



Ecological Assessment for the proposed Izotsha Memorial Park Expansion

Ray Nkonyeni Municipality, KwaZulu-Natal

November 2018

CLIENT



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Declaration	<p>The Biodiversity Company and its associates operate as independent consultants under the auspice of the South African Council for Natural Scientific Professions. We declare that we have no affiliation with or vested financial interests in the proponent, other than for work performed under the Environmental Impact Assessment Regulations, 2014 (as amended). We have no conflicting interests in the undertaking of this activity and have no interests in secondary developments resulting from the authorisation of this project. We have no vested interest in the project, other than to provide a professional service within the constraints of the project (timing, time and budget) based on the principles of science.</p>



DECLARATION

I, Michael Adams, declare that:

- 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 authority 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 and is punishable in terms of Section 24F of the Act.



Michael Adams

Terrestrial Ecologist

The Biodiversity Company

November 2018

DECLARATION

I, Martinus Erasmus, declare that:

- 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;
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- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence and is punishable in terms of Section 24F of the Act.



Martinus Erasmus

Terrestrial Ecologist

The Biodiversity Company

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1 Introduction

The Biodiversity Company was commissioned to conduct an Ecological Assessment, as part of the environmental authorisation process for the proposed Izotsha memorial park expansion near Shelley Beach in the Ray Nkonyeni Municipality, KwaZulu-Natal.

A wet season terrestrial biodiversity survey was conducted on the 31th of October 2018. The survey primarily focussed on the development footprint area, referred to as the project area herein. Furthermore, the identification and description of any sensitive receptors were recorded across the project area, and the manner in which these sensitive receptors may be affected by the activity was also investigated.

This report, after taking into consideration the findings and recommendation provided by the specialist herein, should inform and guide the Environmental Assessment Practitioner (EAP) and regulatory authorities, enabling informed decision making with regards to the proposed activity.

This assessment is in accordance with the 2014 EIA Regulations (No. R. 982-985, Department of Environmental Affairs, 4 December 2014) emanating from Chapter 5 of the National Environmental Management Act (Act No. 107 of 1998).

2 Project Location

Izotsha Memorial Park is situated within the Izotsha area near Shelley Beach in the Ray Nkonyeni Municipality, KwaZulu-Natal. This area is approximately 300 m from the Izotsha Road to the east and 400 m away from the R61. The land uses surrounding the project area consist of natural coastal vegetation as well as an established memorial park (Figure 1).



Figure 1: The general location of the project area

3 Scope of Work

The Terms of Reference (ToR) included the following:

- Desktop description of the baseline receiving environment specific to the field of expertise (general surrounding area as well as site specific environment);
- Identification and description of any sensitive receptors in terms of relevant specialist disciplines (biodiversity) that occur in the study area, and the manner in which these sensitive receptors may be affected by the activity;
- Identify 'significant' ecological and faunal features within the proposed development areas;
- Identification of conservation significant habitats around the Project area which might be impacted by the proposed development;
- Site visit to verify desktop information;
- Screening to identify any critical issues (potential fatal flaws) that may result in project delays or rejection of the application; and
- Provide a map to identifying sensitive receptors in the study area, based on available maps, database information & site visit verification.

4 Limitations

The following limitations should be noted for the study:

- As per the scope of work, the fieldwork component of the assessment comprised of one assessment only, which was conducted during the wet season. This study has not assessed any temporal trends for the respective seasons;
- Details (or specifics) pertaining to the proposed development were not made available at the time of compiling this report, and a general or expected impact assessment has been completed as a result; and
- Taking into account these limitations, the comprehensive desktop study conducted, in conjunction with the wet season survey, and as such there is a moderate confidence in the information provided.

5 Methodologies

5.1 Geographic Information Systems (GIS) Mapping

Existing data layers were incorporated into GIS to establish how the proposed housing development interact with these important entities. Emphasis was placed around the following spatial datasets:

- Vegetation Map of South Africa, Lesotho and Swaziland (Mucina et al., 2007);
- Important Bird Areas 2015 – BirdLife South Africa (vector geospatial dataset); and
- Department of Environmental Affairs (DEA) National Landcover 2015 (DEA, 2015).

Field surveys were conducted to confirm (or refute) the presence of species identified in the desktop assessment. The specialist disciplines completed for this study included:

- Fauna (mammals and avifauna); and
- Herpetology (reptiles and amphibians).

Brief descriptions of the standardised methodologies applied in each of the specialist disciplines are provided below. More detailed descriptions of survey methodologies are available upon request.

5.2 Botanical Assessment

The botanical study encompassed an assessment of all the vegetation units and habitat types within the project area. The focus was on an ecological assessment of habitat types as well as identification of any Red Data species within the known distribution of the project area. The methodology included the following survey techniques:

- Sensitivity analysis based on available remaining natural structural habitat; and
- Identification of expected floral red-data species (desktop analysis).

5.3 Literature Study

A literature review was conducted as part of the desktop study to identify the potential habitats present within the project area. The South African National Biodiversity Institute (SANBI) provides an electronic database system, namely the Botanical Database of Southern Africa (BODATSA), to access distribution records on southern African plants. This is a new database which replaces the old Plants of Southern Africa (POSA) database. The POSA database provided distribution data of flora at the quarter degree square (QDS) resolution.

The Red List of South African Plants website (SANBI, 2017) was utilized to provide the most current account of the national status of flora. Relevant field guides and texts consulted for identification purposes in the field during the surveys included the following:

- A Field Guide to Wild Flowers (Pooley, 1998);
- Guide to Grasses of Southern Africa (Van Oudtshoorn, 1999);
- Orchids of South Africa (Johnson & Bytebier, 2015);
- Guide to the Aloes of South Africa (Van Wyk & Smith, 2014);
- Medicinal Plants of South Africa (Van Wyk et al., 2013);
- Freshwater Life: A field guide to the plants and animals of southern Africa (Griffiths & Day, 2016); and
- Identification Guide to Southern African Grasses. An identification manual with keys, descriptions and distributions. (Fish et al., 2015).

Additional information regarding ecosystems, vegetation types, and species of conservation concern (SCC) included the following sources:

- The Vegetation of South Africa, Lesotho and Swaziland (Mucina & Rutherford, 2012); and
- Red List of South African Plants (Raimondo *et al.*, 2009; SANBI, 2016).

5.4 Faunal Assessment (Mammals & Avifauna)

The faunal desktop assessment included the following:

- Compilation of expected species lists;
- Compilation of identified species lists;
- Identification of any Red Data or species of conservation concern (SCC) present or potentially occurring in the area; and
- Emphasis was placed on the probability of occurrence of species of provincial, national and international conservation importance.

The field survey component of the study utilised a variety of sampling techniques including, but not limited to, the following:

- Visual observations;
- Identification of tracks and signs; and
- Utilization of local knowledge.

Habitat types sampled included pristine, disturbed and semi-disturbed zones and drainage lines. Mammal distribution data were obtained from the following information sources:

- The Mammals of the Southern African Subregion (Skinner & Chimimba, 2005);
- Bats of Southern and Central Africa (Monadjem *et al.*, 2010);
- The 2016 Red List of Mammals of South Africa, Lesotho and Swaziland (www.ewt.org.za);
- Animal Demography Unit (ADU) - MammalMap Category (mammalmap.adu.org.za);
- A Field Guide to the Tracks and Signs of Southern, Central and East African Wildlife (Stuart & Stuart, 2013); and
- The Smaller Mammals of KwaZulu-Natal (Taylor, 1998).

5.5 Herpetology (Reptiles & Amphibians)

A herpetofauna assessment of the Project area was also conducted. The herpetological field survey comprised the following techniques:

- Diurnal hand searches - are used for reptile species that shelter in or under particular microhabitats (typically rocks, exfoliating rock outcrops, fallen timber, leaf litter, bark etc.);
- Visual searches - typically undertaken for species whose behaviour involves surface activity or for species that are difficult to detect by hand-searches or pitfall trapping. May include walking transects or using binoculars to view the species from a distance without the animal being disturbed; and

- Opportunistic sampling - reptiles, especially snakes, are incredibly illusive and difficult to observe. Consequently, all possible opportunities to observe reptiles are taken in order to augment the standard sampling procedures described above. This will include talking to local people and staff at the site and reviewing photographs of reptiles and amphibians that the other biodiversity specialists may come across while on site.

Herpetofauna distributional data was obtained from the following information sources:

- South African Reptile Conservation Assessment (SARCA) (sarca.adu.org);
- A Guide to the Reptiles of Southern Africa (Alexander & Marais, 2007);
- Field guide to Snakes and other Reptiles of Southern Africa (Branch, 1998);
- Atlas and Red list of Reptiles of South Africa, Lesotho and Swaziland (Bates et al., 2014);
- A Complete Guide to the Frogs of Southern Africa (du Preez & Carruthers, 2009);
- Animal Demography Unit (ADU) - FrogMAP (frogmap.adu.org.za);
- Atlas and Red Data Book of Frogs of South Africa, Lesotho and Swaziland (Mintner et al., 2004); and
- Ensuring a future for South Africa's frogs (Measey, 2011).

5.6 Wet Season Fieldwork

The wet season fieldwork and sample sites were placed within targeted areas (i.e. target sites) perceived as ecologically sensitive based on the preliminary interpretation of satellite imagery and GIS analysis (which included the latest applicable biodiversity datasets) available prior to the fieldwork.

The focus of the fieldwork was therefore to maximise coverage and navigate to each target site in the field in order to perform an ecological habitat assessment at each sample site. Emphasis was placed on sensitive habitats, especially those overlapping with proposed development areas.

At each sample site notes were made regarding current impacts (e.g. alien vegetation, erosion etc.), and any sensitive features (e.g. wetlands, outcrops etc.). In addition, opportunistic observations were made while navigating through the project area. Effort was made to cover all the different habitat types within the limits of time and access. The geographic location of sample sites and site coverage are shown under the Results section.

5.7 Key Legislative Requirements

The legislation, policies and guidelines listed below are applicable to the current project in terms of biodiversity and ecological support systems (Table 1). The list below, although extensive, may not be exhaustive and other legislation, policies and guidelines may apply in addition to those listed below.

Explanation of certain documents, organisations or legislation is provided (below Table 1) where these have a high degree of relevance to the project and/or are referred to in this assessment.

Table 1: A list of key legislative requirements relevant to biodiversity and conservation in KwaZulu-Natal

INTERNATIONAL	<p>Convention on Biological Diversity (CBD, 1993)</p> <p>The Convention on Wetlands (RAMSAR Convention, 1971)</p> <p>The United Nations Framework Convention on Climate Change (UNFCCC, 1994)</p> <p>The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES 1973)</p> <p>The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention, 1979)</p>
NATIONAL	<p>Constitution of the Republic of South Africa (Act No. 108 of 2006)</p> <p>The National Environmental Management Act (NEMA) (Act No. 107 of 1998)</p> <p>The National Environmental Management Protected Areas Act (Act No. 57 of 2003)</p> <p>The National Environmental Management Biodiversity Act (Act No. 10 of 2004)</p> <p>The National Environmental Management: Waste Act, 2008 (Act 59 of 2008);</p> <p>The Environment Conservation Act (Act No. 73 of 1989) and associated EIA Regulations</p> <p>National Environmental Management Air Quality Act (No. 39 of 2004)</p> <p>National Protected Areas Expansion Strategy (NPAES)</p> <p>Environmental Conservation Act (Act No. 73 of 1983)</p> <p>Natural Scientific Professions Act (Act No. 27 of 2003)</p> <p>National Biodiversity Framework (NBF, 2009)</p> <p>National Forest Act (Act No. 84 of 1998)</p> <p>National Veld and Forest Fire Act (101 of 1998)</p> <p>National Water Act, 1998 (Act 36 of 1998)</p> <p>National Freshwater Ecosystem Priority Areas (NFEPA's)</p> <p>National Spatial Biodiversity Assessment (NSBA)</p> <p>World Heritage Convention Act (Act No. 49 of 1999)</p> <p>National Heritage Resources Act, 1999 (Act 25 of 1999)</p> <p>Municipal Systems Act (Act No. 32 of 2000)</p> <p>Alien and Invasive Species Regulations, 2014</p> <p>South Africa's National Biodiversity Strategy and Action Plan (NBSAP)</p> <p>Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983)</p> <p>Sustainable Utilisation of Agricultural Resources (Draft Legislation).</p> <p>White Paper on Biodiversity</p>
PROVINCIAL	<p>KwaZulu-Natal Environmental, Biodiversity and Protected Areas Management Bill, 2014</p> <p>KwaZulu-Natal Nature Conservation Management Act (No. 9 of 1997)</p> <p>KwaZulu-Natal Nature Conservation Management Amendment Act (No. 5 of 1999)</p> <p>KwaZulu-Natal Planning and Development Act (No. 6 of 2008)</p> <p>Local Government Municipal System's Act (No 32 of 2000)</p>

International Legislation and Policy

- The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). CITES is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival; and

- The IUCN (World Conservation Union). The IUCN's mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

National Level

- Constitution of the Republic of South Africa (Act 108 of 1996). The Bill of Rights, in the Constitution of South Africa states that everyone has a right to a nonthreatening environment and requires that reasonable measures be applied to protect the environment. This protection encompasses preventing pollution and promoting conservation and environmentally sustainable development;
- 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;
- National Forests Act, 1998 (Act 84 of 1998), specifically with reference to Protected Tree species;
- National Biodiversity Assessment (NBA): The National Biodiversity Assessment (NBA) was completed as a collaboration between the South African National Biodiversity Institute (SANBI), the Department of Environmental Affairs (DEA) and other stakeholders, including scientists and biodiversity management experts throughout the country over a three-year period (Driver at al., 2011). The purpose of the NBA is to assess the state of South Africa's biodiversity with a view to understanding trends over time and informing policy and decision-making across a range of sectors (Driver at al., 2011).

Provincial and Municipal Level

In addition to national legislation, South Africa's nine provinces have their own provincial biodiversity legislation, as nature conservation is a concurrent function of national and provincial government in terms of the Constitution (Act 108 of 1996).

The KwaZulu-Natal Environmental, Biodiversity and Protected Areas Management Bill (2014)

The KwaZulu-Natal Environmental, Biodiversity and Protected Areas Management Bill (2014) hereafter referred to as KZNEBPA, was used to evaluate species conservation status on a Provincial scale.

The KZNEBPA (2014) defines which species are to be protected and managed in terms of human use such as collecting, fishing, hunting, capture, transport and trade. It deals with rare and endangered species within the KZN Province and the powers needed to protect them from exploitation and damage.

KZNEBPA Categories:

- Schedule 3 – KwaZulu-Natal Protected Animal Species: A list of protected animal species, including a listing of certain prohibited and restricted activities with respect to such species;

- Schedule 4 – Restricted Use of Protected Animal Species: Schedule 4 lists the restricted use of protected animal species and provides for certain prohibited and restricted activities in such respect;
- Schedule 7 – KwaZulu-Natal Threatened Plant Species: Schedule 7 lists the threatened plant species and provides for certain prohibited and restricted activities with respect to such species; and
- Schedule 8 – KwaZulu-Natal Protected Plant Species: Schedule 8 lists the protected plant species and provides for certain prohibited and restricted activities with respect to such species.

In addition to the legal requirements, the following National and Regional reviews, reports and guidelines were taken into consideration:

- Guidelines for Biodiversity Impact Assessments in KZN (2013);
- Implementation Manual for Freshwater Ecosystem Priority Areas (Driver et al., 2011);
- Ezemvelo KZN Wildlife Strategy (2009 – 2014); and
- KwaZulu-Natal Systematic Conservation Plan (KZNSCP, 2012).

6 Project Area

6.1 General Land Use

The land uses surrounding the project area consist of natural coastal (forest) vegetation as well as urban developments with its associated infrastructure such as roads and homesteads (Figure 1).

6.2 Project Area in Relation to the KwaZulu-Natal (KZN) Biodiversity Sector Plan

6.2.1 Aim and Objectives of the KZN Biodiversity Sector Plan (BSP)

The aim of a BSP is to:

- Identify and map critical biodiversity assets in KwaZulu-Natal District Municipalities; and
- Provide associated management guidelines which aim to maintain the integrity of these biodiversity features.

The objectives of the BSP are to:

- Ensure aquatic and terrestrial biodiversity targets are met at the District level;
- Conserve representative samples of biodiversity pattern;
- Conserve the ecological and evolutionary processes that allow biodiversity to persist over time; and
- Serve as a first step towards the development of a Bioregional Plan.

The Purpose of the BSP:

The key purpose of this BSP is to assist and guide land use planners and managers within various district and local municipalities, to account for biodiversity conservation priorities in all land use planning and management decisions, thereby promoting sustainable development and the protection of biodiversity, and in turn the protection of ecological infrastructure and associated ecosystem services.

Critical Biodiversity Areas

The KZN BSP also provides a spatial representation of land and coastal marine area required to ensure the persistence and conservation of biodiversity within KZN, reflected as **Critical Biodiversity Areas (CBAs)**.

A CBA is considered a significant and ecologically sensitive area and needs to be kept in a pristine or near-natural state to ensure the continued functioning of ecosystems. A CBA represents the best choice for achieving biodiversity targets and these areas are often considered incompatible with developments and mining.

Based on this assessment it can be concluded that the proposed development is likely to impact an area designated CBA: Irreplaceable (Figure 2). The main project area intersects with a CBA: Irreplaceable, predominantly the north-west and western portions.

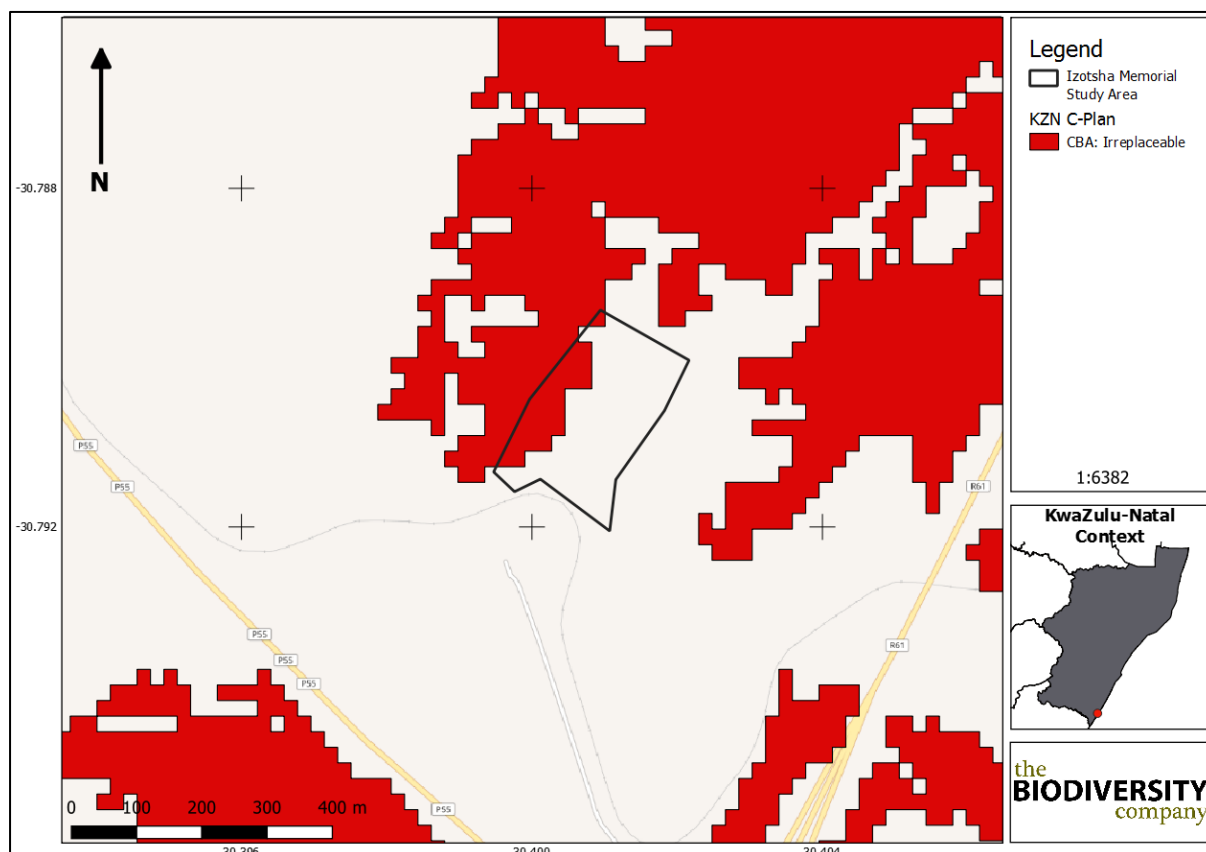


Figure 2: The project area superimposed on the KZN BSP (2014)

6.3 National Biodiversity Assessment

The recently completed National Biodiversity Assessment 2011 provides an assessment of South Africa's biodiversity and ecosystems, including headline indicators and national maps

for the terrestrial, freshwater, estuarine and marine environments. The NBA 2011 was led by the South African National Biodiversity Institute (SANBI) in partnership with a range of organisations, including the Department of Environmental Affairs (DEA), CSIR and SANParks. It follows on from the National Spatial Biodiversity Assessment 2004, broadening the scope of the assessment to include key thematic issues as well as a spatial assessment. The NBA 2011 includes a summary of spatial biodiversity priority areas that have been identified through systematic biodiversity plans at national, provincial and local level.

Information from the NBA can be used to:

- Streamline environmental decision-making, including environmental impact assessments (EIAs), by providing upfront information about threatened ecosystems and biodiversity priority areas that can be integrated early on in the process to improve the quality and efficiency of decision making at the site scale.
- Strengthen land-use planning, including through provincial and municipal Spatial Development Frameworks which set out desired future patterns of land-use, taking into account the priorities and requirements of a range of sectors.
- Strengthen national development planning and other strategic planning processes, through provision of clear spatial inputs to enable optimal development decisions for South Africa's future. This should happen at the national and landscape scale through scenario planning, enabling strategic trade-offs where necessary, for example between minerals development, energy security and water security.
- Identify priorities for management and restoration of ecosystems, which provides opportunities for ecosystem-based job creation and supports the provision of ecosystem services.
- Provide initial identification of threatened ecosystems, for listing in terms of the Biodiversity Act.
- Highlight areas where more detailed assessment and planning is required, for example the need for a national coastal biodiversity plan to identify coastal ecosystem priority areas.

The NBA also provides standard national spatial data layers that can be used in other national, provincial and local planning projects, and an agreed set of national biodiversity targets. In the NBA 2011 these include the first national map of coastal and marine habitat types, and the first national spatial demarcation of the estuarine functional zone.

The two headline indicators assessed in the NBA are ecosystem threat status and ecosystem protection level (Driver et al., 2011).

6.3.1 Ecosystem Threat Status

Ecosystem threat status outlines the degree to which ecosystems are still intact or alternatively losing vital aspects of their structure, function and composition, on which their ability to provide ecosystem services ultimately depends (Driver et al., 2011).

