias	leucopterus	LC
297	Thick-knee	Spotted	Burhinus	capensis	LC
298	Thick-knee	Water	Burhinus	vermiculatus	LC
299	Thrush	Groundscraper	Psophocichla	litsipsirupa	LC
300	Thrush	Karoo	Turdus	smithi	LC
301	Thrush	Kurrichane	Turdus	libonyanus	LC
302	Tinkerbird	Yellow-fronted	Pogoniulus	chrysoconus	LC
303	Tit-babbler	Chestnut-vented	Parisoma	subcaeruleum	LC
304	Turtle-dove	Cape	Streptopelia	capicola	LC
305	Vulture	Cape	Gyps	coprotheres	EN
306	Wagtail	Cape	Motacilla	capensis	LC
307	Wagtail	Yellow	Motacilla	flava	LC
308	Warbler	Dark-capped Yellow	Chloropeta	natalensis	LC
309	Warbler	Garden	Sylvia	borin	LC
310	Warbler	Icterine	Hippolais	icterina	LC
311	Warbler	Marsh	Acrocephalus	palustris	LC
312	Warbler	Sedge	Acrocephalus	schoenobaenus	LC

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313	Warbler	Willow	Phylloscopus	trochilus	LC
314	Waxbill	Blue	Uraeginthus	angolensis	LC
315	Waxbill	Common	Estrilda	astrild	LC
316	Waxbill	Orange-breasted	Amandava	subflava	LC
317	Waxbill	Violet-eared	Granatina	granatina	LC
318	Weaver	Cape	Ploceus	capensis	LC
319	Weaver	Thick-billed	Amblyospiza	albifrons	LC
320	Weaver	Village	Ploceus	cucullatus	LC
321	Wheatear	Capped	Oenanthe	pileata	LC
322	Wheatear	Mountain	Oenanthe	monticola	LC
323	White-eye	Cape	Zosterops	virens	LC
324	Whitethroat	Common	Sylvia	communis	LC
325	Whydah	Pin-tailed	Vidua	macroura	LC
326	Whydah	Shaft-tailed	Vidua	regia	LC
327	Widowbird	Fan-tailed	Euplectes	axillaris	LC
328	Widowbird	Long-tailed	Euplectes	progne	LC
329	Widowbird	Red-collared	Euplectes	ardens	LC
330	Widowbird	White-winged	Euplectes	albonotatus	LC
331	Wood- hoopoe	Green	Phoeniculus	purpureus	LC
332	Woodpecker	Bearded	Dendropicos	namaquus	LC
333	Woodpecker	Cardinal	Dendropicos	fuscescens	LC
334	Woodpecker	Golden-tailed	Campethera	abingoni	LC
335	Wryneck	Red-throated	Jynx	ruficollis	LC

13.4 APPENDIX D: EXPECTED MAMMAL SPECIES LIST

Mammal species to potentially occur within the study area based on Virtual Museum Mammal Map records. Please note that the list of mammal species is only based on previous recordings and do not include any other non-recording mammal species that might occur on sight. Species of conservation concern is highlighted in red.