Ecosystem types are categorised as Critically Endangered (CR), Endangered (EN), Vulnerable (VU) or Least Threatened (LT), based on the proportion of each ecosystem type that remains in good ecological condition (Driver *et al.*, 2011).

The proposed project area was superimposed on the terrestrial ecosystem threat status (Figure 3). As seen in this figure the project area falls within one ecosystem, which is listed as Critically Endangered.

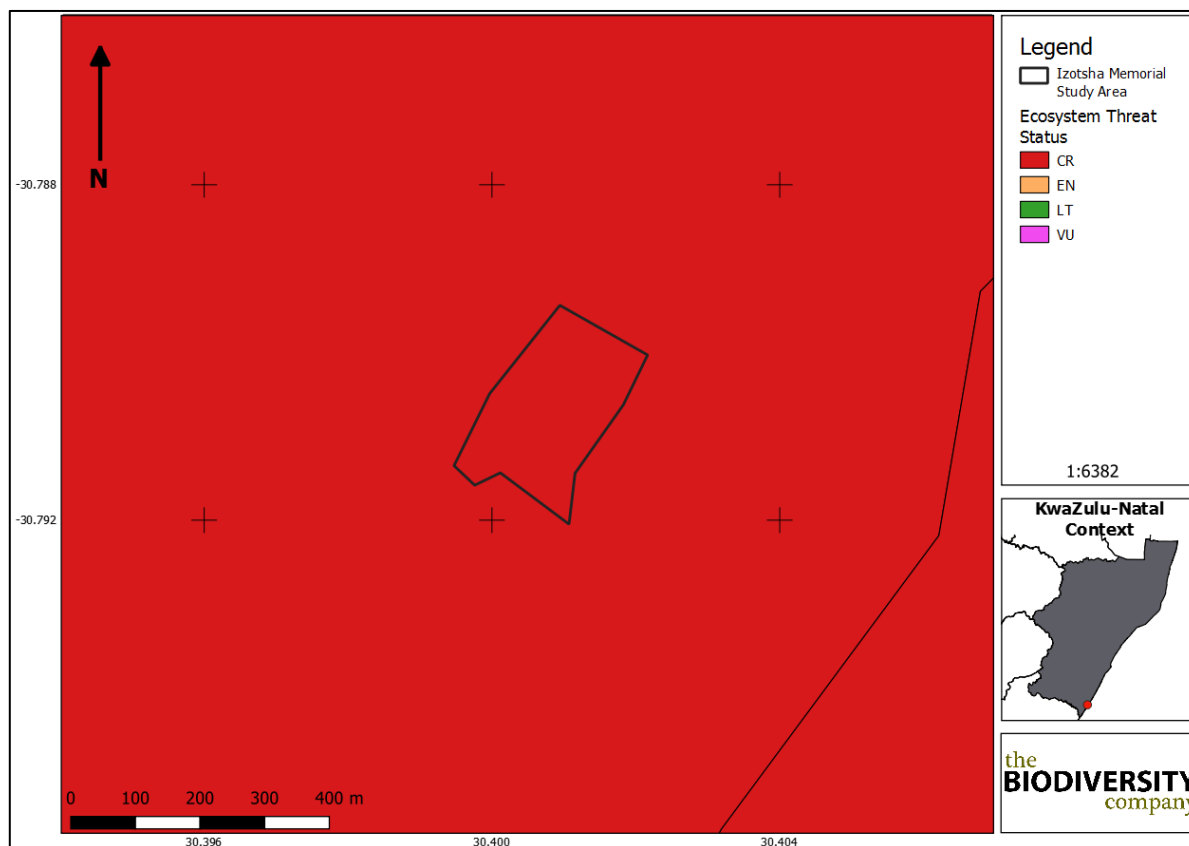


Figure 3: The project area showing the ecosystem threat status of the associated terrestrial ecosystems (NBA, 2012)

6.3.2 Ecosystem Protection Level

Ecosystem protection level tells us whether ecosystems are adequately protected or under-protected. Ecosystem types are categorised as not protected, poorly protected, moderately protected or well protected, based on the proportion of each ecosystem type that occurs within a protected area recognised in the Protected Areas Act (Driver et al., 2011).

The project area was superimposed on the ecosystem protection level map to assess the protection status of terrestrial ecosystems associated with the development (Figure 4). Based on this the terrestrial ecosystems associated with the proposed development are rated as *not protected*.

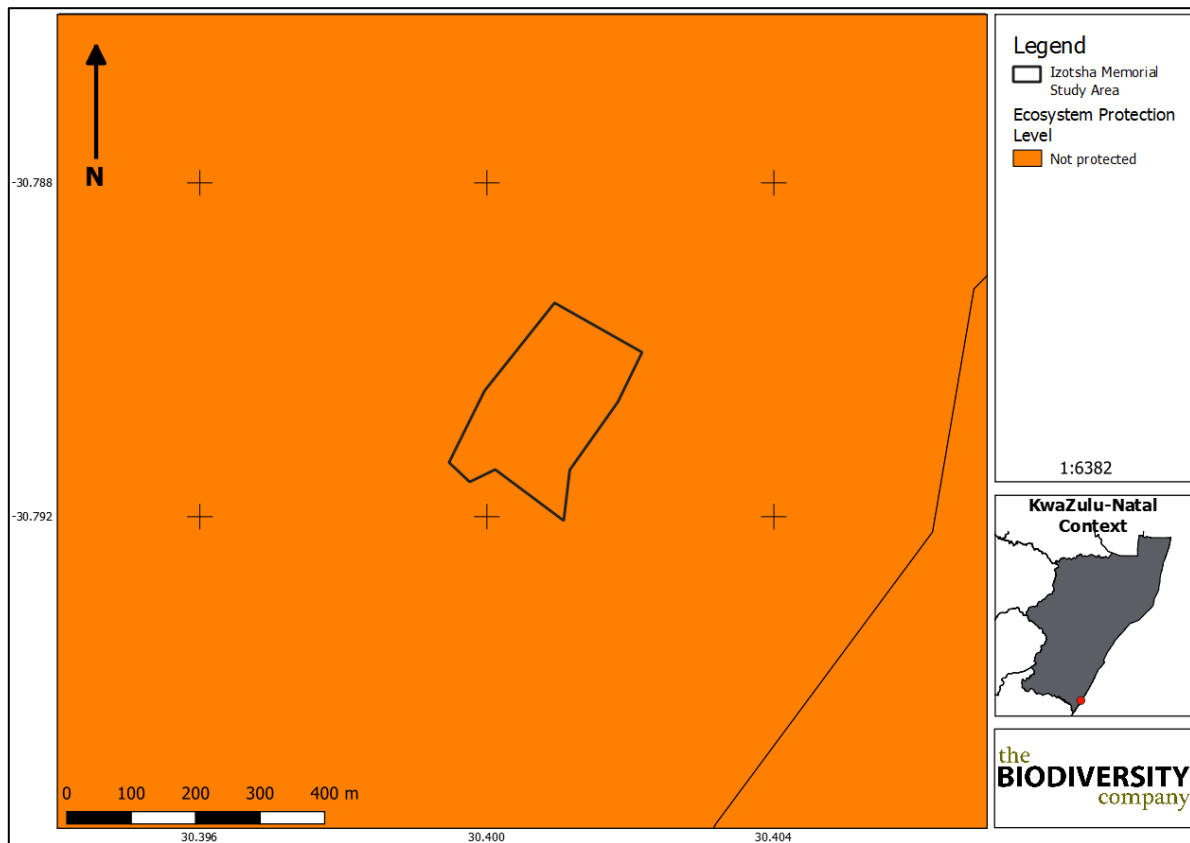


Figure 4: The project area showing the level of protection of terrestrial ecosystems (NBA, 2012)

6.4 Project Area in Relation to Protected Areas

Figure 5 shows the location of formally protected areas in relation to the project area. Formally protected areas refer to areas protected either by national or provincial legislation. Based on the SANBI (2010) Protected Areas Map and the National Protected Areas Expansion Strategy (NPAES) the project area does not overlap any formally protected areas (Figure 5).

Based on the above information and the location of the proposed development, the project area is not expected to have an impact on any formally protected areas. The closest formally protected area is the Skyline Nature Reserve which is 3.7 km south-west of the project area.

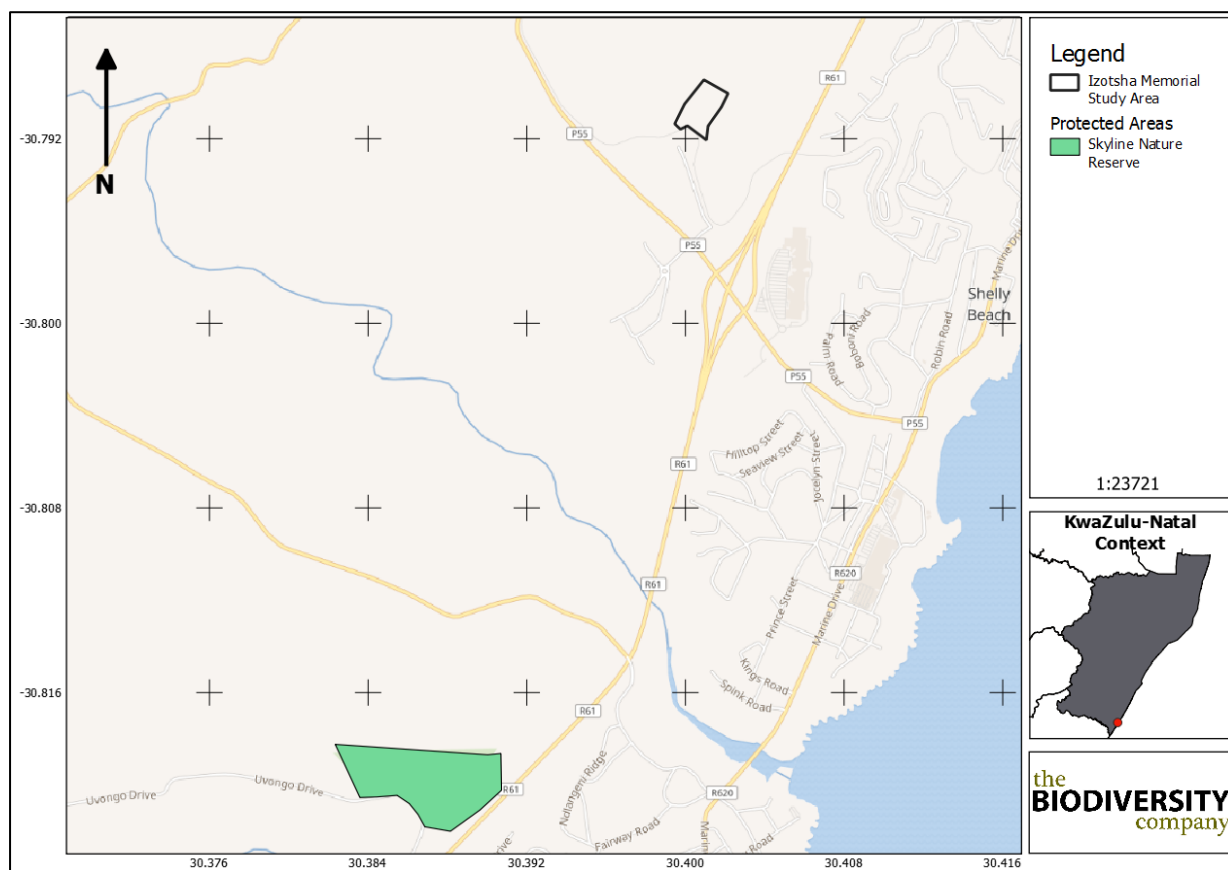


Figure 5: The project area in relation to the formally protected areas (NPAES, 2011)

7 Results & Discussion

7.1 Desktop Assessment

7.1.1 Vegetation Assessment

The project area falls within the Indian Ocean Coastal Belt Biome. This region occurs as an almost 800 km long coastal strip between the South African border with Mozambique as far south as the mouth of the Great Kei River. This high-level vegetation unit comprises a dominant forest cover interrupted by edaphically or hydrologically controlled areas of grassland, with at least a significant part of the belt being open to dense savanna vegetation, interspersed with many areas of forest and grassland. The overwhelmingly large extent of transformation of the coastal belt outside the existing strips and patches of embedded forest represents significant loss of evidence of its prior condition.

7.1.1.1 Vegetation Types

The project area is situated across one vegetation type; KwaZulu Natal Coastal Belt Grassland, according to Mucina & Rutherford (2006) (Figure 6).

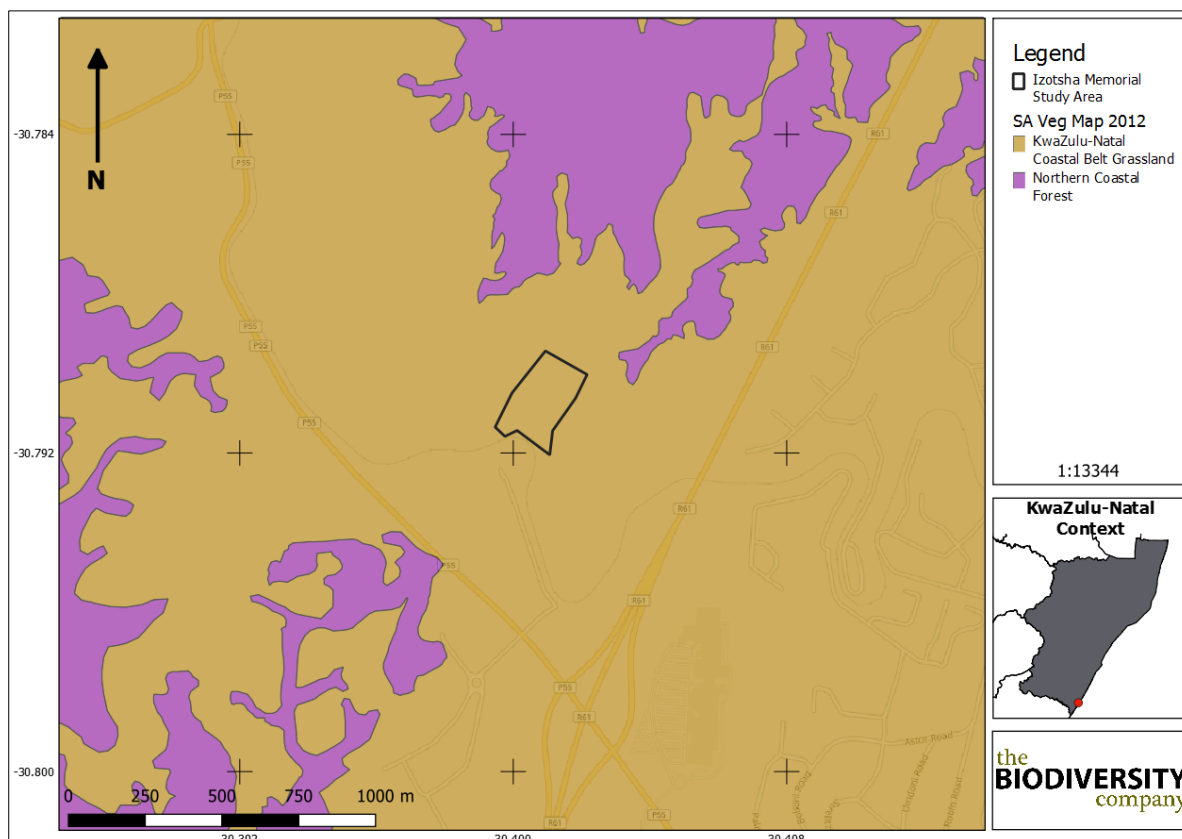


Figure 6: The Project area showing the vegetation type based on the Vegetation Map of South Africa, Lesotho & Swaziland (BGIS,2017)

7.1.1.2 KwaZulu Natal Coastal Belt Grassland

KwaZulu-Natal Coastal Belt Grassland is a broad coastal strip along the KwaZulu-Natal coast, from near Mtunzini in the north, via Durban to Margate and just short of Port Edward in the south. Highly dissected undulating coastal plains which presumably used to be covered to a great extent with various types of subtropical coastal forest. Some primary grassland dominated by *Themeda triandra* still occurs in hilly, high-rainfall areas where pressure from natural fire and grazing regimes prevailed. At present the KwaZulu-Natal Coastal Belt Grassland is affected by an intricate mosaic of very extensive sugarcane fields, timber plantations and coastal holiday resorts, with interspersed secondary *Aristida* grasslands, thickets and patches of coastal thornveld (Mucina & Rutherford, 2006).

7.1.1.2.1 Important Plant Taxa

Important plant taxa are those species that have a high abundance, a frequent occurrence or are prominent in the landscape within a particular vegetation type (Mucina & Rutherford, 2006). The following species are important in the KwaZulu-Natal Coastal Belt.

Graminoids: *Aristida junciformis* subsp. *galpinii* , *Digitaria eriantha* , *Panicum maximum* , *Themeda triandra* , *Alloteropsis semialata* subsp. *eckloniana*, *Cymbopogon caesius*, *C. nardus*, *Eragrostis curvula*, *Eulalia villosa*, *Hyparrhenia filipendula*, *Melinis repens*. **Herbs:** *Berkheya speciosa* subsp. *speciosa* , *Cyanotis speciosa* , *Senecio glaberrimus* , *Alepidea longifolia*, *Centella glabrata*, *Cephalaria oblongifolia*, *Chamaecrista mimosoides*, *Conostomium natalense*, *Crotalaria lanceolata*, *Dissotis canescens*, *Eriosema squarrosum*, *Gerbera ambigua*, *Hebenstretia comosa*, *Helichrysum cymosum* subsp. *cymosum*, *H.*

pallidum, *Hibiscus pedunculatus*, *Hybanthus capensis*, *Indigofera hiliaris*, *Pentanisia prunelloides* subsp. *latifolia*, *Senecio albanensis*, *S. bupleuroides*, *S. coronatus*, *S. rhyncholaenus*, *Sisyranthus imberbis*, *Stachys aethiopica*, *S. nigricans*, *Vernonia galpinii*, *V. oligocephala* (Mucina & Rutherford, 2006).

Geophytic Herbs: *Geophytic Herbs: Bulbine asphodeloides*, *Disa polygonoides*, *Hypoxis filiformis*, *Ledebouria floribunda*, *Pachycarpus asperifolius*, *Schizocarphus nervosus*, *Tritonia disticha*. (Mucina & Rutherford, 2006).

Low Shrubs: *Clutia pulchella*, *Gnidia kraussiana*, *Phyllanthus glaucophyllus*, *Tephrosia polystachya*.

Woody Climbers: *Abrus laevigatus*, *Asparagus racemosus*, *Smilax anceps* (Mucina & Rutherford, 2006).

Small Trees: *Bridelia micrantha* , *Phoenix reclinata* , *Syzygium cordatum* , *Acacia natalitia*, *Albizia adianthifolia*, *Antidesma venosum*.

7.1.1.2.2 Conservation Status of the Vegetation Type

According to Mucina & Rutherford (2006), this vegetation type is classified as Endangered. The national target for conservation protection for this vegetation type is 25%, but only very small part statutorily conserved in Ngoye, Mbumbazi and Vernon Crookes Nature Reserves. About 50% is transformed for cultivation, by urban sprawl and for road-building. Alien species found in this vegetation type includes *Chromolaena odorata*, *Lantana camara*, *Melia azedarach* and *Solanum mauritianum*.

7.1.1.3 Plant Species of Conservation Concern

Based on the Plants of Southern Africa (BODATSA-POSA, 2016) database, 276 plant species are expected to occur in the project area. Figure 7 shows the extent of the grid that was used to compile the expected species list based on the Plants of Southern Africa (BODATSA-POSA, 2016) database. The list of expected plant species is provided in Appendix A.

Of the 276-plant species, eighteen (18) species are listed as being Species of Conservation Concern (SCC) (Table 2).

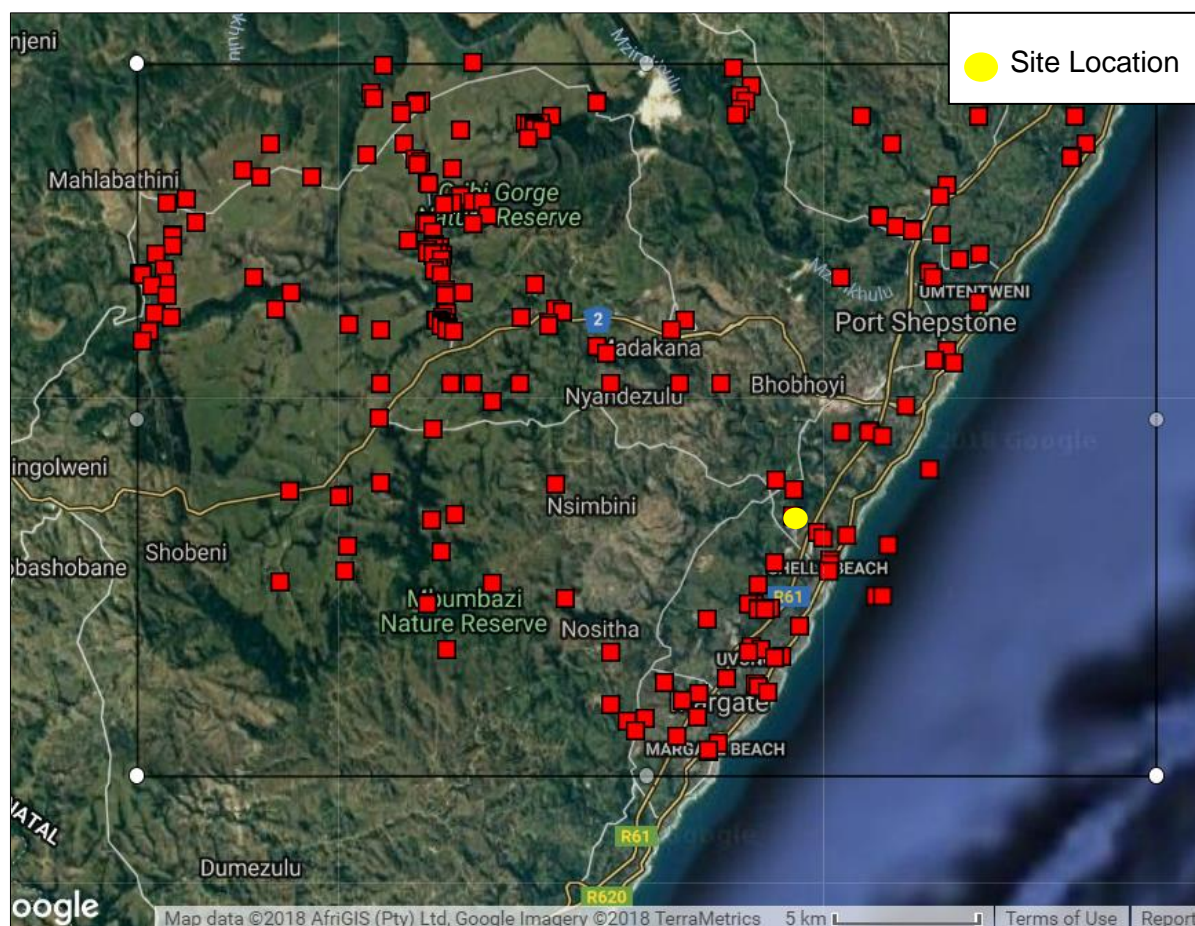


Figure 7: Map showing the grid drawn to compile an expected species list (BODATSA-POSA, 2016)

Table 2 : Plant Species of Conservation Concern (SCC) expected to occur in the project area (BODATSA-POSA, 2016)

Family	Taxon	Author	IUCN	Ecology
Fabaceae	<i>Aspalathus gerrardii</i>	Bolus	VU	Indigenous; Endemic
Apocynaceae	<i>Brachystelma sandersonii</i>	(Oliv.) N.E.Br.	VU	Indigenous; Endemic
Apocynaceae	<i>Brachystelma tenellum</i>	R.A.Dyer	VU	Indigenous; Endemic
Bruniaceae	<i>Brunia trigyna</i>	(Schltr.) Class.-Bockh. & E.G.H.Oliv.	CR	Indigenous; Endemic
Rubiaceae	<i>Eriosemopsis subanisophylla</i>	Robyns	VU	Indigenous; Endemic
Myrtaceae	<i>Eugenia simii</i>	Dummer	VU	Indigenous; Endemic
Euphorbiaceae	<i>Euphorbia flanaganii</i>	N.E.Br.	VU	Indigenous; Endemic
Celastraceae	<i>Gymnosporia bachmannii</i>	Loes.	VU	Indigenous; Endemic
Orobanchaceae	<i>Hyobanche fulleri</i>	E.Phillips	CR	Indigenous; Endemic
Proteaceae	<i>Leucadendron spissifolium</i> subsp. <i>oribinum</i>	(Salisb. ex Knight) I.Williams	VU	Indigenous; Endemic
Proteaceae	<i>Leucospermum innovans</i>	Rourke	EN	Indigenous; Endemic
Sapotaceae	<i>Manilkara nicholsonii</i>	A.E.van Wyk	EN	Indigenous; Endemic
Celastraceae	<i>Pseudosalacia streyi</i>	Codd	EN	Indigenous; Endemic

Salicaceae	<i>Pseudoscolopia polyantha</i>	Gilg	NT	Indigenous; Endemic
Restionaceae	<i>Restio zuluensis</i>	H.P.Linder	VU	Indigenous; Endemic
Rhynchoalycaceae	<i>Rhynchoalycx lawsonioides</i>	Oliv.	NT	Indigenous; Endemic
Fabaceae	<i>Tephrosia bachmannii</i>	Harms	VU	Indigenous; Endemic
Meliaceae	<i>Turraea streyi</i>	F.White & Styles	CR	Indigenous; Endemic

7.1.2 Faunal Assessment

7.1.2.1 Avifauna

Based on the South African Bird Atlas Project, Version 2 (SABAP2) database, 392 bird species are expected to occur in the vicinity of the Project area (pentads 3040_3015; 3040_3020; 3040_3025; 3045_3015; 3045_3020; 3045_3025; 3050_3015; 3050_3020). The full list of potential bird species is provided in Appendix B.

Of the expected bird species, forty-three (43) species are listed as SCC either on a regional (37) or global scale (28) (Table 3).

The SCC include the following:

- Ten (10) species that are listed as Endangered (EN) on a regional basis;
- Twenty (20) species that are listed as Vulnerable (VU) on a regional basis; and
- Seven (7) species that are listed as Near Threatened (NT) on a regional basis.

Table 3: List of bird species of regional or global conservation importance that are expected to occur in pentads mentioned above (SABAP2, 2018, ESKOM, 2014; IUCN, 2018)

Species	Common Name	Conservation Status		Likelihood of Occurrence
		Regional (SANBI, 2016)	IUCN (2017)	
<i>Alcedo semitorquata</i>	Kingfisher, Half-collared	NT	LC	Low
<i>Anthropoides paradiseus</i>	Crane, Blue	NT	VU	Low
<i>Aquila verreauxii</i>	Eagle, Verreaux's	VU	LC	Low
<i>Balearica regulorum</i>	Crane, Grey Crowned	EN	EN	Low
<i>Bradypterus sylvaticus</i>	Warbler, Knysna	VU	VU	Moderate
<i>Bucorvus leadbeateri</i>	Ground-hornbill, Southern	EN	VU	Low
<i>Calidris ferruginea</i>	Sandpiper, Curlew	LC	NT	Low
<i>Campethera notata</i>	Woodpecker, Knysna	NT	NT	Low
<i>Ciconia episcopus</i>	Stork, Woolly-necked	Unlisted	VU	Moderate
<i>Ciconia nigra</i>	Stork, Black	VU	LC	Moderate
<i>Circus maurus</i>	Harrier, Black	EN	VU	Moderate
<i>Circus ranivorus</i>	Marsh-harrier, African	EN	LC	Low
<i>Coracias garrulous</i>	Roller, European	NT	LC	Low
<i>Falco biarmicus</i>	Falcon, Lanner	VU	LC	Moderate
<i>Falco concolor</i>	Falcon, Sooty	NA	NT	Low
<i>Geronticus calvus</i>	Ibis, Southern Bald	VU	VU	Low
<i>Gyps coprotheres</i>	Vulture, Cape	EN	EN	Low
<i>Haematopus moquini</i>	Oystercatcher, African Black	LC	NT	Low

<i>Halcyon senegaloides</i>	Kingfisher, Mangrove	EN	LC	Low
<i>Limosa lapponica</i>	Godwit, Bar-tailed	LC	NT	Low
<i>Lioptilus nigricapillus</i>	Blackcap, Bush	VU	NT	Low
<i>Microparra capensis</i>	Jacana, Lesser	VU	LC	Low
<i>Morus capensis</i>	Gannet, Cape	VU	VU	Low
<i>Nettapus auritus</i>	Goose, African Pygmy	VU	LC	Low
<i>Numenius arquata</i>	Curlew, Eurasian	NT	NT	Low
<i>Pelecanus onocrotalus</i>	Pelican, Great White	VU	LC	Low
<i>Phalacrocorax capensis</i>	Cormorant, Cape	EN	EN	Low
<i>Podica senegalensis</i>	Finfoot, African	VU	LC	Low
<i>Polemaetus bellicosus</i>	Eagle, Martial	EN	VU	Low
<i>Procellaria aequinoctialis</i>	Petrel, White-chinned	VU	VU	Low
<i>Procellaria conspicillata</i>	Petrel, Spectacled	VU	VU	Low
<i>Promerops gurneyi</i>	Sugarbird, Gurney's	Unlisted	NT	Low
<i>Sagittarius serpentarius</i>	Secretarybird	VU	VU	Low
<i>Smithornis capensis</i>	Broadbill, African	VU	LC	Low
<i>Spermestes fringilloides</i>	Mannikin, Magpie	NT	LC	Moderate
<i>Stephanoaetus coronatus</i>	Eagle, African Crowned	VU	NT	Low
<i>Sterna caspia</i>	Tern, Caspian	VU	LC	Low
<i>Thalassarche carteri</i>	Albatross, Indian Yellow-nosed	EN	EN	Low
<i>Thalassarche cauta</i>	Albatross, Shy	NT	NT	Low
<i>Thalassarche chlororhynchos</i>	Albatross, Atlantic Yellow-nosed	EN	EN	Low
<i>Thalassarche eremita</i>	Albatross, Chatham	VU	VU	Low
<i>Thalassarche salvini</i>	Albatross, Salvin's	VU	VU	Low
<i>Tyto capensis</i>	Grass-owl, African	VU	LC	Low

Alcedo semitorquata (Half-collared Kingfisher) is listed as Near Threatened (NT) on a regional scale and occurs across a large range. This species generally prefers narrow rivers, streams, and estuaries with dense vegetation onshore, but it may also move into coastal lagoons and lakes. It mainly feeds on fish (IUCN, 2017). The possibility of occurrence is low.

Anthropoides paradiseus (Blue Crane) is listed as NT on a regional scale and as VU on a global scale. This species has declined, largely owing to direct poisoning, power-line collisions and loss of its grassland breeding habitat owing to afforestation, mining, agriculture and development (IUCN, 2017). This species breeds in natural grass- and sedge-dominated habitats, preferring secluded grasslands at high elevations where the vegetation is thick and short. Due to the lack of open grassland areas or extensive wetlands within the project site the likelihood of occurrence is rated as low.

Aquila verreauxii (Verreaux's Eagle) is listed as VU on a regional scale and LC on a global scale. This species is locally persecuted in southern Africa where it coincides with livestock farms, but because the species does not take carrion, is little threatened by poisoned carcasses. Where hyraxes are hunted for food and skins, eagle populations have declined (IUCN, 2017). The likelihood of occurrence of this species at the project site is rated as low.

Balearica regulorum (Crane, Grey Crowned) is listed as Endangered (EN) on a regional scale as well as global scale. The species inhabits wetlands such as marshes, pans and dams with tall emergent vegetation, open riverine woodland, shallowly flooded plains and temporary

pools with adjacent grasslands, open savannas, croplands and breeds within or at the edges of wetlands. The likelihood to occur in the project area is low.

Bradypterus sylvaticus (Knysna Warbler) is listed as Vulnerable on a regional scale and on a global scale. It has a small, severely fragmented range and population, which are suspected to be undergoing a continuing decline owing to the loss and degradation of suitable habitat. It typically occurs in thick, tangled vegetation along the banks of watercourses, or covering drainage lines in fynbos forest patches, or on the edges of Afromontane forest. Due to the presence of suitable habitat in the area the likelihood of occurrence is rated as moderate

Bucorvus leadbeateri (Southern Ground Hornbill) is listed as EN regionally and as VU globally. Secondary poisoning, trade and persecution are estimated to have caused very rapid population declines in this species in South Africa (IUCN, 2017). It inhabits woodland and savanna, also frequenting grassland adjoining patches of forest. The likelihood of occurrence is rated as low.

Calidris ferruginea (Curlew Sandpiper) is migratory species which breeds on slightly elevated areas in the lowlands of the high Arctic and may be seen in parts of South Africa during winter. During winter, the species occurs at the coast, but also inland on the muddy edges of marshes, large rivers and lakes (both saline and freshwater), irrigated land, flooded areas, dams and salt pans (IUCN, 2017). Due to the lack of these habitat types within the project area the likelihood of occurrence of this species was rated as low.

Campethera notata (Knysna Woodpecker) is listed as near threatened on a regional scale and on a global scale. It is confined to coastal areas of forest, woodland, dense bush, *Euphorbia* scrub, or open country with large trees, extending marginally inland in places. A range contraction in KwaZulu-Natal in the 19th century has been attributed to the clearance of coastal bush for sugar-cane farming and township development. Due to the lack of suitable habitat the likelihood of occurrence is rated as low.

Ciconia episcopus (Woolly-necked Stork) is categorised as Vulnerable on a global scale. A major threat to this species in South East Asia is hunting, it also threatened by severe habitat loss and fragmentation, particularly that of lowland forests with tall trees used for nesting although much suitable habitat remains that is not inhabited. Due to the presence of suitable habitat the likelihood of occurrence is rated as moderate.

Ciconia nigra (Black Stork) is native to South Africa, and inhabits old, undisturbed, open forests. They are known to forage in shallow streams, pools, marshes swampy patches, damp meadows, flood-plains, pools in dry riverbeds and occasionally grasslands, especially where there are stands of reeds or long grass (IUCN, 2017). It is unlikely that this species would breed in the project area due to the lack of forested areas, however some suitable foraging habitat remains in the form an adjacent swamp, and as such the likelihood of occurrence is rated as moderate.

Circus maurus (Black Harrier) is listed as Endangered (EN) on a local basis and is restricted to southern Africa, where it is mainly found in the fynbos and Karoo of the Western and Eastern Cape. It is also found in the grasslands of Free State, Lesotho and KwaZulu-Natal. Harriers breed close to coastal and upland marshes, damp sites, near vleis or streams with tall shrubs or reeds. South-facing slopes are preferred in mountain areas where temperatures are cooler, and vegetation is taller (IUCN, 2017). During the non-breeding season, they will also be found

in dry grassland areas further north and they also visit coastal river floodplains in Namibia. The likelihood of occurrence is rated as moderate.

Circus ranivorus (African Marsh Harrier) is listed as EN in South Africa (ESKOM, 2014). This species has an extremely large distributional range in sub-equatorial Africa. South African populations of this species are declining due to the degradation of wetland habitats, loss of habitat through over-grazing and human disturbance and possibly, poisoning owing to over-use of pesticides (IUCN, 2017). This species breeds in wetlands and forages primarily over reeds and lake margins. The occurrence of *C. ranivorus* in the project area is therefore considered to be low.

Coracias garrulous (European Roller) is a winter migrant from most of South-central Europe and Asia occurring throughout sub-Saharan Africa (IUCN, 2017). The European Roller has a preference for bushy plains and dry savannah areas (IUCN, 2017). There is a low chance of this species occurring in the project area.

Falco biarmicus (Lanner Falcon) is native to South Africa and inhabits a wide variety of habitats, from lowland deserts to forested mountains (IUCN, 2017). They may occur in groups up to 20 individuals but have also been observed solitary. Their diet is mainly composed of small birds such as pigeons and francolins. The likelihood of incidental records of this species in the project area is rated as moderate due to the presence of many bird species on which Lanner Falcons may predate.

Falco concolor (Sooty Falcon) is a migratory species, with birds arriving in their wintering grounds in Madagascar and south-east Africa from late October and returning to breeding sites in April (del Hoyo et al. 1994). Most of the population winters in Madagascar, but a small but unknown proportion winters in coastal Mozambique and eastern South Africa (south to southern Natal), and there is also limited over-wintering in the southern part of the breeding range. The habitat it generally prefers for foraging is open grassland with scattered trees, such as open grassy woodland, wetlands, forest fringes and croplands. The likelihood of occurrence is rated as low.

Geronticus calvus (Southern Bald Ibis) is listed as Vulnerable (VU) on a regional basis and prefers high rainfall (>700 mm p.a.), sour and alpine grasslands, with an absence of trees and a short, dense grass sward and also occurs in lightly wooded and relatively arid country. It forages on recently burned ground, also using unburnt natural grassland, cultivated pastures, reaped maize fields and ploughed areas. It has a varied diet, mainly consisting of insects and other terrestrial invertebrates (IUCN, 2017). It has high nesting success on safe, undisturbed cliffs. The likelihood of occurrence is rated as low.

Gyps coprotheres (Cape Vulture) is listed as Endangered (EN) on both a regional and global scale. Cape Vultures are long-lived carrion-feeders specialising on large carcasses, they fly long distances over open country, although they are usually found near steep terrain, where they breed and roost on cliffs (IUCN, 2017). Individuals may be seen foraging within the area but are unlikely to be resident. Likelihood of occurrence is rated as low.

Haematopus moquini (African Black Oystercatcher) is listed as Near Threatened on a global scale due to its small population size, low reproductive rate and susceptibility to human disturbance, especially urban development and use of off-road vehicles on beaches (destroying nests). Adults are largely sedentary and territorial, generally breeding on sandy

beaches and islands, often heading to more rocky areas of the coastline in the non-breeding season (Hockey et al., 2005). The likelihood of the species occurring in the project area is low.

Halcyon senegaloides (Mangrove Kingfisher) is listed as Endangered on a regional scale. This species occurs along the east coast of sub-Saharan Africa, from southern Somalia through Kenya and Tanzania to southern Africa. In summer it generally prefers the banks of forested rivers, streams and estuaries along or near the coast, while in winter it mainly stays in mangroves and nearby woodland. The likelihood of this species occurring in the project area is rated as low.

Limosa lapponica (Bar-tailed Godwit) is listed as Near Threatened on a global scale. This species has an extremely large range, they breed across the Arctic from northern Europe through Siberia to Alaska (U.S.A.), wintering along the coasts of western Europe, Africa, the Middle East, south- and south-east Asia, Australia and New Zealand. When breeding the species feeds on insects, annelid worms, molluscs and occasionally seeds and berries (del Hoyo et al. 1996). In intertidal areas the species' diet consists of annelids, bivalves and crustaceans, although it will also take crane-fly larvae and earthworms on grasslands and occasionally larval amphibians (tadpoles) and small fish (del Hoyo et al. 1996). The likelihood of occurring in the project area is rated as low.

Lioptilus nigricapillus (Bush Blackcap) is categorised as Vulnerable on a regional and Near Threatened on a national scale. This species has a small population, which is threatened by afforestation of its habitat and is inferred to be in decline. This species prefers major stands of mature forest in ravines fringed with thickets of *Leucosidea* and *Buddleia*. This habitat is often surrounded by grassland or cultivated land which may prove to be beneficial for the species. The likelihood of occurrence in the project area is listed as low.

Microparra capensis (Lesser Jacana) is listed as VU on a regional scale and LC on a global scale. This species shows a preference for shallow water around the edges of permanent and seasonally flooded wetlands, with areas of sparse sedge (IUCN, 2017). Its likelihood of occurrence in the project area is rated as low.

Morus capensis (Cape Gannet) is listed as Vulnerable on a regional scale and as endangered on a global scale. This species has undergone a large population reduction over the past three generations and is projected to continue to decline rapidly over the next three generations. The species is a marine species that during the non-breeding season can be found as far as 120km inland. The likelihood of this species being present in the project site is rated as low

Nettapus auritus (African Pygmy Goose) is listed as Vulnerable in South Africa. They are threatened by habitat degradation such as the destruction of aquatic plant communities through the introduction of exotic fish (e.g. cichlids *Tilapia* spp.), siltation, pollution (e.g. herbicides), drainage and tourist water-sports (which destroy lily beds). The likelihood of occurring in the project area is rated as low.

Numenius arquata (Eurasian Curlew) is listed as Near Threatened on both a regional and a global scale. The species is threatened by the loss and fragmentation of moorland habitats as a result of afforestation and of marginal grassland habitats as a result of agricultural intensification and improvement (e.g. drainage, inorganic fertilisation and reseeded). The species over winter in Africa while during the breeding season they can be found mostly in Europe. The likelihood of the species occurring in the project area is rated as low.

Pelecanus onocrotalus (Great White Pelican) is listed as vulnerable in South Africa as its breeding attempts regularly fail due to human disturbance, such as fishing activities and nest robbing. They prefer shallow lakes, estuaries, flood plain pans, dams, sheltered coastal bays and lagoons. The likelihood of occurring in the project site is rated as low .

Phalacrocorax capensis (Cape Cormorant) is endemic to the southwestern coast of Africa, but during the non-breeding season they spread inland and up the east coast of South Africa. The IUCN as well as Birdlife South Africa lists these birds as endangered, and the main cause of the decline is as a result of the decline of the epipelagic fish stock, oil spills and avian cholera. Due to the lack of suitable habitat and proximity of the urban area, the likelihood of occurrence is rated as low.

Podica senegalensis (African Finfoot) occurs in forest and wooded savanna along permanent streams with thick growths of *Syzygium guineense*, along secluded reaches of thickly wooded rivers and on the edges of pools, lakes and dams with well-vegetated banks on the edges of dense papyrus beds far from the shore. It is rarely found away from shoreline vegetation and generally avoids stagnant or fast-flowing water (IUCN, 2017). Occurrence is possible but due to the proximity of the urban area and the degraded state of the uMnsunduze River the likelihood of occurrence is rated as low.

Polemaetus bellicosus (Martial eagle) is listed as EN on a regional scale and VU on a global scale. This species has an extensive range across much of sub-Saharan Africa, but populations are declining due to deliberate and incidental poisoning, habitat loss, reduction in available prey, pollution and collisions with power lines (IUCN, 2017). It inhabits open woodland, wooded savanna, bushy grassland, thorn-bush and, in southern Africa, more open country and even sub-desert (IUCN, 2017). There is a low chance of this species occurring.

Procellaria aequinoctialis (White-Chinned Petrel) is listed as Vulnerable (VU) both on regional and global scale. This species constitutes the majority of bird bycatch in Southern Ocean longline fisheries. It is thought that fishery-related mortality exerts a greater pressure on the Indian Ocean population than the Atlantic Ocean population. It is a burrow-nesting annual breeder, laying in mid-October to mid-November. The likelihood of the species occurring in the project area is rated as low.

Procellaria conspicillata (Spectacled Petrel) is listed as Vulnerable (VU) both on regional and global scale. The greatest threat comes from interactions with longline fisheries. It breeds in wet heath at 250-500 m where burrows are found along the banks of river valleys but most pairs breed in loose colonies among bogfern *Blechnum palmiforme* vegetation, where their burrowing activity creates distinctive marshy areas dominated by *Scirpus* sedges. The likelihood of the species occurring in the project area is rated as low.

Promerops gurneyi (Gurney's Sugarbird) is listed as Near Threatened on a global scale. Commercial afforestation may threaten this species' habitat, while *Protea* farming does provide extra habitat for the species, it could be possible that conflict will arise with farmers due to the birds damaging flowers. The likelihood of occurrence in the project area is rated as low

Sagittarius serpentarius (Secretarybird) occurs in sub-Saharan Africa and inhabits grasslands, open plains, and lightly wooded savanna. It is also found in agricultural areas and sub-desert (IUCN, 2017). The likelihood of occurrence is rated as low.

Smithornis capensis (African Broadbill) is listed as Vulnerable on a regional scale. The African broadbill mainly occurs in south-central and southern Africa, where it has populations scattered across northern Zimbabwe and Botswana, Mozambique and KwaZulu-Natal. It is locally common although difficult to see, as it is extremely inconspicuous, remaining motionless on its perch for long periods. It generally prefers dense forest or woodland, exclusively eating invertebrates, such as grasshoppers, beetles and spiders. The likelihood of occurrence in the project area is rated as low

Spermestes fringilloides (Magpie Mannikin) is listed as Near Threatened on a regional scale. The decline is partly due to its dependence on bamboo for food which is not common in KwaZulu-Natal. It generally prefers seeds taken directly from grasses, especially bamboo, supplemented with insects. The likelihood of occurrence in the project area is rated as moderate.

Stephanoaetus coronatus (African Crowned Eagle) inhabits forest, woodland, savanna and shrubland, as well as some modified habitats, such as plantations and secondary growth, and can persist in small forest fragments including urban greenspace forests (IUCN, 2017). The species has shown high resilience to heavy deforestation and degradation in some areas. The likelihood of occurrence is rated as low.

Sterna caspia (Caspian Tern) is native to South Africa and are known to occur in inland freshwater systems such as large rivers, creeks, floodlands, reservoirs and sewage ponds. Habitat suitability was found to be low and thus the likelihood of occurrence is low.

Thalassarche carteri (Indian Yellow-nosed Albatross) is listed as Endangered (EN) on a regional scale and as endangered (EN) species on a global scale. It breeds on slopes or cliffs, typically in bare, rocky areas but sometimes in tussock-grass and ferns. The Amsterdam population declined due to the outbreak of two diseases in the early 1980s (avian cholera and *Erysipelothrix rhusiopathidae*) that were thought to have been introduced to the island via poultry kept at the French military base. The diseases mainly affect young chicks, but adults may also be affected. The likelihood of the species occurring in the project area is rated as low.