#	Scientific name	Common name	Red list Category (SANBI, 2016)
1	Aepyceros melampus	Impala	Least Concern
2	Aethomys ineptus	Tete Veld Rat	Least Concern
3	Aethomys namaquensis	Namaqua Rock rat	Least Concern
4	Alcelaphus buselaphus	Hartebeest	Least Concern
5	Antidorcas marsupialis	Sclater's Shrew	Least Concern
6	Aonyx capensis	African Clawless Otter	Near Threatened
7	Atelerix frontalis	Southern African Hedgehog	Near Threatened
8	Atilax paludinosus	Marsh Mongoose	Least Concern
9	Canis mesomelas	Black-backed Jackal	Least Concern
10	Caracal caracal	Caracal	Least Concern
11	Chlorocebus pygerythrus	Vervet Monkey	Least Concern
12	Cloeotis percivali	Percival's Short-eared Trident Bat	Endangered
13	Connochaetes gnou	Black Wildebeest	Least Concern
14	Connochaetes taurinus	Blue Wildebeest	Least Concern
15	Cryptomys hottentotus	Southern African Mole-rat	Least Concern
16	Cynictis penicillata	Yellow Mongoose	Least Concern
17	Damaliscus pygargus phillipsi	Blesbok	Least Concern
18	Elephantulus myurus	Eastern Rock Elephant Shrew	Least Concern
19	Equus quagga	Plains Zebra	Least Concern
20	Felis catus	Domestic Cat	Introduced
21	Galago senegalensis	Senegal Bushbaby	Least Concern
22	Genetta genetta	Common Genet	Least Concern
23	Genetta tigrina	Cape Genet (Cape Large-spotted Genet)	Least Concern
24	Giraffa giraffa	South African Giraffe	Least Concern
25	Graphiurus (Graphiurus) murinus	Forest African Dormouse	Least Concern
26	Herpestes sanguineus	Slender Mongoose	Least Concern
27	Hippopotamus amphibius	Common Hippopotamus	Least Concern
28	Hippotragus niger	Sable Antelope	Least Concern
29	Hyaena brunnea	Brown Hyena	Near Threatened
30	Hystrix africaeaustralis	Cape Porcupine	Least Concern
31	Ko ellipsiprymnus	Waterbuck	Least Concern
32	Lemniscomys rosalia	Single-Striped Lemniscomys	Least Concern
33	Leptailuris serval	Serval	Near Threatened
34	Lepus saxatilis	Scrub Hare	Least Concern
35	Mastomys natalensis	Natal Mastomys	Least Concern
36	Miniopterus fraterculus	Lesser Long-fingered Bat	Least Concern

37	Miniopterus natalensis	Natal Long-fingered Bat	Least Concern
38	Miniopterus schreibersii	Schreibers's Long-fingered Bat	Near Threatened
39	Mops (Mops) condylurus	Angolan Free-tailed Bat	Least Concern
40	Mops (Mops) midas	Midas' Free-tailed Bat	Least Concern
41	Mus (Nannomys) minutoides	Southern African Pygmy Mouse	Least Concern
42	Myosorex varius	Forest Shrew	Least Concern
43	Myotis tricolor	Temminck's Myotis	Least Concern
44	Neoromicia capensis	Cape Serotine	Least Concern
45	Nycteris thebaica	Egyptian Slit-faced Bat	Least Concern
46	Oryx gazella	Gemsbok	Least Concern
47	Otocyon megalotis	Bat-eared Fox	Least Concern
48	Otomys angoniensis	Angoni Vlei Rat	Least Concern
49	Otomys auratus	Southern African Vlei Rat	Near Threatened
50	Panthera leo	Lion	Least Concern
51	Papio ursinus	Baboon	Least Concern
52	Phacochoerus africanus	Common Warthog	Least Concern
53	Poecilogale albinucha	African Striped Weasel	Near Threatened
54	Potamochoerus porcus	Red River Hog	Least Concern
55	Procavia capensis	Cape Rock Hyrax	Least Concern
56	Pronolagus randensis	Jameson's Red Rock Hare	Least Concern
57	Proteles cristata	Aardwolf	Least Concern
58	Raphicerus campestris	Steenbok	Least Concern
59	Rattus rattus	Roof Rat	Least Concern
60	Redunca fulvorufula	Mountain Reedbuck	Endangered
61	Rhabdomys pumilio	Xeric Four-striped Grass Rat	Least Concern
62	Rhinolophus blasii	Blasius's Horseshoe Bat	Near Threatened
63	Rhinolophus capensis	Cape Horseshoe Bat	Least Concern
64	Rhinolophus clivosus	Geoffroy's Horseshoe Bat	Least Concern
65	Rhinolophus darlingi	Darling's Horseshoe Bat	Least Concern
66	Rhinolophus hildebrandtii	Hildebrandt's Horseshoe Bat	Near Threatened
67	Rhinolophus simulator	Bushveld Horseshoe Bat	Least Concern
68	Sauromys petrophilus	Roberts's Flat-headed Bat	Least Concern
69	Scotophilus dinganii	Yellow-bellied House Bat	Least Concern
70	Sylvicapra grimmia	Bush Duiker	Least Concern
71	Syncerus caffer	African Buffalo	Least Concern
72	Tadarida aegyptiaca	Egyptian Free-tailed Bat	Least Concern
73	Taurotragus oryx	Common Eland	Least Concern
74	Taurotragus oryx oryx	Cape eland	Least Concern
75	Thallomys paedulcus	Acacia Thallomys	Least Concern
76	Tragelaphus angasii	Nyala	Least Concern
77	Tragelaphus scriptus	Bushbuck	Least Concern
78	Tragelaphus strepsiceros	Greater Kudu	Least Concern
79	Vulpes chama	Cape Fox	Least Concern
80	Xerus inauris	South African Ground Squirrel	Least Concern