Thalassarche cauta (Shy Albatross) is listed as NT species on a regional scale and as NT on a global scale. Shy Albatross breeds annually in colonies. Nests are a mound of soil, grass and roots, and are located on rock islands. Avian pox virus has been recorded in chicks on Albatross Island (Tasmania) and has the potential to impact population trends through negative impacts to breeding success. The likelihood of the species occurring in the project area is rated as low.

Thalassarche chlororhynchos (Atlantic Yellow-nosed Albatross, Yellow-nosed Albatross) is listed as Endangered (EN) species on regional scale and as endangered (EN) species on a global scale. It builds nests built on tussock grass, on rocks and under trees. This species is commonly caught as incidental bycatch in longline fisheries within its range. It is one of the most frequently killed species in longline fisheries off Namibia. The likelihood of the species occurring in the project area is rated as low.

Thalassarche eremita (Chatham Albatross) is listed as vulnerable (VU) on a regional scale and as Vulnerable (VU) on a global scale. It usually nests on rocky ledges and steep slopes. Illegal harvesting of chicks may occur occasionally and, although numbers are apparently

small, this may have some effect on the population. The likelihood of the species occurring in the project area is rated as low.

Thalassarche salvini (Salvin's Albatross) is listed as Vulnerable (VU) on a regional scale and as Vulnerable (VU) on a global scale. It breeds mostly on small, bare rocky islands. The nest is a muddy pedestal made of dried mud, feathers and some bird bones. The species is also potentially threatened by climate change because it has a bounded distribution: it is restricted to islands with a maximum altitude of 340 m. They are particularly vulnerable to extreme weather events. The likelihood of occurrence is rated as low.

Tyto capensis (African Grass-owl) is rated as Vulnerable (VU) on a regional basis. The distribution of the species includes the eastern parts of South Africa. The species is generally solitary, but it does also occur in pairs, in moist grasslands where it roosts (IUCN, 2017). The species prefers thick grasses around wetlands and rivers which are not present in the project area. Furthermore, this species specifically has a preference for nesting in dense stands of the grass species *Imperata cylindrica*. The likelihood of occurrence is rated as low.

Spheniscus demersus (African Penguin) was removed from the list due to the distance of the project area from the ocean.

7.1.2.1.1 Important Bird Areas

Important Bird Areas (IBAs) are the sites of international significance for the conservation of the world's birds and other nature as identified by BirdLife International. These sites are also all Key Biodiversity Areas; sites that contribute significantly to the global persistence of biodiversity (Birdlife, 2017).

According to Birdlife International (2017), the selection of Important Bird and Biodiversity Areas (IBAs) is achieved through the application of quantitative ornithological criteria, grounded in up-to-date knowledge of the sizes and trends of bird populations. The criteria ensure that the sites selected as IBAs have true significance for the international conservation of bird populations and provide a common currency that all IBAs adhere to, thus creating consistency among, and enabling comparability between, sites at national, continental and global levels.

The project area is situated 15.8 kilometres south-east of the Oribi Gorge Nature Reserve IBA (Figure 8). The grassland and lightly wooded areas hold Grey Crowned Crane (*Balearica regulorum*) and the forest supports small numbers of wintering Spotted Ground Thrush (*Zoothera guttata*) as well as populations of Knysna Turaco (*Tauraco corythaix*), Knysna Woodpecker (*Campethera notata*) (at its northern and eastern extremity), Chorister Robin-Chat (*Cossypha dichroa*), Brown Scrub Robin (*Erythropygia signata*), Forest Canary (*Serinus scotops*), Black-bellied Starling (*Notopholia corrusca*) and Grey Sunbird (*Cyanomitra veroxii*).

The cliffs just outside the boundary of the reserve hold a breeding colony of Cape Vultures (*Gyps coprotheres*), which visit the feeding area inside the reserve whenever it is provisioned. The cliffs also support a small Peregrine Falcon (*Falco peregrinus*) population. Other raptors in the reserve include Martial Eagle (*Polemaetus bellicosus*), African Marsh Harrier (*Circus ranivorus*) and African Grass Owl (*Tyto capensis*). The backwaters of the river are the home of African Finfoot (*Podica senegalensis*).

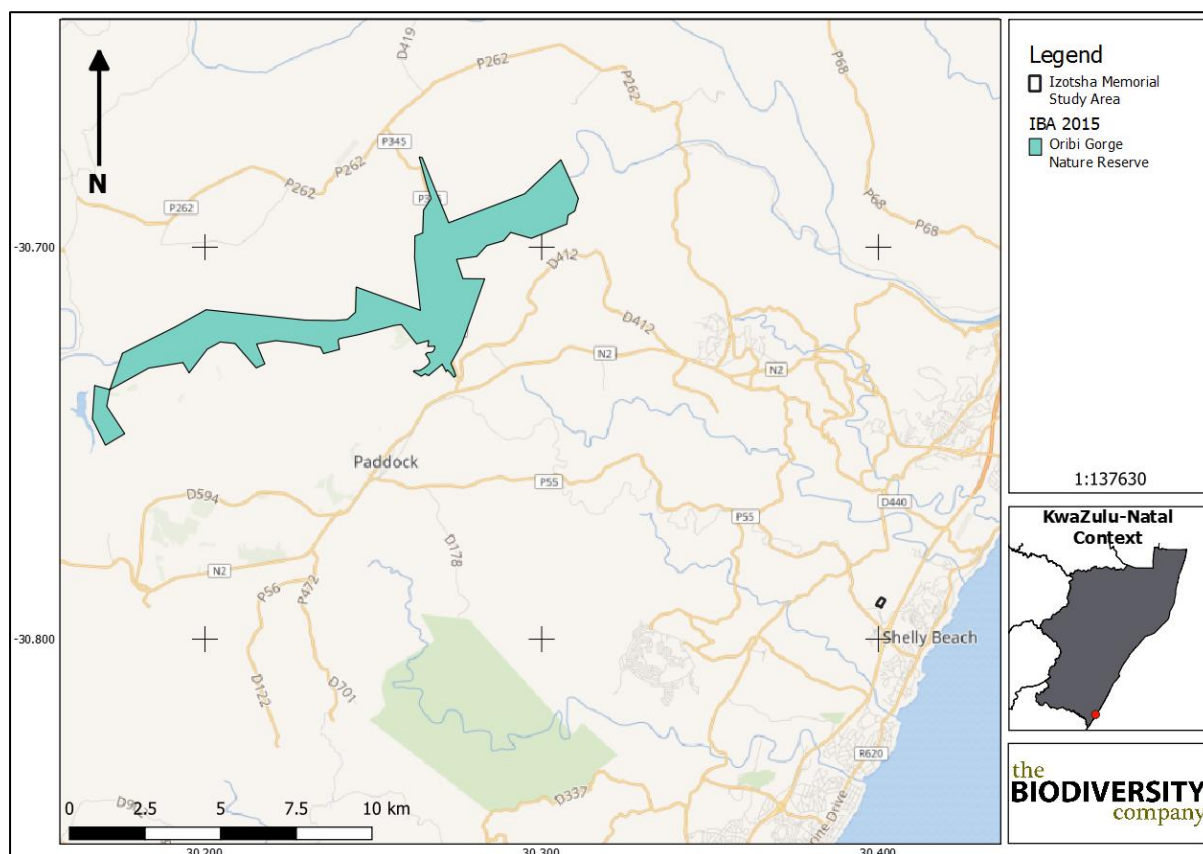


Figure 8: The project area in relation to the Oribi Gorge Nature Reserve IBA (Birdlife, 2017)

7.1.2.2 Mammals

The IUCN Red List Spatial Data (IUCN, 2018) lists 75 mammal species that could be expected to occur within the project area (Appendix C). Of these species, 6 are medium to large conservation dependant species, such as *Ceratotherium simum* (Southern White Rhinoceros) and *Equus quagga* (Plains Zebra) that, in South Africa, are generally restricted to protected areas such as game reserves. These species are not expected to occur in the Project area and are removed from the expected SCC list. They are however still included in Appendix C.

Of the remaining 69 small to medium sized mammal species, ten (10) are listed as being of conservation concern on a regional or global basis (Table 4). The list of potential species includes:

- One (1) that is listed as Endangered (EN) on a regional basis;
- Four (4) that are listed as Vulnerable (VU) on a regional basis; and
- Five (5) that are listed as Near Threatened (NT) on a regional scale.

Table 4: List of mammal species of conservation concern that may occur in the project area as well as their global and regional conservation statuses (IUCN, 2017; SANBI, 2016)

Species	Common name	Conservation Status		Likelihood of Occurrence
		Regional (SANBI, 2016)	IUCN (2017)	
<i>Aonyx capensis</i>	Cape Clawless Otter	NT	NT	Low
<i>Cercopithecus mitis</i>	Samango Monkey	VU	LC	Low

<i>Dasymys incomtus</i>	African Marsh Rat	NT	LC	Low
<i>Dendrohyrax arboreus</i>	Southern Tree Hyrax	EN	LC	Low
<i>Leptailurus serval</i>	Serval	NT	LC	Low
<i>Otomys laminatus</i>	Laminate Vlei Rat	NT	LC	Moderate
<i>Panthera pardus</i>	Leopard	VU	VU	Low
<i>Philantomba monticola</i>	Blue Duiker	VU	LC	Low
<i>Poecilogale albinucha</i>	African Striped Weasel	NT	LC	Low
<i>Rhinolophus swinnyi</i>	Swinny's Horseshoe Bat	VU	LC	Low

Aonyx capensis (Cape Clawless Otter) is the most widely distributed otter species in Africa (IUCN, 2017). This species is predominantly aquatic, and it is seldom found far from water, The likelihood of occurrence of this species occurring in the project area is considered to be low.

Cercopithecus mitis (Samango Monkey) is listed as Vulnerable on a regional scale. This species is present in many different forest types including lowland and montane tropical moist forest, riverine and gallery forest, delta forest and bamboo forest (IUCN, 2017). It can occur in secondary forest, logged forest and thickets. The likelihood of occurrence in the project area is rated as low .

Dasymys incomtus (African Marsh Rat) is listed as NT on a regional scale and LC on a global scale. This species has a wide distributional range that includes Central Africa, East Africa and parts of Southern Africa. This species has been recorded from a wide variety of habitats, including forest and savanna habitats, wetlands and grasslands (IUCN, 2017). The likelihood of occurrence of this species in the project area is rated as low.

Dendrohyrax arboreus (Tree Hyrax) is listed as Endangered (EN) on a regional basis and occurs in forested and well-wooded areas. In South Africa, it occurs in Afromontane forests and thickets of the Eastern Cape and KwaZulu-Natal Provinces (IUCN, 2017). Due to the lack of suitable habitat the likelihood of occurrence is rated as low.

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

Otomys laminatus (Laminate Vlei Rat) is listed as Near Threatened on a regional basis. It inhabits moist habitats such as bogs, swamps, marshes, and moist grassland and shrubland areas. The likelihood of finding this species in the project area is rated as moderate.

Panthera pardus (Leopard) has a wide distributional range across Africa and Asia, but populations have become reduced and isolated, and they are now extirpated from large portions of their historic range (IUCN, 2017). Impacts that have contributed to the decline in populations of this species include continued persecution by farmers, habitat fragmentation, increased illegal wildlife trade, excessive harvesting for ceremonial use of skins, prey base declines and poorly managed trophy hunting (IUCN, 2017). Although known to occur and persist outside of formally protected areas, the densities in these areas are considered to be

low. The likelihood of occurrence in the Project area which is in such close proximity to an urban area, and where they are likely to be persecuted, is regarded as low.

In South Africa, *Philantomba monticola* (Blue Duiker) is mainly confined to the evergreen forest and thickets along the coast from northern KwaZulu-Natal to the eastern Western Cape province (IUCN, 2017). Due to the lack of forest or thicket the likelihood of occurrence is very low.

Poecilogale albinucha (African Striped Weasel) is usually associated with savanna habitats, although it probably has a wider habitat tolerance (IUCN, 2017). Due to its secretive nature, it is often overlooked in many areas where it does occur. There is sufficient habitat for this species in the project area and the likelihood of occurrence of this species is therefore considered to be low.

Rhinolophus swinnyi (Swinny's Horseshoe Bat) has been recorded from eastern parts of South Africa where suitable habitat includes moist montane rainforest, and dry and moist savanna. On a population level, they are dependant on caves, mines and similar habitats for roosting (IUCN, 2017). The likelihood of occurrence of this species in the project area is rated as low due to the proximity of the urban area and lack of suitable habitat and roosting locations.

KZNEBPA Mammals

Certain mammal species may not be protected under NEMBA or IUCN regulations but KZNEBPA has specific provincial regulations relating to some of these species which need to be adhered to.

Vervet Monkeys are protected under Schedule 3 of the KZNEBPA and appear in Appendix II of CITES. Vervet monkeys are being forced into smaller pockets of vegetation as a direct result of the destruction of their natural habitat, resulting in conflict with humans.

African Wild Cats, Banded Mongooses, Chacma Baboons, Greater Galago's, Natal Red Rock Rabbit and Striped Polecats are provincially protected species (Schedule 3 of the KZNEBPA, 2014). Hunting, and the possession, breeding, selling, making available for sale or otherwise trade in, buying, receiving, giving or donating, or accepting as a gift, or in any way acquiring or disposing of, capturing, collecting, immobilizing, killing, translocating, releasing, displaying, importing or keep in captivity or exporting is prohibited.

Similarly, Geoffroy's Horseshoe bat, the Lesser Long-fingered bat, Sundevall's Leaf-nosed bat and Temminck's Myotis are provincially protected (Schedule 3, KZNEBPA, 2014) from hunting and killing by fumigation, damaging communal breeding or roosting sites; possession, breeding, selling, making available for sale or otherwise trade in, buying, receiving, giving, donating or accepting as a gift, or in any way acquiring or disposing of, capturing, collecting, immobilizing, killing, translocating, releasing, displaying, importing or keep in captivity or exporting.

7.1.2.3 Herpetofauna (Reptiles & Amphibians)

7.1.2.3.1 Reptiles

Based on the IUCN Red List Spatial Data (IUCN, 2017) and the ReptileMap database provided by the Animal Demography Unit (ADU, 2017) 60 reptile species are expected to occur in the Project area (Appendix D). Eight (8) reptile species of conservation concern are expected to be present in the Project area (Table 5).

Table 5: Expected reptile species of conservation concern that may occur in the project area

Species	Common Name	Conservation Status		Likelihood of Occurrence
		Regional (SANBI, 2016)	IUCN (2017)	
<i>Acontias poecilus</i>	Variable Legless Skink	EN	EN	Moderate
<i>Bradypodion melanocephalum</i>	KwaZulu Dwarf Chameleon	VU	VU	Moderate
<i>Chamaesaura macrolepis</i>	Large-scaled Grass Lizard	NT	NT	Moderate
<i>Crocodylus niloticus</i>	Nile Crocodile	VU	LC	Low
<i>Dendroaspis angusticeps</i>	Eastern Green Mamba	VU	Unlisted	Moderate
<i>Macrelaps microlepidotus</i>	Kwazulu-Natal Black Snake	NT	NT	Moderate
<i>Pseudocordylus spinosus</i>	Spiny Crag Lizard	NT	NT	Low

Acontias poecilus (Variable Legless Skink) is categorised as endangered on both a regional and an international scale. Threatened by land conversion for agriculture, housing and recreation, particularly in coastal areas. Has limited dispersal capabilities and a restricted distribution. Endemic to South Africa, occurring in coastal regions of the extreme southern part of KwaZulu-Natal and the adjacent eastern parts of the Eastern Cape. The likelihood of occurrence in the project area is rated as moderate due to suitable habitat that is present in the project area.

Bradypodion melanocephalum (KwaZulu Dwarf Chameleon) is found in the coastal regions of KwaZulu-Natal, South Africa, from north of Durban southwards to Mkambati Nature Reserve where it inhabits a number of vegetation types including grassland, bushland, thicket, trees and roadside verges. The likelihood of occurrence is rated as moderate due to the presence of some suitable habitat, especially in the neighbouring areas.

Chamaesaura macrolepis (Large-scaled Grass Lizard) is categorised as near-threatened on both a regional and an international scale. Endemic to South Africa (KwaZulu-Natal, Mpumalanga and Limpopo), Swaziland and Zimbabwe. They occur in the Savanna, Indian Ocean Coastal Belt and Grassland biomes where they are found in the grassland, especially on rocky, grassy hillsides. Threatened by transformation of land for crop farming and plantations, overgrazing by livestock, infrastructural development, frequent anthropogenic fires and use of pesticides. The likelihood of occurrence in the project area is rated as low as rocky grasslands are not present in the project area.

Crocodylus niloticus (Nile Crocodile) is listed as VU on a regional basis. Based on the close proximity of the urban area which will most likely cause the species to be persecuted, the likelihood of occurrence of Nile crocodile is considered to be low.

Dendroaspis angusticeps (Green Mamba) is categorised as Vulnerable on a regional scale. This species is distributed along East Coast of Africa from KwaZulu-Natal up to Kenya. Preferred habitats include lowland forest, moist savanna, bamboo thickets and mango or tea plantations. They are almost never found on the ground and spends most of their life in trees or shrubs. The likelihood of occurrence in the project area is rated as moderate as the surrounding moist, dense forest serves as an ideal habitat for this species.

Macrelaps microlepidotus (Natal Black Snake) is a semi-fossorial species with an affinity for forests, where it tends to frequent moist leaf litter and humic soil. In coastal bush, it is associated with damp localities near water (IUCN, 2017). The likelihood of occurrence is rated as moderate due to the presence of forest habitats in the project area.

Pseudocordylus spinosus (Spiny Crag Lizard) is categorised as near threatened on both a regional and a global scale. Endemic to KwaZulu-Natal and Free State provinces, South Africa. Found in outcrops consisting of small rocks scattered in montane grassland in the Grassland Biome, often utilizes crevices at or near ground level. Afforestation (pines, bluegums) is a major threat, especially in the southern KwaZulu-Natal. Fires are a minor threat because refuge and safety will be sought in rocky crevices. Human traffic on hiking trails in the Drakensberg is of minor concern. Threats are potentially magnified by the species' intrinsically poor dispersal capabilities and restricted range. The likelihood of occurrence in the project site is rated as low as there is limited rocky habitat available for this species.

Caretta caretta (Loggerhead Sea Turtle) and *Dermochelys coriacea* (Leatherback Sea Turtle) was removed due to the distance of the site to the ocean and coastline to which these species are confined.

KZNEBPA Listings

Rock Monitor Lizards (*Varanus exanthematicus*) and Water Monitor Lizards (*Varanus niloticus*) are listed 'Least Concern', but they are protected under Schedule 3 of the KZNEBPA and appear on Appendix II of CITES. Water Monitors are found usually close to, or in water, but they can also be found some distance away from water when foraging.

7.1.2.3.2 Amphibians

Based on the IUCN Red List Spatial Data (IUCN, 2017) and the AmphibianMap database provided by the Animal Demography Unit (ADU, 2018) 39 amphibian species are expected to occur in the Project area (Appendix E).

Three (3) amphibian species of conservation concern could be present in the Project area according to the above-mentioned sources (Table 6).

Table 6: Amphibian species of conservation concern which may occur in the project area

Species	Common Name	Conservation Status		Likelihood of Occurrence
		Regional (SANBI, 2016)	IUCN (2017)	
<i>Afrivalus spinifrons</i>	Natal Leaf-folding Frog	VU	LC	Moderate
<i>Hyperolius pickersgilli</i>	Pickersgill's Reed Frog	EN	EN	Low
<i>Natalobatrachus bonebergi</i>	Kloof Frog	EN	EN	Moderate

Afrivalus spinifrons (Natal Leaf-folding Frog) is endemic to South Africa and occurs in two subspecies: *Afrivalus spinifrons spinifrons* and *A. s. intermedius*. The *Afrivalus spinifrons spinifrons* occurs at low to intermediate altitudes (below 700 masl) in KwaZulu-Natal; the latter occurs at altitudes up to 1,500 masl in western KwaZulu-Natal, between the midlands and foothills of the Drakensberg, and in the Eastern Cape Province (IUCN, 2017). These species inhabit Coastal Bushveld-Grassland and Moist Upland Grassland in KwaZulu-Natal and the Eastern Cape Provinces and has also been found in degraded forest habitats. *Afrivalus spinifrons spinifrons* breeds in standing water (including dams and ponds), sedge beds and grassy wetlands. *Afrivalus spinifrons intermedius* occurs in marshes, dams, floodplains and riverbanks and females and juveniles of the subspecies can be found sunbathing in arum lilies during the day (IUCN, 2017). This species has a moderate likelihood of occurring within the project area.

Hyperolius pickersgilli (Pickersgill Reed Frog) is listed as Endangered (EN) both regionally and globally. This small frog only occurs in a few isolated wetlands around Durban. Much of its original range has been destroyed due to human encroachment and impacts to wetlands. This species has not been recorded so far south of Durban and as such its likelihood of occurrence is classed as low.

Natalobatrachus bonebergi (Kloof Frog) is categorised as Endangered on both a regional and an international scale. This species is restricted to south-eastern South Africa, where it ranges from Manubi State Forest Reserve in the Eastern Cape Province, to southern and central KwaZulu-Natal Province. It is restricted to lowland riparian forest patches within this range. It is a habitat specialist, inhabiting rocky streams in dense scarp and gallery forests, where it is usually found close to water, and does not occur in open areas. The species is a semi-arboreal specialist, requiring clear shallow streams with overhanging vegetation and large rocks for egg clump attachment. The likelihood of occurrence in the project area is classed as moderate as the drainage line might be suitable habitat, but the water level might also be too low to sustain the species.

7.2 Ezemvelo KwaZulu Natal Wildlife

Data was requested from Ezemvelo KZN Wildlife for the project area. The Minset and SEA (Strategic Environmental Assessment, 2000) lists modelled the distribution of a selection of 255 red data and endemic species. The table lists those species that have the potential to occur in the area. Fourteen (14) fauna species were flagged by Ezemvelo KZN (Minset & SEA) as species that might occur in the project area (Table 7).

Table 7: The fauna species that were flagged by Ezemvelo KZN wildlife

Scientific Name	Type of Species
<i>Atyoida serrata</i>	Crustacean
<i>Bradypodion melanocephalum</i>	Reptile
<i>Centrobolus anulatus</i>	Millipede
<i>Centrobolus anulatus</i>	Millipede
<i>Centrobolus inscriptus</i>	Millipede
<i>Charaxes druceanus cinadon</i>	Butterfly
<i>Cochlitoma semigranosa</i>	Mollusc
<i>Doratogonus infragilis</i>	Millipede
<i>Doratogonus montanus</i>	Millipede
<i>Edouardia conulus</i>	Mollusc
<i>Gnomeskelus tuberosus falcifer</i>	Millipede
<i>Gulella separata</i>	Mollusc
<i>Microchaetus papillatus</i>	Annelid
<i>Stagira virescens</i>	Insect

8 Field Survey

The field survey for the project area (fauna (mammals, avifauna, amphibians and reptiles)) was conducted on the 31th of October 2018. During the surveys the faunal communities in the project area were assessed. The project area was ground-truthed on foot, which included spot checks in pre-selected areas to validate desktop data.