13.5 APPENDIX E: EXPECTED HERPETOFAUNA LIST

Herpetofauna species to potentially occur within the study area based on Virtual Museum ReptileMap and FrogMap records. Please note that the list of reptile and amphibian species is only based on previous recordings and do not include any other non-recording reptile and amphibian species that might occur on sight. Species of conservation concern is highlighted in red.

#	Family	Scientific name	Common name	Red list Category (SARCA, 2014)
1	Agamidae	Agama atra	Southern Rock Agama	Least Concern
2	Chamaeleonidae	Chamaeleo dilepis	Common Flap-neck Chameleon	Least Concern
3	Colubridae	Crotaphopeltis hotamboeia	Red-lipped Snake	Least Concern
4	Colubridae	Dasypeltis scabra	Rhombic Egg-eater	Least Concern
5	Colubridae	Dispholidus typus	Boomslang	Least Concern
6	Colubridae	Philothamnus hoplogaster	Green Water Snake	Least Concern
7	Colubridae	Philothamnus occidentalis	Western Natal Green Snake	Least Concern
8	Colubridae	Philothamnus semivariegatus	Spotted Bush Snake	Least Concern
9	Colubridae	Telescopus semiannulatus semiannulatus	Eastern Tiger Snake	Least Concern
10	Cordylidae	Cordylus vittifer	Common Girdled Lizard	Least Concern
11	Elapidae	Elapsoidea sundevallii media	Highveld Garter Snake	Least Concern
12	Elapidae	Hemachatus haemachatus	Rinkhals	Least Concern
13	Elapidae	Naja annulifera	Snouted Cobra	Least Concern
14	Elapidae	Naja mossambica	Mozambique Spitting Cobra	Least Concern
15	Gekkonidae	Hemidactylus mabouia	Common Tropical House Gecko	Least Concern
16	Gekkonidae	Lygodactylus capensis	Common Dwarf Gecko	Least Concern
17	Gekkonidae	Pachydactylus affinis	Transvaal Gecko	Least Concern
18	Gekkonidae	Pachydactylus capensis	Cape Gecko	Least Concern
19	Gerrhosauridae	Gerrhosaurus flavigularis	Yellow-throated Plated Lizard	Least Concern
20	Lacertidae	Nucras ornata	Ornate Sandveld Lizard	Least Concern
21	Lamprophiidae	Aparallactus capensis	Black-headed Centipede- eater	Least Concern
22	Lamprophiidae	Atractaspis bibronii	Bibron's Stiletto Snake	Least Concern
23	Lamprophiidae	Boaedon capensis	Brown House Snake	Least Concern
24	Lamprophiidae	Duberria lutrix lutrix	South African Slug-eater	Least Concern
25	Lamprophiidae	Homoroselaps dorsalis	Striped Harlequin Snake	Near Threatened
26	Lamprophiidae	Lycophidion capense capense	Cape Wolf Snake	Least Concern
27	Lamprophiidae	Prosymna sundevallii	Sundevall's Shovel-snout	Least Concern
28	Lamprophiidae	Psammophis brevirostris	Short-snouted Grass Snake	Least Concern
29	Lamprophiidae	Psammophis crucifer	Cross-marked Grass Snake	Least Concern
30	Lamprophiidae	Psammophylax rhombeatus	Spotted Skaapsteker	Least Concern
31	Lamprophiidae	Psammophylax tritaeniatus	Striped Skaapsteker	Least Concern

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32	Lamprophiidae	Pseudaspis cana	Mole Snake	Least Concern	
33	Leptotyphlopidae	Leptotyphlops distanti	Distant's Thread Snake	Least Concern	
34	Leptotyphlopidae	Leptotyphlops scutifrons scutifrons	Peters' Worm Snake	Least Concern	
35	Pelomedusidae	Pelomedusa galeata	South African Helmeted Terrapin	Least Concern	
36	Pythonidae	Python natalensis	Southern African Python	Least Concern	
37	Scincidae	Mochlus sundevallii	Sundevall's Writhing Skink	Least Concern	
38	Scincidae	Panaspis wahlbergi	Wahlberg's Snake-eyed Skink	Least Concern	
39	Scincidae	Trachylepis capensis	Cape Skink	Least Concern	
40	Scincidae	Trachylepis punctatissima	Speckled Rock Skink	Least Concern	
41	Scincidae	Trachylepis varia sensu lato	Common Variable Skink Complex	Least Concern	
42	Testudinidae	Kinixys lobatsiana	Lobatse Hinged Tortoise	Least Concern	
43	Testudinidae	Kinixys spekii	Speke's Hinged Tortoise	Least Concern	
44	Testudinidae	Stigmochelys pardalis	Leopard Tortoise	Least Concern	
45	Typhlopidae	Afrotyphlops bibronii	Bibron's Blind Snake	Least Concern	
46	Typhlopidae	Rhinotyphlops lalandei	Delalande's Beaked Blind Snake	Least Concern	
47	Varanidae	Varanus albigularis albigularis	Rock Monitor	Least Concern	
48	Varanidae	Varanus niloticus	Water Monitor	Least Concern	
49	Viperidae	Bitis arietans arietans	Puff Adder	Least Concern	
50	Viperidae	Causus rhombeatus	Rhombic Night Adder	Least Concern	

13.6 APPENDIX F: EXPECTED AMPHIBIAN LIST

#	Family	Scientific name	Common name	Red list Category (IUCN,2016)
1	Bufonidae	Schismaderma carens	Red Toad	Least Concern
2	Bufonidae	Sclerophrys capensis	Raucous Toad	Least Concern
3	Bufonidae	Sclerophrys garmani	Olive Toad	Least Concern
4	Bufonidae	Sclerophrys gutturalis	Guttural Toad	Least Concern
5	Hyperoliidae	Hyperolius marmoratus	Painted Reed Frog	Least Concern
6	Hyperoliidae	Kassina senegalensis	Bubbling Kassina	Least Concern
7	Microhylidae	Phrynomantis bifasciatus	Banded Rubber Frog	Least Concern
8	Pipidae	Xenopus laevis	Common Platanna	Least Concern
9	Pyxicephalidae	Amietia delalandii	Delalande's River Frog	Least Concern
10	Pyxicephalidae	Amietia fuscigula	Cape River Frog	Least Concern
11	Pyxicephalidae	Cacosternum boettgeri	Common Caco	Least Concern
12	Pyxicephalidae	Pyxicephalus adspersus	Giant Bull Frog	Least Concern
13	Pyxicephalidae	Tomopterna cryptotis	Tremelo Sand Frog	Least Concern
14	Pyxicephalidae	Tomopterna natalensis	Natal Sand Frog	Least Concern