8.1 Vegetation Assessment

The vegetation within the project area was characterised by a thick wooded area which mainly consisted of *Eucalyptus* species with some grass cover. The grass area was found particularly close to the current road and the grass dominance in this area can be attributed to habitat modification. The grass layer was cut short and the primary grass species that could be identified was *Stenotaphrum secundatum*. A total of 21 tree, shrub and herbaceous plant species were recorded in the project area during the field assessment

Table 8: List of identifiable plant species

Scientific Name	Common Name	Threat Status (SANBI, 2017)	SA Endemic	NEMBA Category
<i>Acacia mearnsii</i>	Black Wattle			Not indigenous; Naturalised
<i>Ageratum houstonianum</i>	Mexican Ageratum			NEMBA Category 1b
<i>Bambusa balcooa</i>	Bamboo			Not indigenous; Naturalised
<i>Bidens pilosa</i>	Blackjack			Not indigenous; Naturalised
<i>Conyza bonariensis</i>	Hairy Fleabane			Not indigenous; Naturalised
<i>Cynodon dactylon</i>	Bermuda Grass / Common Couch			NEMBA Category 2
<i>Eucalyptus sp</i>	Gum Trees			NEMBA Category 1b
<i>Ficus sur</i>	Bush Fig	LC	No	NEMBA Category 2
<i>Lantana camara</i>	Lantana			NEMBA Category 1b
<i>Mangifera indica</i>	Mango Tree			Not Indigenous; Naturalised
<i>Melia azedarach</i>	Syringa			NEMBA Category 1b and Category 3 in urban areas
<i>Pennisetum clandestinum</i>	Kikuyu Grass			NEMBA Category 1b in protected areas and wetlands
<i>Pinus patula</i>	Patula Pine			NEMBA Category 2
<i>Psidium guajava</i>	Guava			
<i>Schinus terebinthifolius</i>	Brazilian Pepper Tree			Not Indigenous
<i>Senna didymobotrya</i>	Peanut Butter Cassia			NEMBA Category 1b
<i>Setaria megaphylla</i>	Ribbon Grass	LC	No	
<i>Solanum mauritianum</i>	Bugweed			NEMBA Category 1b
<i>Sporobolus africanus</i>	Ratstail Dropseed	LC	No	
<i>Stenotaphrum secundatum</i>	Buffalo Grass	LC	No	
<i>Trichilia emetica</i>	Cape Mahogany	LC	No	

8.1.1 Alien and Invasive Plants

Declared weeds and invader plant species have the tendency to dominate or replace the canopy or herbaceous layer of natural ecosystems, thereby transforming the structure, composition and function of these systems. Therefore, it is important that these plants are controlled and eradicated by means of an eradication and monitoring programme. Some invader plants may also degrade ecosystems through superior competitive capabilities to exclude native plant species.

The National Environmental Management: Biodiversity Act (NEMBA) is the most recent legislation pertaining to alien invasive plant species. In October 2014, the list of Alien Invasive

Species was published in terms of the National Environmental Management: Biodiversity Act (Act 10 of 2004) (Government Gazette No 78 of 2014). The Alien and Invasive Species Regulations were published in the Government Gazette No. 37886, 1 October 2014. The legislation calls for the removal and / or control of alien invasive plant species (Category 1 species). In addition, unless authorised thereto in terms of the National Water Act, 1998 (Act No. 36 of 1998), no land user shall allow Category 2 plants to occur within 30 meters of the 1:50 year flood line of a river, stream, spring, natural channel in which water flows regularly or intermittently, lake, dam or wetland. Category 3 plants are also prohibited from occurring within proximity to a watercourse.

Below is a brief explanation of the three categories in terms of the National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA):

- Category 1a: Invasive species requiring compulsory control. Remove and destroy. Any specimens of Category 1a listed species need, by law, to be eradicated from the environment. No permits will be issued.
- Category 1b: Invasive species requiring compulsory control as part of an invasive species control programme. Remove and destroy. These plants are deemed to have such a high invasive potential that infestations can qualify to be placed under a government sponsored invasive species management programme. No permits will be issued.
- Category 2: Invasive species regulated by area. A demarcation permit is required to import, possess, grow, breed, move, sell, buy or accept as a gift any plants listed as Category 2 plants. No permits will be issued for Category 2 plants to exist in riparian zones.
- Category 3: Invasive species regulated by activity. An individual plant permit is required to undertake any of the following restricted activities (import, possess, grow, breed, move, sell, buy or accept as a gift) involving a Category 3 species. No permits will be issued for Category 3 plants to exist in riparian zones.

Note that according to the regulations, a person who has under his or her control a category 1b listed invasive species must immediately:

- Notify the competent authority in writing
- Take steps to manage the listed invasive species in compliance with:
 - Section 75 of the Act;
 - The relevant invasive species management programme developed in terms of regulation 4; and
 - Any directive issued in terms of section 73(3) of the Act.

Seven (7) Category 1b invasive plant species were recorded within the project area and it is recommended that an alien invasive plant management programme be implemented in compliance of section 75 of the Act as stated above. The NEMBA listed species identified within the project area are marked in green (Table 8).

8.2 Faunal Assessment

8.2.1 Avifauna

Eleven (11) bird species were recorded in the project area during the October 2018 survey based on either direct observations, vocalisations, or the presence of visual tracks & signs (Table 9). No species of conservation concern were observed in the project area

Table 9: Avifauna species observed in the project area.

Species	Common Name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2017)
<i>Acridotheres tristis</i>	Myna, Common	Unlisted	LC
<i>Columba guinea</i>	Pigeon, Speckled	Unlisted	LC
<i>Columba livia</i>	Dove, Rock	Unlisted	LC
<i>Gallirex porphyreolophus</i>	Turaco, Purple-crested	Unlisted	LC
<i>Pycnonotus tricolor</i>	Bulbul, Dark-capped	Unlisted	Unlisted
<i>Streptopelia capicola</i>	Turtle-dove, Cape	Unlisted	LC
<i>Streptopelia senegalensis</i>	Dove, Laughing	Unlisted	LC
<i>Terpsiphone viridis</i>	Paradise-flycatcher, African	Unlisted	LC
<i>Threskiornis aethiopicus</i>	Ibis, African Sacred	Unlisted	LC
<i>Vanellus armatus</i>	Lapwing, Blacksmith	Unlisted	LC
<i>Vanellus coronatus</i>	Lapwing, Crowned	Unlisted	LC

8.2.2 Mammals

Overall, mammal diversity in the project area was low, with no mammal species being recorded during the October 2018 survey.

8.2.3 Herpetofauna (Reptiles & Amphibians)

Herpetofauna diversity was considered to be low with one reptile species, namely *Trachylepis striata* being recorded. No amphibian species were observed or recorded in the project area during the October 2018 survey.

9 Habitat Sensitivity Mapping

As per the terms of reference for the project, a GIS sensitivity map is required in order to identify sensitive features in terms of the relevant specialist discipline/s within the project area. Site sensitivities were classified and mapped.

The sensitivity scores identified during the field survey for each habitat were then visually mapped (Figure 9).

Areas that were classified as having low or low-moderate sensitivities are those areas which were deemed by the specialists to have been most impacted upon and/or were modified from their original condition due to factors such as human activity and/or presence of alien invasive species. The area given a high sensitivity rating are those areas with existing natural vegetation or areas that are somewhat disturbed but still have the capacity to serve as habitat for various species (especially potential SCC).

For this project, most of the project area is low sensitivity due to the extent of the transformation of the habitat by the current land use. The moderate sensitivity area was added as buffer to the observed wetland/swamp area adjacent the project area (east). It is important

to note that the surrounding areas (particularly to the east, north and west are considered to be sensitive habitats (and appear to be in a relatively natural condition).

It is important to note that this map does not replace any local, provincial or government legislation relating to these areas or the land use capabilities or sensitivities of these environments.

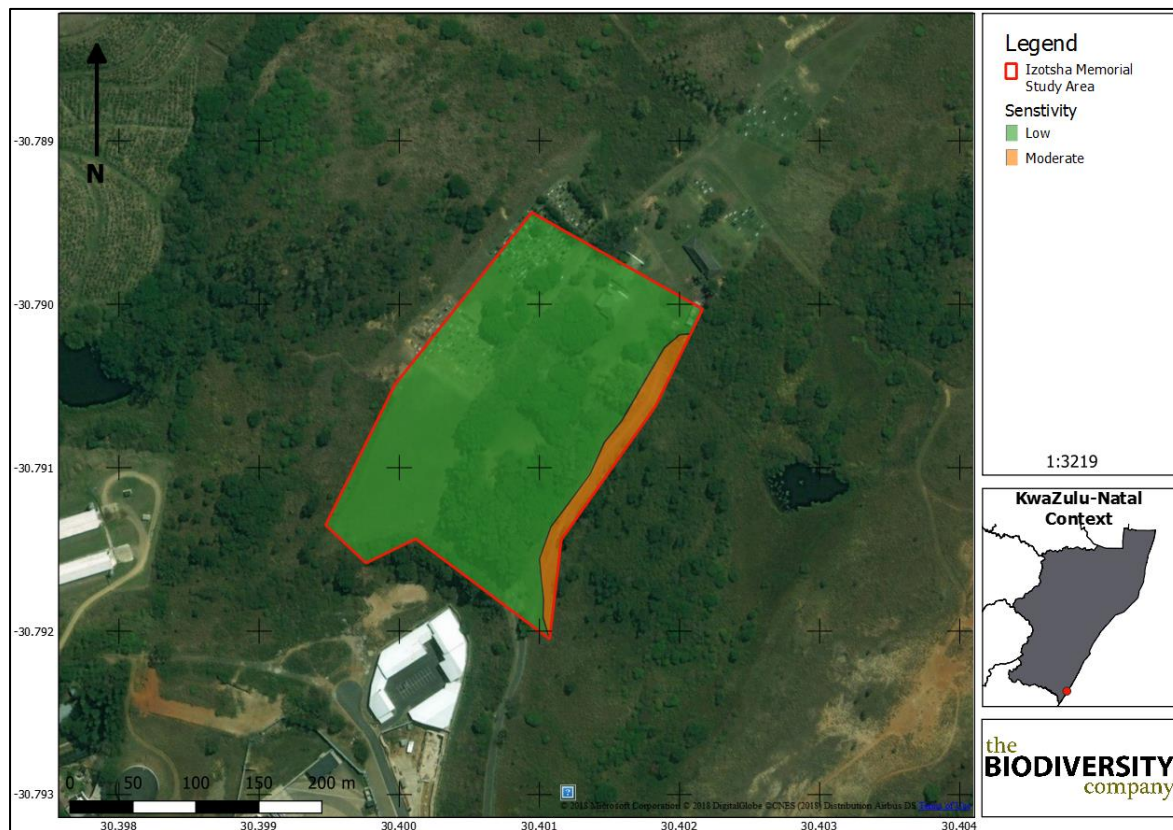


Figure 9: Habitat sensitivity map of the project area

10 Impact Assessment

Development-related activities can have significant impacts on biodiversity and ecosystem services, often causing irreversible and large-scale habitat loss across large areas or areas important for the provision of important ecosystem services.

Key impacts commonly associated with development activities are discussed below. The listed activities are merely indicative, and the proposed developments may either have additional or fewer activities depending on the circumstances. It should be noted that these categories, with associated impact descriptions is not exhaustive, and more impacts may be identified at a later stage as more information becomes available.

The significance (quantification) of potential environmental impacts has been assessed in terms of the Guideline Documentation on EIA Regulation; Department of Environmental Affairs and Tourism, 2014 (Impact Assessment Methodology, Appendix 6).

10.1 Methodology

Potential impacts were evaluated against the data captured during the fieldwork to identify relevance to the Project area. The relevant impacts were then subjected to a prescribed impact assessment methodology which is described below.

Impacts were assessed in terms of the construction and operational phases only. The operational phase refers to that phase of the project where the construction has been completed and the road is in use. Due to the nature of this development, the operational phase is assessed as lasting indefinitely and there is no closure or post-closure phases in this scenario.

Mitigation measures were only applied to impacts deemed relevant based on the impact analysis. The likelihood and consequence descriptors are presented in Table 10. The consequence description is described in Table 11 and the significance rating matrix is presented in Table 12.

Table 10: Likelihood descriptors

Probability of impact	Rating
Highly unlikely	1
Possible	2
Likely	3
Highly likely	4
Definite	5
Sensitivity of receiving environment	Rating
Ecology not sensitive/important	1
Ecology with limited sensitivity/importance	2
Ecology moderately sensitive/ /important	3
Ecology highly sensitive /important	4
Ecology critically sensitive /important	5

Table 11: Consequence Descriptors

Severity of impact	Rating
Insignificant / ecosystem structure and function unchanged	1
Small / ecosystem structure and function largely unchanged	2
Significant / ecosystem structure and function moderately altered	3
Great / harmful/ ecosystem structure and function largely altered	4
Disastrous / ecosystem structure and function seriously to critically altered	5
Spatial scope of impact	Rating
Activity specific/ < 5 ha impacted / Linear features affected < 100m	1
Development specific/ within the site boundary / < 100 ha impacted / Linear features affected < 100m	2
Local area/ within 1 km of the site boundary / < 5000ha impacted / Linear features affected < 1000m	3
Regional within 5 km of the site boundary / < 2000ha impacted / Linear features affected < 3000m	4
Entire habitat unit / Entire system/ > 2000ha impacted / Linear features affected > 3000m	5
Duration of impact	Rating
One day to one month: Temporary	1
One month to one year: Short Term	2
One year to five years: Medium Term	3

Life of operation or less than 20 years: Long Term	4
Permanent	5

Table 12: Significance Rating Matrix

LIKELIHOOD (Frequency of activity + Frequency of impact)	CONSEQUENCE (Severity + Spatial Scope + Duration)															Very Low
	0	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	Low	
3	6	9	12	15	18	21	24	27	30	33	36	39	42	45		
4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	Moderate	
5	10	15	20	25	30	35	40	45	50	55	60	65	70	75		
6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	Moderately High	
7	14	21	28	35	42	49	56	63	70	77	84	91	98	105		
8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	High	
9	18	27	36	45	54	63	72	81	90	99	108	117	126	135		
10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	Critical	

10.2 Current Impacts

During the field survey, the current impacts that are having a negative impact on the area were identified, and are listed below and can be seen in Figure 10;

- Presence of alien and invasive plant species;
- Existing infrastructure (Cemeteries and houses)
- Secondary road with the associated noise disturbance and road mortalities; and
- Livestock.



Figure 10: Current impacts within the project area (October 2018); A) Transformed Areas B) Cemetery, C) Alien Invasive Mango Clump, and D) Livestock grazing

10.3 Identification of Additional Impacts

The proposed construction may result in loss and disturbance of habitats and displacement of fauna and flora. The removal of natural vegetation to accommodate infrastructure and operations will reduce the habitat available for fauna species and may displace (or reduce) animal populations.

Land clearing destroys local wildlife habitat and can lead to the loss of local breeding grounds, nesting sites and wildlife movement corridors such as rivers, streams and drainage lines, or other locally important features.

The project area provides possible habitat and shelter to several endemic and protected mammal, reptile and bird species. Although it is assumed that the majority of fauna species will move to different areas as a result of disturbance, many protected and endemic fauna species have very specific habitat requirements, and the complete destruction of their habitats will result in displacement to less optimal habitats, or ultimately lead to their complete demise. This will result in a decline in species numbers which may ultimately affect the conservation status of specific species on global, national and provincial scales.

The potential impacts associated with the various project stages are discussed below.

10.4 Construction Phase

Potential impacts on faunal communities include:

- Displacement of flora and faunal communities (including threatened or protected species) due to habitat loss, disturbance and/or direct mortalities; and
- Continued encroachment and displacement of an indigenous and endangered vegetation community by alien invasive plant species.

10.5 Operational Phase

The following potential impacts were considered on terrestrial vegetation communities:

- Continued encroachment and displacement of an indigenous and Endangered vegetation community by alien invasive plant species; and
- Potential pollutant and water runoff into the surrounding environment, causing erosion and loss of species.

Potential impacts on faunal communities include:

- Continued displacement and fragmentation of the faunal community (including threatened or protected species) due to ongoing anthropogenic disturbances and habitat degradation (litter, road mortalities and/or poaching).

11 Assessment of Significance

11.1 Construction Phase

Table 13 shows the significance of potential impacts associated with the development on vegetation and faunal communities before the implementation of mitigation measures. Due to the existing poor condition of the area prior to the survey and prior to any proposed

implementation of mitigation measures, the consequences of impacts were rated as moderately detrimental (Table 13). The implementation of mitigations, for example an alien plant removal and management plan reduced the impact on the vegetation community to very low.

Due to the nature of the proposed development which will entail extensive clearing and disturbances such as continued human presence, the impact on faunal community was rated as moderate. Implementation of avoidance measures as mitigation reduced the significance of these potential impacts on the faunal communities to low for the assessed impacts (Table 13).

11.2 Operational Phase

Table 14 shows the significance of potential operational phase impacts on vegetation and faunal communities before and after the implementation of mitigation measures. The significance of impacts was rated as moderately detrimental (Table 14) pre-mitigation. Implementation of mitigation measures and rehabilitation of project footprint after completion of construction reduced the significance of the impact to very low (Table 14).

The significance of operational phase impacts on terrestrial fauna communities was rated as moderately high, pre-mitigation (Table 14). This impact was attributed to the expected continued loss and fragmentation of the endangered vegetation community. Implementation of mitigation measures and rehabilitation of project footprint after completion of construction reduced the significance of the impact to low.

Table 13: Assessment of significance of potential construction impacts on terrestrial biodiversity associated with the proposed construction pre- and post- mitigation:

Impact	Prior to mitigation						Post mitigation					
	Duration of Impact	Spatial Scope	Severity of Impact	Sensitivity of Receiving Environment	Probability of Impact	Significance	Duration of Impact	Spatial Scope	Severity of Impact	Sensitivity of Receiving Environment	Probability of Impact	Significance
Further loss and fragmentation of the vegetation community (due to clearing of land for buildings)	3	3	3	2	4		2	2	2	1	2	
	One year to five years: Medium Term	Local Area	Significant	Ecology with limited sensitivity	Highly likely	Moderate	One month to one year: Short Term	Development specific	Small / ecosystem structure and function largely unchanged	Ecology not sensitive/important	Possible	Very Low
Displacement of faunal community due to habitat loss and disturbance (such as noise).	3	3	3	3	4		3	2	2	2	3	
	One year to five years: Medium Term	Local Area	Significant	Ecology moderately sensitive	Highly likely	Moderate	One month to one year: Short Term	Development specific	Small / ecosystem structure and function largely unchanged	Ecology with limited sensitivity/importance	Likely	Low

Table 14: Assessment of significance of potential operational impacts on terrestrial biodiversity associated with the proposed construction pre- and post- mitigation.

Impact	Prior to mitigation						Post mitigation					
	Duration of Impact	Spatial Scope	Severity of Impact	Sensitivity of Receiving Environment	Probability of Impact	Significance	Duration of Impact	Spatial Scope	Severity of Impact	Sensitivity of Receiving Environment	Probability of Impact	Significance
Further displacement, fragmentation and disturbance of the faunal community (coupled with an increase in human presence and associated impacts).	5	3	3	3	4		3	2	2	2	2	
	Permanent	Local Area	Significant	Ecology moderately sensitive	Highly likely	Moderately High	One year to five years: Medium Term	Development Specific	Small / ecosystem structure and function largely unchanged	Ecology with limited sensitivity/importance	Possible	Low
Continued encroachment and displacement of indigenous vegetation community by alien invasive plant species.	4	3	3	2	4		3	2	2	1	2	
	Long Term	Local Area	Significant	Ecology with limited sensitivity	Highly Likely	Moderate	Medium Term	Development Specific	Small / ecosystem structure and function largely unchanged	Ecology not sensitive/importance	Possible	Very Low

12 Mitigation Measures

12.1 Objectives

The focus of mitigation measures should be to reduce the significance of potential impacts associated with the development and thereby to:

- Prevent the further loss and fragmentation of this Endangered vegetation community and the CBA areas in the vicinity of the project area (including wetland areas); and
- Prevent the loss of the faunal community (including potentially occurring species of conservation concern) associated with this vegetation community.

12.1.1 Mitigation Measures for Impacts on Faunal and Flora Communities

Recommended mitigation and rehabilitation measures for faunal community's hinge largely on protecting their habitats and ensuring it remains intact. Recommended mitigation and rehabilitation measures include the following:

- As far as possible, the proposed developments should be placed in areas that have already been disturbed, and no further loss of secondary vegetation should be permitted. It is recommended that areas to be developed be specifically demarcated so that during the construction phase, only the demarcated areas be impacted upon (including fencing off the defined Project area);
- Areas of indigenous vegetation, even secondary communities should under no circumstances be fragmented or disturbed further or used as an area for dumping of waste;
- The areas rated as moderately sensitive in the project area as defined in this report should be declared a 'no-go' area during the construction and operational phases and all efforts must be made to prevent access to this area from construction workers, machinery and the general public;
 - These areas should be clearly demarcated and all access to the adjoining areas should be restricted;
- All laydown, storage areas etc should be restricted to within the project area;
- A qualified environmental control officer must be on site when construction begins to identify species that will be directly disturbed and to relocate fauna/flora that is found during construction (including all reptiles and amphibians);
- Areas that are denuded during construction need to be re-vegetated with indigenous vegetation to prevent erosion during flood events. This will also reduce the likelihood of encroachment by alien invasive plant species; and
- Compilation of and implementation of an alien vegetation management plan for the entire site.

Specific mitigation measures for birds and amphibians

- No more than two weeks in advance of vegetation clearance that will commence during the breeding season (1 September – 1 March) a qualified Zoologist must conduct a pre-construction survey of all potential special-status bird nesting habitat in the vicinity of the project area, and on the project areas;
- If active nests are found, avoidance procedures must be implemented on a case-by-case basis. Avoidance procedures may include the implementation of buffer zones, relocation of birds, or seasonal avoidance. If buffers are created, a no disturbance zone must be created around active nests during the breeding season by a suitably qualified Zoologist;
- Similarly, regarding amphibians, no more than two weeks in advance of vegetation clearance that will commence during the breeding season (1 September – 1 March) a qualified Zoologist must conduct a pre-construction survey of all potential special-status amphibians that may be calling within the project area.
- Any individuals found should be relocated to a suitable area.

In addition to this the following measures are recommended:

- If any faunal species are recorded during construction, activities should temporarily cease, and an appropriate specialist should be consulted to identify the correct course of action;
- During vegetation clearance, methods should be employed to minimize potential harm to fauna species. Clearing has to take place in a phased and slow manner, commencing from the interior of the site progressing outwards towards the boundary to maximize potential for mobile species to move to adjacent areas;
- Prior and during vegetation clearance any larger fauna species noted should be given the opportunity to move away from the construction machinery;
- Fauna species such as frogs and reptiles that have not moved away should be carefully and safely removed to a suitable location beyond the extent of the development footprint by a suitably qualified ECO trained in the handling and relocation of animals;
- Waste management must be a priority and all waste must be collected and stored adequately. It is recommended that all waste be removed from site on a weekly basis to prevent rodents and pests entering the site;
- No trapping, killing or poisoning of any wildlife is to be allowed;
- During the construction phase noise must be kept to a minimum to reduce the impact of the development on the fauna residing on the site;
- Staff should be educated about the sensitivity of faunal species and measures should be put in place to deal with any species that are encountered during the construction process;
- Construction activities and vehicles could cause spillages of lubricants, fuels and construction material which could then be transported to the wetland areas, impacting

on the water quality and potentially the functioning of the systems. All vehicles and equipment must be maintained, and all re-fuelling and servicing of equipment is to take place in demarcated areas outside of the wetland and buffer areas;

- The intentional killing of any animals including snakes, insects, lizards, birds or other animals should be strictly prohibited.

13 Conclusion

It is clear from the regional ecological overview, as well as the baseline data collected to date that the project area has been somewhat altered both historically and at present. This is predominantly due to presence of the pre-existing cemetery, the proximity of an existing urbanised environment and associated human activity, including: dumping of rubble, general littering and the infringement by people into natural areas via footpaths and roads.

However, despite these impacts, the adjacent natural habitats, especially the wetland/swamp habitats to the east of the project area exhibited a largely natural state. This diversity is indicative of the importance of these systems to collectively provide refugia, food and corridors for dispersal in and through the surrounding area. The preservation of these systems is the most important aspect to consider for the proposed project, even more so due to the sensitivity of the area according to the various ecological datasets.

Careful consideration must be afforded each of the mitigation measures provided in this report. In the event that environmental authorisation is issued for this project, proven ecological (or environmental) controls and mitigation measures must be entrenched in the management framework.

The following further conclusions were reached based on the results of this assessment:

- According to the KZN BPS it can be concluded that the proposed development is likely to impact on a CBA: Irreplaceable, but that this CBA has been negatively modified to some extent;
- According to the NBA (2011) terrestrial ecosystem threat status, the project area falls entirely within one ecosystem, which is listed as Critically Endangered (CR) and as '*not protected*';
- Based on the SANBI (2010) Protected Areas Map and the National Protected Areas Expansion Strategy (NPAES) the project area does not overlap with any formally or informally protected areas;
- The project area is situated entirely within the KwaZulu Natal Coastal Belt Grassland vegetation type. This vegetation type is listed as Endangered (Mucina & Rutherford, 2006);
- Based on the South African Bird Atlas Project, Version 2 (SABAP2) database, 392 bird species are expected to occur in the vicinity of the project area. Of the expected bird species, forty-three (43) species are listed as SCC either on a regional (37) or global scale; and
- The project area is situated 15.8 km south-east of the Oribi Gorge Nature Reserve Important Bird Area (IBA).

14 Impact Statement

An impact statement is required as per the NEMA regulations with regards to the proposed development.

Considering the above-mentioned conclusions, it is the opinion of the specialists that the project (as is), can be favourably considered. Strict mitigation measures (as outlined in this report) will need to be adhered to should the proposed development go ahead. Important among these, is that sensitive areas on the boundary of the project area not be further impacted upon.

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APPENDIX A: Flora species expected in the project area

Family	Taxon	Author	IUCN	Ecology
Fabaceae	<i>Abrus laevigatus</i>	E.Mey.	LC	Indigenous
Fabaceae	<i>Acacia mearnsii</i>	De Wild.	NE	Not Indigenous; Naturalised; Invasive
Passifloraceae	<i>Adenia gummifera</i> var. <i>gummifera</i>	(Harv.) Harms	LC	Indigenous
Asteraceae	<i>Afroaster serrulatus</i>	(Harv.) J.C.Manning & Goldblatt	LC	Indigenous
Loranthaceae	<i>Agelanthus gracilis</i>	(Toelken & Wiens) Polhill & Wiens		Indigenous
Asteraceae	<i>Ageratum conyzoides</i>	L.		Not Indigenous; Naturalised; Invasive
Asteraceae	<i>Ageratum houstonianum</i>	Mill.		Not Indigenous; Naturalised; Invasive
Fabaceae	<i>Albizia adianthifolia</i> var. <i>adianthifolia</i>	(Schumach.) W.Wight	LC	Indigenous
Asphodelaceae	<i>Aloe maculata</i> subsp. <i>maculata</i>	All.	LC	Indigenous
Asphodelaceae	<i>Aloe</i> sp.			
Asphodelaceae	<i>Aloiampelos tenuior</i>	(Haw.) Klopper & Gideon F.Sm.	LC	Indigenous; Endemic
Zingiberaceae	<i>Alpinia zerumbet</i>	(Pers.) B.L.Burtt & R.M.Sm.		Not Indigenous; Naturalised; Invasive
Rubiaceae	<i>Anthospermum galpinii</i>	Schltr.	LC	Indigenous; Endemic
Rubiaceae	<i>Anthospermum herbaceum</i>	L.f.	LC	Indigenous
Phyllanthaceae	<i>Antidesma venosum</i>	E.Mey. ex Tul.	LC	Indigenous
Icacinaceae	<i>Apodytes dimidiata</i>	E.Mey. ex Arn.		Indigenous
Myrsinaceae	<i>Ardisia crenata</i>	Sims		Not Indigenous; Naturalised; Invasive
Fabaceae	<i>Argyrobium rotundifolium</i>	T.J.Edwards	LC	Indigenous
Fabaceae	<i>Argyrobium stipulaceum</i>	Eckl. & Zeyh.	LC	Indigenous
Poaceae	<i>Arundo donax</i>	L.	NE	Not Indigenous; Naturalised; Invasive
Fabaceae	<i>Aspalathus gerrardii</i>	Bolus	VU	Indigenous; Endemic
Apocynaceae	<i>Aspidoglossum gracile</i>	(E.Mey.) Kupicha	LC	Indigenous; Endemic
Aspleniaceae	<i>Asplenium prionitis</i>	Kunze	LC	Indigenous
Asteraceae	<i>Berkheya speciosa</i> subsp. <i>speciosa</i>	(DC.) O.Hoffm.	LC	Indigenous
Asteraceae	<i>Berkheya umbellata</i>	DC.	LC	Indigenous; Endemic
Asteraceae	<i>Bidens pilosa</i>	L.		Not Indigenous; Naturalised
Asteraceae	<i>Brachylaena discolor</i>	DC.	LC	Indigenous
Asteraceae	<i>Brachylaena elliptica</i>	(Thunb.) DC.	LC	Indigenous; Endemic
Apocynaceae	<i>Brachystelma sandersonii</i>	(Oliv.) N.E.Br.	VU	Indigenous; Endemic
Apocynaceae	<i>Brachystelma tenellum</i>	R.A.Dyer	VU	Indigenous; Endemic
Brachytheciaceae	<i>Brachytecium ruderale</i>	(Brid.) W.R.Buck		Indigenous
Phyllanthaceae	<i>Bridelia micrantha</i>	(Hochst.) Baill.	LC	Indigenous
Solanaceae	<i>Brugmansia arborea</i>	(L.) Lagerh.		Not Indigenous; Cultivated; Naturalised
Bruniaceae	<i>Brunia trigyna</i>	(Schltr.) Class.- Bockh. & E.G.H.Oliv.	CR	Indigenous; Endemic
Bryaceae	<i>Bryum andicola</i>	Hook.		Indigenous
Scrophulariaceae	<i>Buddleja salviifolia</i>	(L.) Lam.	LC	Indigenous

Asphodelaceae	<i>Bulbine latifolia</i> var. <i>latifolia</i>	(L.f.) Schult. & J.H.Schult.	LC	Indigenous; Endemic
Asteraceae	<i>Callilepis laureola</i>	DC.	LC	Indigenous
Asteraceae	<i>Callilepis leptophylla</i>	Harv.	LC	Indigenous
Cannaceae	<i>Canna flaccida</i>	Salisb.		Cultivated
Capparaceae	<i>Capparis brassii</i>	DC.	LC	Indigenous
Sapindaceae	<i>Cardiospermum halicacabum</i> var. <i>microcarpum</i>	L.		Indigenous
Aizoaceae	<i>Carpobrotus dimidiatus</i>	(Haw.) L.Bolus	LC	Indigenous
Cannabaceae	<i>Celtis gomphophylla</i>	Baker	LC	Indigenous
Apiaceae	<i>Centella asiatica</i>	(L.) Urb.	LC	Indigenous
Cannabaceae	<i>Chaetachme aristata</i>	Planch.	LC	Indigenous
Fabaceae	<i>Chamaecrista mimosoides</i>	(L.) Greene	LC	Indigenous
Oleaceae	<i>Chionanthus foveolatus</i> subsp. <i>tomentellus</i>	(E.Mey.) Stearn	LC	Indigenous; Endemic
Lauraceae	<i>Cinnamomum camphora</i>	(L.) J.Presl	NE	Not Indigenous; Naturalised; Invasive
Asteraceae	<i>Cirsium vulgare</i>	(Savi) Ten.		Not Indigenous; Naturalised; Invasive
Vitaceae	<i>Cissus fragilis</i>	E.Mey. ex Kunth		Indigenous; Endemic
Rutaceae	<i>Clausena anisata</i> var. <i>anisata</i>	(Willd.) Hook.f. ex Benth.	LC	Indigenous
Clusiaceae	<i>Clusia rosea</i>	Jacq.		Not Indigenous; Cultivated; Naturalised; Invasive
Cucurbitaceae	<i>Coccinia mackenii</i>	Naudin ex C.Huber	LC	Indigenous
Santalaceae	<i>Colpoon compressum</i>	P.J.Bergius	LC	Indigenous
Combretaceae	<i>Combretum edwardsii</i>	Exell	LC	Indigenous; Endemic
Commelinaceae	<i>Commelina diffusa</i> subsp. <i>diffusa</i>	Burm.f.	LC	Indigenous
Rubiaceae	<i>Conostomium natalense</i> var. <i>natalense</i>	(Hochst.) Bremek.	LC	Indigenous
Asteraceae	<i>Conyza chilensis</i>	Spreng.		Not Indigenous; Naturalised
Asteraceae	<i>Conyza scabrida</i>	DC.		Indigenous
Crassulaceae	<i>Crassula obovata</i> var. <i>dregeana</i>	Haw.		Indigenous; Endemic
Crassulaceae	<i>Crassula obovata</i> var. <i>obovata</i>	Haw.		Indigenous; Endemic
Crassulaceae	<i>Crassula perfoliata</i> var. <i>heterotricha</i>	L.		Indigenous
Euphorbiaceae	<i>Croton</i> sp.			
Euphorbiaceae	<i>Croton sylvaticus</i>	Hochst.	LC	Indigenous
Lauraceae	<i>Cryptocarya woodii</i>	Engl.	LC	Indigenous
Araliaceae	<i>Cussonia nicholsonii</i>	Strey		Indigenous; Endemic
Poaceae	<i>Cymbopogon nardus</i>	(L.) Rendle	LC	Indigenous
Cyperaceae	<i>Cyperus albostriatus</i>	Schrad.	LC	Indigenous
Cyperaceae	<i>Cyperus leptocladus</i>	Kunth	LC	Indigenous
Cyperaceae	<i>Cyperus obtusiflorus</i> var. <i>obtusiflorus</i>	Vahl	LC	Indigenous
Cyperaceae	<i>Cyperus sexangularis</i>	Nees	LC	Indigenous
Cyperaceae	<i>Cyperus sphaerospermus</i>	Schrad.	LC	Indigenous
Vitaceae	<i>Cyphostemma flaviflorum</i>	(Sprague) Desc.		Indigenous
Amaryllidaceae	<i>Cyrtanthus obliquus</i>	(L.f.) Aiton	LC	Indigenous; Endemic
Fabaceae	<i>Dalbergia obovata</i>	E.Mey.	LC	Indigenous

Euphorbiaceae	<i>Dalechampia scandens</i> var. <i>natalensis</i>	L.	LC	Indigenous
Solanaceae	<i>Datura stramonium</i>	L.		Not Indigenous; Naturalised; Invasive
Aizoaceae	<i>Delosperma lineare</i>	L.Bolus	LC	Indigenous
Aizoaceae	<i>Delosperma</i> sp.			
Fabaceae	<i>Desmodium incanum</i>	DC.	NE	Not Indigenous; Naturalised
Fabaceae	<i>Desmodium repandum</i>	(Vahl) DC.	LC	Indigenous
Iridaceae	<i>Dietes grandiflora</i>	N.E.Br.	LC	Indigenous
Dioscoreaceae	<i>Dioscorea dregeana</i>	(Kunth) T.Durand & Schinz	LC	Indigenous
Ebenaceae	<i>Diospyros</i> sp.			
Asteraceae	<i>Disparago tortilis</i>	(DC.) Sch.Bip.	LC	Indigenous; Endemic
Asteraceae	<i>Distephanus angulifolius</i>	(DC.) H.Rob. & B.Kahn		Indigenous
Fabaceae	<i>Dolichos falciformis</i>	E.Mey.	LC	Indigenous
Malvaceae	<i>Dombeya tiliacea</i>	(Endl.) Planch.	LC	Indigenous; Endemic
Ruscaceae	<i>Dracaena aletriformis</i>	(Haw.) Bos	LC	Indigenous
Hyacinthaceae	<i>Drimia anomala</i>	(Baker) Baker		Indigenous; Endemic
Droseraceae	<i>Drosera madagascariensis</i>	DC.	LC	Indigenous
Verbenaceae	<i>Duranta erecta</i>	L.		Not Indigenous; Naturalised; Invasive
Celastraceae	<i>Elaeodendron croceum</i>	(Thunb.) DC.	LC	Indigenous
Poaceae	<i>Eleusine indica</i>	(L.) Gaertn.	LC	Indigenous
Myrsinaceae	<i>Embelia ruminata</i>	(E.Mey. ex A.DC.) Mez	LC	Indigenous; Endemic
Rubiaceae	<i>Empogona lanceolata</i>	(Sond.) Tosh & Robbr.		Indigenous; Endemic
Ericaceae	<i>Erica cubica</i> var. <i>cubica</i>	L.	LC	Indigenous; Endemic
Ericaceae	<i>Erica cubica</i> var. <i>natalensis</i>	L.	LC	Indigenous; Endemic
Fabaceae	<i>Eriosema kraussianum</i>	Meisn.	LC	Indigenous
Rubiaceae	<i>Eriosemopsis subanisophylla</i>	Robyns	VU	Indigenous; Endemic
Fabaceae	<i>Erythrina latissima</i>	E.Mey.	LC	Indigenous
Ebenaceae	<i>Euclea crispa</i> subsp. <i>crispa</i>	(Thunb.) Gurke		Indigenous
Ebenaceae	<i>Euclea natalensis</i> subsp. <i>natalensis</i>	A.DC.	LC	Indigenous
Ebenaceae	<i>Euclea schimperi</i>	(A.DC.) Dandy		Indigenous
Myrtaceae	<i>Eugenia simii</i>	Dummer	VU	Indigenous; Endemic
Orchidaceae	<i>Eulophia speciosa</i>	(R.Br. ex Lindl.) Bolus	LC	Indigenous
Euphorbiaceae	<i>Euphorbia flanaganii</i>	N.E.Br.	VU	Indigenous; Endemic
Euphorbiaceae	<i>Euphorbia pulcherrima</i>	Willd. ex Klotzsch	NE	Not Indigenous; Naturalised
Moraceae	<i>Ficus glumosa</i>	Delile	LC	Indigenous
Phyllanthaceae	<i>Flueggea verrucosa</i>	(Thunb.) G.L.Webster	LC	Indigenous; Endemic
Agavaceae	<i>Furcraea foetida</i>	(L.) Haw.		Not Indigenous; Cultivated; Naturalised; Invasive
Rubiaceae	<i>Gardenia thunbergia</i>	L.f.	LC	Indigenous
Asphodelaceae	<i>Gasteria croucheri</i> subsp. <i>croucheri</i>	(Hook.f.) Baker	NE	Indigenous
Asteraceae	<i>Gazania krebsiana</i>	Less.		Indigenous
Iridaceae	<i>Gladiolus inandensis</i>	Baker	LC	Indigenous; Endemic

Proteaceae	<i>Grevillea robusta</i>	A.Cunn. ex R.Br.		Not Indigenous; Cultivated; Naturalised; Invasive
Malvaceae	<i>Grewia lasiocarpa</i>	E.Mey. ex Harv.	LC	Indigenous; Endemic
Fabaceae	<i>Guilandina bonduc</i>	L.		Indigenous
Celastraceae	<i>Gymnosporia bachmannii</i>	Loes.	VU	Indigenous; Endemic
Celastraceae	<i>Gymnosporia rubra</i>	(Harv.) Loes.	LC	Indigenous; Endemic
Celastraceae	<i>Gymnosporia sp.</i>			
Proteaceae	<i>Hakea sericea</i>	Schrad. & J.C.Wendl.	NE	Not Indigenous; Naturalised; Invasive
Anacardiaceae	<i>Harpephyllum caffrum</i>	Bernh. ex Krauss	LC	Indigenous
Scrophulariaceae	<i>Hebenstretia comosa</i>	Hochst.	LC	Indigenous
Zingiberaceae	<i>Hedychium gardnerianum</i>	Ker Gawl.		Not Indigenous; Naturalised; Invasive
Asteraceae	<i>Helichrysum appendiculatum</i>	(L.f.) Less.	LC	Indigenous
Asteraceae	<i>Helichrysum decorum</i>	DC.	LC	Indigenous
Asteraceae	<i>Helichrysum herbaceum</i>	(Andrews) Sweet	LC	Indigenous
Asteraceae	<i>Helichrysum nudifolium var. oxyphyllum</i>	(L.) Less.	LC	Indigenous
Asteraceae	<i>Helichrysum nudifolium var. pilosellum</i>	(L.) Less.	LC	Indigenous
Asteraceae	<i>Helichrysum populifolium</i>	DC.	LC	Indigenous; Endemic
Asteraceae	<i>Helichrysum ruderale</i>	Hilliard & B.L.Burt	LC	Indigenous; Endemic
Rhamnaceae	<i>Helinus sp.</i>			
Loranthaceae	<i>Helixanthera woodii</i>	(Schltr. & K.Krause) Danser	LC	Indigenous
Malvaceae	<i>Hibiscus pedunculatus</i>	L.f.	LC	Indigenous
Orobanchaceae	<i>Hyobanche fulleri</i>	E.Phillips	CR	Indigenous; Endemic
Arecaceae	<i>Hyphaene coriacea</i>	Gaertn.	LC	Indigenous
Hypodontiaceae	<i>Hypodontium dregei</i>	(Hornsch.) Mull.Hal.		Indigenous
Hypoxidaceae	<i>Hypoxis filiformis</i>	Baker	LC	Indigenous
Hypoxidaceae	<i>Hypoxis hemerocallidea</i>	Fisch., C.A.Mey. & Ave-Lall.	LC	Indigenous
Hypoxidaceae	<i>Hypoxis sp.</i>			
Fabaceae	<i>Indigofera crebra</i>	N.E.Br.	LC	Indigenous
Fabaceae	<i>Indigofera frondosa</i>	N.E.Br.	LC	Indigenous
Fabaceae	<i>Indigofera micrantha</i>	E.Mey.	LC	Indigenous
Convolvulaceae	<i>Ipomoea cairica</i>	(L.) Sweet		Indigenous
Juncaceae	<i>Juncus lomatoophyllus</i>	Spreng.	LC	Indigenous
Rubiaceae	<i>Keetia gueinzii</i>	(Sond.) Bridson	LC	Indigenous
Hyacinthaceae	<i>Ledebouria floribunda</i>	(Baker) Jessop		Indigenous
Proteaceae	<i>Leucadendron spissifolium subsp. oribinum</i>	(Salisb. ex Knight) I.Williams	VU	Indigenous; Endemic
Proteaceae	<i>Leucospermum innovans</i>	Rourke	EN	Indigenous; Endemic
Liliaceae	<i>Lilium formosanum</i>	Wallace		Not Indigenous; Naturalised; Invasive
Lobeliaceae	<i>Lobelia chamaedryfolia</i>	(C.Presl) A.DC.	LC	Indigenous; Endemic
Asteraceae	<i>Lopholaena dregeana</i>	DC.	LC	Indigenous; Endemic
Onagraceae	<i>Ludwigia octovalvis</i>	(Jacq.) P.H.Raven	LC	Indigenous
Thelypteridaceae	<i>Macrothelypteris torresiana</i>	(Gaudich.) Ching	NE	Not Indigenous; Naturalised
Capparaceae	<i>Maerua racemulosa</i>	(A.DC.) Gilg & Gilg-Ben.	LC	Indigenous

Maesaceae	<i>Maesa lanceolata</i>	Forssk.	LC	Indigenous
Sapotaceae	<i>Manilkara nicholsonii</i>	A.E.van Wyk	EN	Indigenous; Endemic
Celastraceae	<i>Maytenus acuminata</i>	(L.f.) Loes.		Indigenous
Celastraceae	<i>Maytenus acuminata</i> var. <i>acuminata</i>	(L.f.) Loes.	LC	Indigenous
Celastraceae	<i>Maytenus peduncularis</i>	(Sond.) Loes.	LC	Indigenous
Lamiaceae	<i>Mesosphaerum pectinatum</i>	(L.) Kuntze		Not Indigenous; Naturalised
Polypodiaceae	<i>Microsorium</i> sp.			
Fabaceae	<i>Millettia grandis</i>	(E.Mey.) Skeels	LC	Indigenous; Endemic
Sapotaceae	<i>Mimusops caffra</i>	E.Mey. ex A.DC.	LC	Indigenous
Sapotaceae	<i>Mimusops obovata</i>	Nees ex Sond.	LC	Indigenous
Myricaceae	<i>Morella serrata</i>	(Lam.) Killick		Indigenous
Erythroxylaceae	<i>Nectaropetalum capense</i>	(Bolus) Stapf & Boodle	LC	Indigenous; Endemic
Scrophulariaceae	<i>Nemesia denticulata</i>	(Benth.) Grant ex Fourc.	LC	Indigenous; Endemic
Nephrolepidaceae	<i>Nephrolepis cordifolia</i> var. <i>cordifolia</i>	(L.) C.Presl		Not Indigenous; Naturalised; Invasive
Stilbaceae	<i>Nuxia floribunda</i>	Benth.	LC	Indigenous
Ochnaceae	<i>Ochna arborea</i> var. <i>arborea</i>	Burch. ex DC.	NE	Indigenous
Lamiaceae	<i>Ocimum obovatum</i> subsp. <i>obovatum</i>	E.Mey. ex Benth.	NE	Indigenous
Lamiaceae	<i>Ocimum obovatum</i> subsp. <i>obovatum</i>	E.Mey. ex Benth.	NE	Indigenous
Asteraceae	<i>Oedera squarrosa</i>	(L.) Anderb. & K.Bremer	LC	Indigenous; Endemic
Oleaceae	<i>Olea capensis</i> subsp. <i>enervis</i>	L.	LC	Indigenous
Oxalidaceae	<i>Oxalis</i> sp.			
Poaceae	<i>Panicum maximum</i>	Jacq.	LC	Indigenous
Poaceae	<i>Paspalum urvillei</i>	Steud.	NE	Not Indigenous; Naturalised
Thymelaeaceae	<i>Passerina montivaga</i>	Bredenk. & A.E.van Wyk	LC	Indigenous
Thymelaeaceae	<i>Peddiea africana</i>	Harv.	LC	Indigenous
Geraniaceae	<i>Pelargonium alchemilloides</i>	(L.) L'Her.	LC	Indigenous
Cactaceae	<i>Pereskia</i> sp.			
Rhamnaceae	<i>Phyllica natalensis</i>	Pillans		Indigenous; Endemic
Phyllanthaceae	<i>Phyllanthus meyerianus</i>	Mull.Arg.	LC	Indigenous
Asteraceae	<i>Phymaspermum pinnatifidum</i>	(Oliv.) Kallersjo	LC	Indigenous; Endemic
Phytolaccaceae	<i>Phytolacca dodecandra</i>	L'Her.	LC	Indigenous
Araceae	<i>Pistia stratiotes</i>	L.		Not Indigenous; Cultivated; Naturalised; Invasive
Pittosporaceae	<i>Pittosporum viridiflorum</i>	Sims	LC	Indigenous
Pteridaceae	<i>Pityrogramma calomelanos</i> var. <i>aureoflava</i>	(L.) Link		Not Indigenous; Naturalised
Plantaginaceae	<i>Plantago lanceolata</i>	L.	LC	Indigenous
Polypodiaceae	<i>Platynerium bifurcatum</i>	(Cav.) C.Chr.		Not Indigenous; Cultivated; Naturalised; Invasive
Lamiaceae	<i>Plectranthus fruticosus</i>	L'Her.	LC	Indigenous
Lamiaceae	<i>Plectranthus hadiensis</i> var. <i>woodii</i>	(Forssk.) Schweinf. ex Spreng.	LC	Indigenous; Endemic
Lamiaceae	<i>Plectranthus oertendahlia</i>	T.C.E.Fr.	LC	Indigenous; Endemic

Lamiaceae	<i>Plectranthus petiolaris</i>	E.Mey. ex Benth.	LC	Indigenous; Endemic
Lamiaceae	<i>Plectranthus sp.</i>			
Polygalaceae	<i>Polygala gazensis</i>	Baker f.	LC	Indigenous
Polygalaceae	<i>Polygala refracta</i>	DC.	LC	Indigenous
Salicaceae	<i>Populus alba</i>	L.		Not Indigenous; Naturalised; Invasive
Thurniaceae	<i>Prionium serratum</i>	(L.f.) Drege ex E.Mey.	LC	Indigenous; Endemic
Proteaceae	<i>Protea caffra subsp. caffra</i>	Meisn.	LC	Indigenous
Anacardiaceae	<i>Protorhus longifolia</i>	(Bernh.) Engl.	LC	Indigenous
Celastraceae	<i>Pseudosalacia streyi</i>	Codd	EN	Indigenous; Endemic
Salicaceae	<i>Pseudoscolopia polyantha</i>	Gilg	NT	Indigenous; Endemic
Myrtaceae	<i>Psidium guajava</i>	L.		Not Indigenous; Naturalised; Invasive
Fabaceae	<i>Psoralea glabra</i>	E.Mey.	LC	Indigenous
Rutaceae	<i>Ptaeroxylon obliquum</i>	(Thunb.) Radlk.	LC	Indigenous
Pteridaceae	<i>Pteris cretica</i>	L.	LC	Indigenous
Pteridaceae	<i>Pteris tremula</i>	R.Br.		Not Indigenous; Naturalised
Celastraceae	<i>Pterocelastrus rostratus</i>	(Thunb.) Walp.	LC	Indigenous
Asteraceae	<i>Pulicaria scabra</i>	(Thunb.) Druce	LC	Indigenous
Amaranthaceae	<i>Pupalia lappacea var. lappacea</i>	(L.) A.Juss.	LC	Indigenous
Racopilaceae	<i>Racopilum capense</i>	Mull.Hal. ex Broth.		Indigenous
Myrsinaceae	<i>Rapanea melanophloeos</i>	(L.) Mez	LC	Indigenous
Restionaceae	<i>Restio zuluensis</i>	H.P.Linder	VU	Indigenous; Endemic
Rhynchoalycaceae	<i>Rhynchoalycis lawsonioides</i>	Oliv.	NT	Indigenous; Endemic
Fabaceae	<i>Rhynchosia caribaea</i>	(Jacq.) DC.	LC	Indigenous
Fabaceae	<i>Rhynchosia hirta</i>	(Andrews) Meikle & Verdc.	LC	Indigenous
Cyperaceae	<i>Rhynchospora brownii</i>	Roem. & Schult.	LC	Indigenous
Ricciaceae	<i>Riccia stricta</i>	(Lindenb.) Perold		Indigenous
Celastraceae	<i>Robsonodendron eucleiforme</i>	(Eckl. & Zeyh.) R.H.Archer		Indigenous
Rosaceae	<i>Rubus rigidus</i>	Sm.	LC	Indigenous
Salicaceae	<i>Salix mucronata subsp. mucronata</i>	Thunb.	LC	Indigenous
Goodeniaceae	<i>Scaevola sericea</i>	Vahl		Indigenous
Fabaceae	<i>Schotia brachypetala</i>	Sond.	LC	Indigenous
Oleaceae	<i>Schrebera alata</i>	(Hochst.) Welw.	LC	Indigenous
Cyperaceae	<i>Scleria melanomphala</i>	Kunth	LC	Indigenous
Anacardiaceae	<i>Searsia chirindensis</i>	(Baker f.) Moffett		Indigenous
Anacardiaceae	<i>Searsia fastigata</i>	(Eckl. & Zeyh.) Moffett		Indigenous; Endemic
Anacardiaceae	<i>Searsia gueinzii</i>	(Sond.) F.A.Barkley		Indigenous
Anacardiaceae	<i>Searsia lucida forma lucida</i>	(L.) F.A.Barkley		Indigenous
Asteraceae	<i>Senecio affinis</i>	DC.	LC	Indigenous
Asteraceae	<i>Senecio chrysocoma</i>	Meerb.	LC	Indigenous; Endemic
Asteraceae	<i>Senecio erubescens var. incisus</i>	Aiton	NE	Indigenous; Endemic
Asteraceae	<i>Senecio glaberrimus</i>	DC.	LC	Indigenous
Asteraceae	<i>Senecio latifolius</i>	DC.	LC	Indigenous

Fabaceae	<i>Senna didymobotrya</i>	(Fresen.) H.S.Irwin & Barneby	NE	Not Indigenous; Cultivated; Naturalised; Invasive
Malvaceae	<i>Sida rhombifolia</i>	L.		Indigenous
Sapotaceae	<i>Sideroxylon inerme subsp. inerme</i>	L.	LC	Indigenous
Apocynaceae	<i>Sisyranthus barbatus</i>	(Turcz.) N.E.Br.	LC	Indigenous; Endemic
Anacardiaceae	<i>Smodingium argutum</i>	E.Mey. ex Sond.	LC	Indigenous; Endemic
Solanaceae	<i>Solanum americanum</i>	Mill.		Not Indigenous; Naturalised; Invasive
Solanaceae	<i>Solanum giganteum</i>	Jacq.	LC	Indigenous
Solanaceae	<i>Solanum rubetorum</i>	Dunal	LC	Indigenous; Endemic
Solanaceae	<i>Solanum umtuma</i>	Voronts. & S.Knapp	LC	Indigenous; Endemic
Poaceae	<i>Sporobolus natalensis</i>	(Steud.) T.Durand & Schinz	LC	Indigenous
Gesneriaceae	<i>Streptocarpus haygarthii</i>	N.E.Br. ex C.B.Clark	LC	Indigenous; Endemic
Loganiaceae	<i>Strychnos decussata</i>	(Pappe) Gilg	LC	Indigenous
Loganiaceae	<i>Strychnos gerrardii</i>	N.E.Br.	LC	Indigenous
Loganiaceae	<i>Strychnos henningsii</i>	Gilg	LC	Indigenous
Loganiaceae	<i>Strychnos usambarensis</i>	Gilg	LC	Indigenous
Euphorbiaceae	<i>Suregada africana</i>	(Sond.) Kuntze	LC	Indigenous
Myrtaceae	<i>Syncarpia glomulifera</i>	(Sm.) Nied.		Not Indigenous; Cultivated; Naturalised
Myrtaceae	<i>Syzygium intermedium</i>	Engl. & Brehmer	LC	Indigenous
Fabaceae	<i>Tephrosia bachmannii</i>	Harms	VU	Indigenous; Endemic
Santalaceae	<i>Thesium asterias</i>	A.W.Hill	LC	Indigenous
Santalaceae	<i>Thesium gypsophiloides</i>	A.W.Hill	LC	Indigenous
Santalaceae	<i>Thesium pallidum</i>	A.DC.	LC	Indigenous
Poaceae	<i>Tragus berteronianus</i>	Schult.	LC	Indigenous
Cannabaceae	<i>Trema orientalis</i>	(L.) Blume	LC	Indigenous
Meliaceae	<i>Trichilia dregeana</i>	Sond.	LC	Indigenous
Pottiaceae	<i>Trichostomum brachydontium</i>	Bruch		Indigenous
Orchidaceae	<i>Tridactyle bicaudata subsp. rupestris</i>	(Lind.) Schltr.	LC	Indigenous; Endemic
Iridaceae	<i>Tritonia disticha subsp. disticha</i>	(Klatt) Baker	LC	Indigenous; Endemic
Iridaceae	<i>Tritonia gladiolaris</i>	(Lam.) Goldblatt & J.C.Manning	LC	Indigenous; Endemic
Malvaceae	<i>Triumfetta pilosa var. effusa</i>	Roth	NE	Indigenous
Meliaceae	<i>Turraea streyi</i>	F.White & Styles	CR	Indigenous; Endemic
Annonaceae	<i>Uvaria caffra</i>	E.Mey. ex Sond.		Indigenous
Verbenaceae	<i>Verbena officinalis</i>	L.		Not Indigenous; Naturalised
Fabaceae	<i>Vigna vexillata var. vexillata</i>	(L.) A.Rich.	LC	Indigenous
Lamiaceae	<i>Vitex obovata subsp. obovata</i>	E.Mey.		Indigenous
Iridaceae	<i>Watsonia pillansii</i>	L.Bolus	LC	Indigenous; Endemic
Scrophulariaceae	<i>Zaluzianskya elongata</i>	Hilliard & B.L.Burt	LC	Indigenous
Rutaceae	<i>Zanthoxylum capense</i>	(Thunb.) Harv.	LC	Indigenous

APPENDIX B: Avifaunal species expected to occur in the project area

Species	Common Name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2017)
<i>Accipiter melanoleucus</i>	Sparrowhawk, Black	Unlisted	LC
<i>Accipiter minullus</i>	Sparrowhawk, Little	Unlisted	LC
<i>Accipiter rufiventris</i>	Sparrowhawk, Rufous-breasted	Unlisted	LC
<i>Accipiter tachiro</i>	Goshawk, African	Unlisted	LC
<i>Acridotheres tristis</i>	Myna, Common	Unlisted	LC
<i>Acrocephalus arundinaceus</i>	Reed-warbler, Great	Unlisted	LC
<i>Acrocephalus baeticatus</i>	Reed-warbler, African	Unlisted	Unlisted
<i>Acrocephalus gracilirostris</i>	Swamp-warbler, Lesser	Unlisted	LC
<i>Acrocephalus palustris</i>	Warbler, Marsh	Unlisted	LC
<i>Acrocephalus schoenobaenus</i>	Warbler, Sedge	Unlisted	LC
<i>Actitis hypoleucos</i>	Sandpiper, Common	Unlisted	LC
<i>Actophilornis africanus</i>	Jacana, African	Unlisted	LC
<i>Alcedo cristata</i>	Kingfisher, Malachite	Unlisted	Unlisted
<i>Alcedo semitorquata</i>	Kingfisher, Half-collared	NT	LC
<i>Alopochen aegyptiacus</i>	Goose, Egyptian	Unlisted	LC
<i>Amandava subflava</i>	Waxbill, Orange-breasted	Unlisted	Unlisted
<i>Amaurornis flavirostris</i>	Crake, Black	Unlisted	LC
<i>Amblyospiza albifrons</i>	Weaver, Thick-billed	Unlisted	LC
<i>Anas hottentota</i>	Teal, Hottentot	Unlisted	LC
<i>Anas platyrhynchos</i>	Duck, Mallard	Unlisted	LC
<i>Anas smithii</i>	Shoveler, Cape	Unlisted	LC
<i>Anas sparsa</i>	Duck, African Black	Unlisted	LC
<i>Anas undulata</i>	Duck, Yellow-billed	Unlisted	LC
<i>Anastomus lamelligerus</i>	Openbill, African	Unlisted	LC
<i>Andropadus importunus</i>	Greenbul, Sombre	Unlisted	LC
<i>Anhinga rufa</i>	Darter, African	Unlisted	LC
<i>Anser anser</i>	Goose, Domestic	Unlisted	LC
<i>Anthropoides paradiseus</i>	Crane, Blue	NT	VU
<i>Anthus cinnamomeus</i>	Pipit, African	Unlisted	LC
<i>Anthus leucophrys</i>	Pipit, Plain-backed	Unlisted	LC
<i>Anthus lineiventris</i>	Pipit, Striped	Unlisted	LC
<i>Anthus vaalensis</i>	Pipit, Buffy	Unlisted	LC
<i>Apalis flavida</i>	Apalis, Yellow-breasted	Unlisted	LC
<i>Apalis thoracica</i>	Apalis, Bar-throated	Unlisted	LC
<i>Apaloderma narina</i>	Trogon, Narina	Unlisted	LC
<i>Aplopelia larvata</i>	Dove, Lemon	Unlisted	LC
<i>Apus affinis</i>	Swift, Little	Unlisted	LC
<i>Apus apus</i>	Swift, Common	Unlisted	LC
<i>Apus barbatus</i>	Swift, African Black	Unlisted	LC
<i>Apus caffer</i>	Swift, White-rumped	Unlisted	LC
<i>Apus horus</i>	Swift, Horus	Unlisted	LC
<i>Aquila pennatus</i>	Eagle, Booted	Unlisted	LC

<i>Aquila verreauxii</i>	Eagle, Verreaux's	VU	LC
<i>Aquila wahlbergi</i>	Eagle, Wahlberg's	Unlisted	LC
<i>Ardea cinerea</i>	Heron, Grey	Unlisted	LC
<i>Ardea goliath</i>	Heron, Goliath	Unlisted	LC
<i>Ardea melanocephala</i>	Heron, Black-headed	Unlisted	LC
<i>Ardea purpurea</i>	Heron, Purple	Unlisted	LC
<i>Ardeola ralloides</i>	Heron, Squacco	Unlisted	LC
<i>Arenaria interpres</i>	Turnstone, Ruddy	Unlisted	LC
<i>Asio capensis</i>	Owl, Marsh	Unlisted	LC
<i>Aviceda cuculoides</i>	Hawk, African Cuckoo	Unlisted	LC
<i>Balearica regulorum</i>	Crane, Grey Crowned	EN	EN
<i>Batis capensis</i>	Batis, Cape	Unlisted	LC
<i>Batis molitor</i>	Batis, Chinspot	Unlisted	LC
<i>Bostrychia hagedash</i>	Ibis, Hadeda	Unlisted	LC
<i>Botaurus stellaris</i>	Bittern, Eurasian	Unlisted	LC
<i>Bradypterus baboecala</i>	Rush-warbler, Little	Unlisted	LC
<i>Bradypterus barratti</i>	Warbler, Barratt's	Unlisted	LC
<i>Bradypterus sylvaticus</i>	Warbler, Knysna	VU	VU
<i>Bubo africanus</i>	Eagle-owl, Spotted	Unlisted	LC
<i>Bubulcus ibis</i>	Egret, Cattle	Unlisted	LC
<i>Bucorvus leadbeateri</i>	Ground-hornbill, Southern	EN	VU
<i>Burhinus capensis</i>	Thick-knee, Spotted	Unlisted	LC
<i>Burhinus vermiculatus</i>	Thick-knee, Water	Unlisted	LC
<i>Buteo rufofuscus</i>	Buzzard, Jackal	Unlisted	LC
<i>Buteo vulpinus</i>	Buzzard, Steppe	Unlisted	Unlisted
<i>Butorides striata</i>	Heron, Green-backed	Unlisted	LC
<i>Bycanistes bucinator</i>	Hornbill, Trumpeter	Unlisted	LC
<i>Calandrella cinerea</i>	Lark, Red-capped	Unlisted	LC
<i>Calidris alba</i>	Sanderling	Unlisted	LC
<i>Calidris ferruginea</i>	Sandpiper, Curlew	LC	NT
<i>Calidris minuta</i>	Stint, Little	LC	LC
<i>Calonectris borealis</i>	Shearwater, Cory's	Unlisted	LC
<i>Camaropectera brachyura</i>	Camaropectera, Green-backed	Unlisted	LC
<i>Camaropectera brevicaudata</i>	Camaropectera, Grey-backed	Unlisted	Unlisted
<i>Campephaga flava</i>	Cuckoo-shrike, Black	Unlisted	LC
<i>Campethera abingoni</i>	Woodpecker, Golden-tailed	Unlisted	LC
<i>Campethera notata</i>	Woodpecker, Knysna	NT	NT
<i>Caprimulgus fossii</i>	Nightjar, Square-tailed	Unlisted	LC
<i>Caprimulgus pectoralis</i>	Nightjar, Fiery-necked	Unlisted	LC
<i>Caprimulgus tristigma</i>	Nightjar, Freckled	Unlisted	LC
<i>Catharacta antarctica</i>	Brown Skua	Unlisted	LC
<i>Centropus burchellii</i>	Coucal, Burchell's	Unlisted	Unlisted
<i>Centropus superciliosus</i>	Coucal, White-browed	Unlisted	LC
<i>Cercomela familiaris</i>	Chat, Familiar	Unlisted	LC
<i>Cercotrichas leucophrys</i>	Scrub-robin, White-browed	Unlisted	LC
<i>Cercotrichas signata</i>	Scrub Robin, Brown	Unlisted	LC

<i>Ceryle rudis</i>	Kingfisher, Pied	Unlisted	LC
<i>Ceuthmochares australis</i>	Malkoha, Green	Unlisted	LC
<i>Chalcomitra amethystina</i>	Sunbird, Amethyst	Unlisted	LC
<i>Chalcomitra senegalensis</i>	Sunbird, Scarlet-chested	Unlisted	LC
<i>Charadrius asiaticus</i>	Plover, Caspian	Unlisted	LC
<i>Charadrius hiaticula</i>	Plover, Common Ringed	Unlisted	LC
<i>Charadrius leschenaultii</i>	Plover, Greater Sand	Unlisted	LC
<i>Charadrius marginatus</i>	Plover, White-fronted	Unlisted	LC
<i>Charadrius pecuarius</i>	Plover, Kittlitz's	Unlisted	LC
<i>Charadrius tricollaris</i>	Plover, Three-banded	Unlisted	LC
<i>Chlidonias hybrida</i>	Tern, Whiskered	Unlisted	LC
<i>Chlidonias leucopterus</i>	Tern, White-winged	Unlisted	LC
<i>Chlorocichla flaviventris</i>	Greenbul, Yellow-bellied	Unlisted	LC
<i>Chloropeta natalensis</i>	Warbler, Dark-capped Yellow	Unlisted	LC
<i>Chrysococcyx caprius</i>	Cuckoo, Diderick	Unlisted	LC
<i>Chrysococcyx cupreus</i>	Cuckoo, African Emerald	Unlisted	LC
<i>Chrysococcyx klaas</i>	Cuckoo, Klaas's	Unlisted	LC
<i>Ciconia ciconia</i>	Stork, White	Unlisted	LC
<i>Ciconia episcopus</i>	Stork, Woolly-necked	Unlisted	VU
<i>Ciconia nigra</i>	Stork, Black	VU	LC
<i>Cinnyricinclus leucogaster</i>	Starling, Violet-backed	Unlisted	LC
<i>Cinnyris afer</i>	Sunbird, Greater Double-collared	Unlisted	LC
<i>Cinnyris bifasciatus</i>	Sunbird, Purple-banded	Unlisted	LC
<i>Cinnyris chalybeus</i>	Sunbird, Southern Double-collared	Unlisted	LC
<i>Cinnyris talatala</i>	Sunbird, White-bellied	Unlisted	LC
<i>Circaetus cinereus</i>	Snake-eagle, Brown	Unlisted	LC
<i>Circus maurus</i>	Harrier, Black	EN	VU
<i>Circus ranivorus</i>	Marsh-harrier, African	EN	LC
<i>Cisticola aberrans</i>	Cisticola, Lazy	Unlisted	LC
<i>Cisticola ayresii</i>	Cisticola, Wing-snapping	Unlisted	LC
<i>Cisticola chiniana</i>	Cisticola, Rattling	Unlisted	LC
<i>Cisticola cinnamomeus</i>	Cisticola, Pale-crowned	Unlisted	LC
<i>Cisticola erythropus</i>	Cisticola, Red-faced	Unlisted	LC
<i>Cisticola fulvicapilla</i>	Neddicky, Neddicky	Unlisted	LC
<i>Cisticola galactotes</i>	Cisticola, Rufous-winged	Unlisted	LC
<i>Cisticola juncidis</i>	Cisticola, Zitting	Unlisted	LC
<i>Cisticola luapula</i>	Cisticola, Luapula	Unlisted	LC
<i>Cisticola natalensis</i>	Cisticola, Croaking	Unlisted	LC
<i>Cisticola tinniens</i>	Cisticola, Levillant's	Unlisted	LC
<i>Clamator jacobinus</i>	Cuckoo, Jacobin	Unlisted	LC
<i>Coccyzygia melanotis</i>	Waxbill, Sweet	Unlisted	LC
<i>Colius striatus</i>	Mousebird, Speckled	Unlisted	LC
<i>Columba arquatrix</i>	Olive-pigeon, African	Unlisted	LC
<i>Columba guinea</i>	Pigeon, Speckled	Unlisted	LC
<i>Columba livia</i>	Dove, Rock	Unlisted	LC
<i>Coracias garrulus</i>	Roller, European	NT	LC

<i>Coracina caesia</i>	Cuckoo-shrike, Grey	Unlisted	LC
<i>Corvus albicollis</i>	Raven, White-necked	Unlisted	LC
<i>Corvus albus</i>	Crow, Pied	Unlisted	LC
<i>Corvus capensis</i>	Crow, Cape	Unlisted	LC
<i>Corvus splendens</i>	Crow, House	Unlisted	LC
<i>Cossypha caffra</i>	Robin-chat, Cape	Unlisted	LC
<i>Cossypha dichroa</i>	Robin-Chat, Chorister	Unlisted	LC
<i>Cossypha natalensis</i>	Robin-chat, Red-capped	Unlisted	LC
<i>Coturnix coturnix</i>	Quail, Common	Unlisted	LC
<i>Creatophora cinerea</i>	Starling, Wattled	Unlisted	LC
<i>Crithagra gularis</i>	Seedeater, Streaky-headed	Unlisted	LC
<i>Crithagra mozambica</i>	Canary, Yellow-fronted	Unlisted	LC
<i>Crithagra scotops</i>	Canary, Forest	Unlisted	LC
<i>Crithagra sulphurata</i>	Canary, Brimstone	Unlisted	Unlisted
<i>Cuculus canorus</i>	Cuckoo, Common	Unlisted	LC
<i>Cuculus clamosus</i>	Cuckoo, Black	Unlisted	LC
<i>Cuculus solitarius</i>	Cuckoo, Red-chested	Unlisted	LC
<i>Cyanomitra olivacea</i>	Sunbird, Olive	Unlisted	LC
<i>Cyanomitra veroxii</i>	Sunbird, Grey	LC	Unlisted
<i>Cypsiurus parvus</i>	Palm-swift, African	Unlisted	LC
<i>Delichon urbicum</i>	House-martin, Common	Unlisted	LC
<i>Dendrocygna bicolor</i>	Duck, Fulvous	Unlisted	LC
<i>Dendrocygna viduata</i>	Duck, White-faced Whistling	Unlisted	LC
<i>Dendropicos fuscescens</i>	Woodpecker, Cardinal	Unlisted	LC
<i>Dendropicos griseocephalus</i>	Woodpecker, Olive	Unlisted	LC
<i>Dicrurus adsimilis</i>	Drongo, Fork-tailed	Unlisted	LC
<i>Dicrurus ludwigii</i>	Drongo, Square-tailed	Unlisted	
<i>Dryoscopus cubla</i>	Puffback, Black-backed	Unlisted	LC
<i>Egretta alba</i>	Egret, Great	Unlisted	LC
<i>Egretta ardesiaca</i>	Heron, Black	Unlisted	LC
<i>Egretta garzetta</i>	Egret, Little	Unlisted	LC
<i>Egretta intermedia</i>	Egret, Yellow-billed	Unlisted	LC
<i>Elanus caeruleus</i>	Kite, Black-shouldered	Unlisted	LC
<i>Emberiza flaviventris</i>	Bunting, Golden-breasted	Unlisted	LC
<i>Estrilda astrild</i>	Waxbill, Common	Unlisted	LC
<i>Estrilda perreini</i>	Waxbill, Grey	Unlisted	LC
<i>Euplectes albonotatus</i>	Widowbird, White-winged	Unlisted	LC
<i>Euplectes ardens</i>	Widowbird, Red-collared	Unlisted	LC
<i>Euplectes axillaris</i>	Widowbird, Fan-tailed	Unlisted	LC
<i>Euplectes orix</i>	Bishop, Southern Red	Unlisted	LC
<i>Euplectes progne</i>	Widowbird, Long-tailed	Unlisted	LC
<i>Falco biarmicus</i>	Falcon, Lanner	VU	LC
<i>Falco concolor</i>	Falcon, Sooty	NA	NT
<i>Falco peregrinus</i>	Falcon, Peregrine	Unlisted	LC
<i>Falco rupicolus</i>	Kestrel, Rock	Unlisted	LC
<i>Fulica cristata</i>	Coot, Red-knobbed	Unlisted	LC

<i>Gallinago nigripennis</i>	Snipe, African	Unlisted	LC
<i>Gallinula chloropus</i>	Moorhen, Common	Unlisted	LC
<i>Gallirex porphyreolophus</i>	Turaco, Purple-crested	Unlisted	LC
<i>Geronticus calvus</i>	Ibis, Southern Bald	VU	VU
<i>Gyps coprotheres</i>	Vulture, Cape	EN	EN
<i>Haematopus moquini</i>	Oystercatcher, African Black	LC	NT
<i>Halcyon albiventris</i>	Kingfisher, Brown-hooded	Unlisted	LC
<i>Halcyon senegaloides</i>	Kingfisher, Mangrove	EN	LC
<i>Haliaeetus vocifer</i>	Fish-eagle, African	Unlisted	LC
<i>Hedydipna collaris</i>	Sunbird, Collared	Unlisted	LC
<i>Himantopus himantopus</i>	Stilt, Black-winged	Unlisted	LC
<i>Hirundo abyssinica</i>	Swallow, Lesser Striped	Unlisted	LC
<i>Hirundo albigularis</i>	Swallow, White-throated	Unlisted	LC
<i>Hirundo cucullata</i>	Swallow, Greater Striped	Unlisted	LC
<i>Hirundo fuligula</i>	Martin, Rock	Unlisted	Unlisted
<i>Hirundo rustica</i>	Swallow, Barn	Unlisted	LC
<i>Indicator indicator</i>	Honeyguide, Greater	Unlisted	LC
<i>Indicator minor</i>	Honeyguide, Lesser	Unlisted	LC
<i>Indicator variegatus</i>	Honeyguide, Scaly-throated	Unlisted	LC
<i>Ispidina picta</i>	Pygmy-Kingfisher, African	Unlisted	LC
<i>Ixobrychus minutus</i>	Bittern, Little	Unlisted	LC
<i>Jynx ruficollis</i>	Wryneck, Red-throated	Unlisted	LC
<i>Lagonosticta rubricata</i>	Firefinch, African	Unlisted	LC
<i>Lagonosticta senegala</i>	Firefinch, Red-billed	Unlisted	LC
<i>Lamprotornis coruscus</i>	Starling, Black-bellied	Unlisted	LC
<i>Lamprotornis nitens</i>	Starling, Cape Glossy	Unlisted	LC
<i>Laniarius ferrugineus</i>	Boubou, Southern	Unlisted	LC
<i>Lanius collaris</i>	Fiscal, Common (Southern)	Unlisted	LC
<i>Lanius collurio</i>	Shrike, Red-backed	Unlisted	LC
<i>Larus cirrocephalus</i>	Gull, Grey-headed	Unlisted	LC
<i>Larus dominicanus</i>	Gull, Kelp	Unlisted	LC
<i>Leptoptilos crumeniferus</i>	Stork, Marabou	Unlisted	LC
<i>Limosa lapponica</i>	Godwit, Bar-tailed	LC	NT
<i>Lioptilus nigricapillus</i>	Blackcap, Bush	VU	NT
<i>Lissotis melanogaster</i>	Bustard, Black-bellied	Unlisted	LC
<i>Lophaetus occipitalis</i>	Eagle, Long-crested	Unlisted	LC
<i>Lybius torquatus</i>	Barbet, Black-collared	Unlisted	LC
<i>Macronyx capensis</i>	Longclaw, Cape	Unlisted	LC
<i>Macronyx croceus</i>	Longclaw, Yellow-throated	Unlisted	LC
<i>Malaconotus blanchoti</i>	Bush-shrike, Grey-headed	Unlisted	LC
<i>Mandingoa nitidula</i>	Twinspot, Green	Unlisted	LC
<i>Megaceryle maximus</i>	Kingfisher, Giant	Unlisted	Unlisted
<i>Melaenornis pammelaina</i>	Flycatcher, Southern Black	Unlisted	LC
<i>Merops bullockoides</i>	Bee-eater, White-fronted	Unlisted	LC
<i>Merops pusillus</i>	Bee-eater, Little	Unlisted	LC
<i>Microparra capensis</i>	Jacana, Lesser	VU	LC

<i>Milvus aegyptius</i>	Kite, Yellow-billed	Unlisted	Unlisted
<i>Milvus migrans</i>	Kite, Black	Unlisted	LC
<i>Mirafraga africana</i>	Lark, Rufous-naped	Unlisted	LC
<i>Monticola explorator</i>	Rock-thrush, Sentinel	Unlisted	LC
<i>Monticola rupestris</i>	Rock-thrush, Cape	Unlisted	LC
<i>Morus capensis</i>	Gannet, Cape	VU	VU
<i>Motacilla aguimp</i>	Wagtail, African Pied	Unlisted	LC
<i>Motacilla capensis</i>	Wagtail, Cape	Unlisted	LC
<i>Motacilla clara</i>	Wagtail, Mountain	Unlisted	LC
<i>Muscicapa adusta</i>	Flycatcher, African Dusky	Unlisted	LC
<i>Muscicapa caerulescens</i>	Flycatcher, Ashy	Unlisted	LC
<i>Muscicapa striata</i>	Flycatcher, Spotted	Unlisted	LC
<i>Nectarinia famosa</i>	Sunbird, Malachite	Unlisted	LC
<i>Netta erythrophthalma</i>	Pochard, Southern	Unlisted	LC
<i>Nettapus auritus</i>	Goose, African Pygmy	VU	LC
<i>Nilais afer</i>	Brubru	Unlisted	LC
<i>Numenius arquata</i>	Curlew, Eurasian	NT	NT
<i>Numenius phaeopus</i>	Whimbrel, Common	Unlisted	LC
<i>Numida meleagris</i>	Guinea fowl, Helmeted	Unlisted	LC
<i>Nycticorax nycticorax</i>	Night-Heron, Black-crowned	Unlisted	LC
<i>Oceanites oceanicus</i>	Storm Petrel, Wilson's	Unlisted	LC
<i>Oena capensis</i>	Dove, Namaqua	Unlisted	LC
<i>Onychognathus morio</i>	Starling, Red-winged	Unlisted	LC
<i>Oriolus larvatus</i>	Oriole, Black-headed	Unlisted	LC
<i>Oriolus oriolus</i>	Oriole, Eurasian Golden	Unlisted	LC
<i>Ortygospiza atricollis</i>	Quailfinch, African	Unlisted	LC
<i>Otus senegalensis</i>	Scops-owl, African	Unlisted	LC
<i>Pandion haliaetus</i>	Osprey, Osprey	Unlisted	LC
<i>Parus niger</i>	Tit, Southern Black	Unlisted	Unlisted
<i>Passer diffusus</i>	Sparrow, Southern Grey-headed	Unlisted	LC
<i>Passer domesticus</i>	Sparrow, House	Unlisted	LC
<i>Passer griseus</i>	Sparrow, Northern Grey-headed	Unlisted	LC
<i>Passer melanurus</i>	Sparrow, Cape	Unlisted	LC
<i>Pelecanus onocrotalus</i>	Pelican, Great White	VU	LC
<i>Peliperdix coqui</i>	Francolin, Coqui	Unlisted	LC
<i>Pernis apivorus</i>	Honey-buzzard, European	Unlisted	LC
<i>Petronia superciliosa</i>	Petronia, Yellow-throated	Unlisted	LC
<i>Phalacrocorax africanus</i>	Cormorant, Reed	Unlisted	LC
<i>Phalacrocorax capensis</i>	Cormorant, Cape	EN	EN
<i>Phalacrocorax carbo</i>	Cormorant, White-breasted	LC	LC
<i>Philomachus pugnax</i>	Ruff	Unlisted	LC
<i>Phoeniculus purpureus</i>	Wood-hoopoe, Green	Unlisted	LC
<i>Phyllastrephus terrestris</i>	Brownbul, Terrestrial	Unlisted	LC
<i>Phylloscopus ruficapilla</i>	Warbler, Yellow-throated Woodland	Unlisted	LC
<i>Phylloscopus trochilus</i>	Warbler, Willow	Unlisted	LC
<i>Platalea alba</i>	Spoonbill, African	Unlisted	LC

<i>Platysteira peltata</i>	Wattle-eye, Black-throated	LC	LC
<i>Plectropterus gambensis</i>	Goose, Spur-winged	Unlisted	LC
<i>Plegadis falcinellus</i>	Ibis, Glossy	Unlisted	LC
<i>Ploceus bicolor</i>	Weaver, Dark-backed	Unlisted	LC
<i>Ploceus capensis</i>	Weaver, Cape	Unlisted	LC
<i>Ploceus cucullatus</i>	Weaver, Village	Unlisted	LC
<i>Ploceus ocularis</i>	Weaver, Spectacled	Unlisted	LC
<i>Ploceus subaureus</i>	Weaver, Yellow	Unlisted	LC
<i>Ploceus xanthops</i>	Weaver, African (Holub's) Golden	Unlisted	LC
<i>Pluvialis squatarola</i>	Plover, Grey	Unlisted	LC
<i>Podica senegalensis</i>	Finfoot, African	VU	LC
<i>Pogoniulus bilineatus</i>	Tinkerbird, Yellow-rumped	Unlisted	LC
<i>Pogoniulus pusillus</i>	Tinkerbird, Red-fronted	Unlisted	LC
<i>Pogonocichla stellata</i>	Robin, White-starred	Unlisted	LC
<i>Polemaetus bellicosus</i>	Eagle, Martial	EN	VU
<i>Polyboroides typus</i>	Harrier-Hawk, African	Unlisted	LC
<i>Porphyrio madagascariensis</i>	Swamphen, African Purple	Unlisted	Unlisted
<i>Prinia hypoxantha</i>	Prinia, Drakensberg	Unlisted	LC
<i>Prinia subflava</i>	Prinia, Tawny-flanked	Unlisted	LC
<i>Procellaria aequinoctialis</i>	Petrel, White-chinned	VU	VU
<i>Procellaria conspicillata</i>	Petrel, Spectacled	VU	VU
<i>Prodotiscus regulus</i>	Honeybird, Brown-backed	Unlisted	LC
<i>Promerops gurneyi</i>	Sugarbird, Gurney's	Unlisted	NT
<i>Psalidoprocne holomelaena</i>	Saw-wing, Black (Southern race)	Unlisted	Unlisted
<i>Psittacula krameri</i>	Parakeet, Rose-ringed	Unlisted	LC
<i>Psophocichla litsipsirupa</i>	Thrush, Groundscraper	Unlisted	Unlisted
<i>Pternistis natalensis</i>	Spurfowl, Natal	Unlisted	LC
<i>Ptilopusus granti</i>	Scops-owl, Southern White-faced	Unlisted	Unlisted
<i>Pycnonotus tricolor</i>	Bulbul, Dark-capped	Unlisted	Unlisted
<i>Pytilia melba</i>	Pytilia, Green-winged	Unlisted	LC
<i>Quelea quelea</i>	Quelea, Red-billed	Unlisted	LC
<i>Rallus caerulescens</i>	Rail, African	Unlisted	LC
<i>Rhinoptilus chalcopterus</i>	Courser, Bronze-winged	Unlisted	LC
<i>Riparia paludicola</i>	Martin, Brown-throated	Unlisted	LC
<i>Riparia riparia</i>	Martin, Sand	Unlisted	LC
<i>Sagittarius serpentarius</i>	Secretarybird	VU	VU
<i>Sarkidiornis melanotos</i>	Duck, Comb	Unlisted	LC
<i>Sarothrura elegans</i>	Flufftail, Buff-spotted	Unlisted	LC
<i>Sarothrura rufa</i>	Flufftail, Red-chested	Unlisted	LC
<i>Saxicola torquatus</i>	Stonechat, African	Unlisted	LC
<i>Schoenicola brevirostris</i>	Warbler, Broad-tailed	NT	LC
<i>Scleroptila levaillantii</i>	Francolin, Red-winged	LC	LC
<i>Scleroptila shelleyi</i>	Francolin, Shelley's	Unlisted	LC
<i>Scopus umbretta</i>	Hamerkop, Hamerkop	Unlisted	LC
<i>Serinus canicollis</i>	Canary, Cape	Unlisted	LC
<i>Sigelus silens</i>	Flycatcher, Fiscal	Unlisted	LC

<i>Smithornis capensis</i>	Broadbill, African	VU	LC
<i>Spermestes bicolor</i>	Mannikin, Black and White	LC	LC
<i>Spermestes cucullatus</i>	Mannikin, Bronze	Unlisted	Unlisted
<i>Spermestes fringilloides</i>	Mannikin, Magpie	NT	LC
<i>Spermestes nigriceps</i>	Mannikin, Red-backed	LC	LC
<i>Sphenoeacus afer</i>	Grassbird, Cape	Unlisted	LC
<i>Stactolaema leucotis</i>	Barbet, White-eared	Unlisted	LC
<i>Stephanoaetus coronatus</i>	Eagle, African Crowned	VU	NT
<i>Stercorarius parasiticus</i>	Jaeger, Parasitic	LC	LC
<i>Sterna albifrons</i>	Tern, Little	LC	LC
<i>Sterna bengalensis</i>	Tern, Lesser Crested	LC	LC
<i>Sterna bergii</i>	Tern, Swift	LC	LC
<i>Sterna caspia</i>	Tern, Caspian	VU	LC
<i>Sterna fuscata</i>	Tern, Sooty	LC	LC
<i>Sterna hirundo</i>	Tern, Common	LC	LC
<i>Sterna paradisaea</i>	Tern, Arctic	LC	LC
<i>Sterna sandvicensis</i>	Tern, Sandwich	LC	LC
<i>Streptopelia capicola</i>	Turtle-dove, Cape	Unlisted	LC
<i>Streptopelia semitorquata</i>	Dove, Red-eyed	Unlisted	LC
<i>Streptopelia senegalensis</i>	Dove, Laughing	Unlisted	LC
<i>Strix woodfordii</i>	Owl, African Wood	Unlisted	LC
<i>Struthio camelus</i>	Ostrich, Common	Unlisted	LC
<i>Sturnus vulgaris</i>	Starling, Common	Unlisted	LC
<i>Sula sula</i>	Booby, Red-footed	Unlisted	LC
<i>Sylvietta rufescens</i>	Crombec, Long-billed	Unlisted	LC
<i>Tachybaptus ruficollis</i>	Grebe, Little	Unlisted	LC
<i>Tachymartus melba</i>	Swift, Alpine	Unlisted	LC
<i>Tauraco corythaix</i>	Turaco, Knysna	Unlisted	LC
<i>Tauraco livingstonii</i>	Turaco, Livingstone's	Unlisted	LC
<i>Tauraco schalowi</i>	Turaco, Schalow's	LC	LC
<i>Tchagra senegalus</i>	Tchagra, Black-crowned	Unlisted	LC
<i>Tchagra tchagra</i>	Tchagra, Southern	Unlisted	LC
<i>Telophorus olivaceus</i>	Bush-shrike, Olive	Unlisted	LC
<i>Telophorus quadricolor</i>	Bush-shrike, Gorgeous	Unlisted	LC
<i>Telophorus sulfureopectus</i>	Bush-shrike, Orange-breasted	Unlisted	LC
<i>Telophorus zeylonus</i>	Bokmakierie, Bokmakierie	Unlisted	LC
<i>Terpsiphone viridis</i>	Paradise-flycatcher, African	Unlisted	LC
<i>Thalassarche carteri</i>	Albatross, Indian Yellow-nosed	EN	EN
<i>Thalassarche cauta</i>	Albatross, Shy	NT	NT
<i>Thalassarche chlororhynchos</i>	Albatross, Atlantic Yellow-nosed	EN	EN
<i>Thalassarche eremita</i>	Albatross, Chatham	VU	VU
<i>Thalassarche melanophris</i>	Albatross, Black-browed	LC	LC
<i>Thalassarche salvini</i>	Albatross, Salvin's	VU	VU
<i>Thalassornis leuconotus</i>	Duck, White-backed	Unlisted	LC
<i>Thamnolaea cinnamomeiventris</i>	Cliff-chat, Mocking	Unlisted	LC
<i>Threskiornis aethiopicus</i>	Ibis, African Sacred	Unlisted	LC

<i>Tockus alboterminatus</i>	Hornbill, Crowned	Unlisted	LC
<i>Tockus leucomelas</i>	Hornbill, Southern Yellow-billed	Unlisted	LC
<i>Trachyphonus vaillantii</i>	Barbet, Crested	Unlisted	LC
<i>Treron calvus</i>	Green-pigeon, African	Unlisted	LC
<i>Tringa glareola</i>	Sandpiper, Wood	Unlisted	LC
<i>Tringa nebularia</i>	Greenshank, Common	Unlisted	LC
<i>Tringa stagnatilis</i>	Sandpiper, Marsh	Unlisted	LC
<i>Trochocercus cyanomelas</i>	Crested-Flycatcher, Blue-mantled	Unlisted	LC
<i>Turdus libonyanus</i>	Thrush, Kurrichane	Unlisted	Unlisted
<i>Turdus olivaceus</i>	Thrush, Olive	Unlisted	LC
<i>Turdus smithi</i>	Thrush, Karoo	Unlisted	LC
<i>Turnix sylvaticus</i>	Buttonquail, Kurrichane	Unlisted	LC
<i>Turtur chalcospilos</i>	Wood-dove, Emerald-spotted	Unlisted	LC
<i>Turtur tympanistria</i>	Dove, Tambourine	Unlisted	LC
<i>Tyto alba</i>	Owl, Barn	Unlisted	LC
<i>Tyto capensis</i>	Grass-owl, African	VU	LC
<i>Upupa africana</i>	Hoopoe, African	Unlisted	LC
<i>Uraeginthus angolensis</i>	Waxbill, Blue	Unlisted	LC
<i>Urocolius indicus</i>	Mousebird, Red-faced	Unlisted	LC
<i>Vanellus armatus</i>	Lapwing, Blacksmith	Unlisted	LC
<i>Vanellus coronatus</i>	Lapwing, Crowned	Unlisted	LC
<i>Vanellus melanopterus</i>	Lapwing, Black-winged	Unlisted	LC
<i>Vidua funerea</i>	Indigobird, Dusky	Unlisted	LC
<i>Vidua macroura</i>	Whydah, Pin-tailed	Unlisted	LC
<i>Vidua regia</i>	Whydah, Shaft-tailed	Unlisted	LC
<i>Zosterops pallidus</i>	White-eye, Orange River	Unlisted	LC
<i>Zosterops virens</i>	White-eye, Cape	Unlisted	LC

APPENDIX C: *Mammals species expected to occur in the project area*

Species	Common name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2017)
<i>Aethomys ineptus</i>	Tete Veld Rat	LC	LC
<i>Aethomys namaquensis</i>	Namaqua rock rat	LC	LC
<i>Amblysomus hottentotus</i>	Hottentot's Golden Mole	LC	LC
<i>Aonyx capensis</i>	Cape Clawless Otter	NT	NT
<i>Atilax paludinosus</i>	Water Mongoose	LC	LC
<i>Canis mesomelas</i>	Black-backed Jackal	LC	LC
<i>Ceratotherium simum</i>	White Rhinoceros	NT	NT
<i>Cercopithecus mitis</i>	Samango monkey	VU	LC
<i>Chaerephon pumilus</i>	Little Free-tailed Bat	LC	LC
<i>Chlorocebus pygerythrus</i>	Vervet Monkey	LC	LC
<i>Crocidura cyanea</i>	Reddish-grey Musk Shrew	LC	LC
<i>Crocidura flavescens</i>	Greater Red Musk Shrew	LC	LC
<i>Cryptomys hottentotus</i>	Common Mole-rat	LC	LC
<i>Dasymys incomtus</i>	African Marsh rat	NT	LC
<i>Dendrohyrax arboreus</i>	Southern Tree Hyrax	EN	LC
<i>Dendromus melanotis</i>	Grey Climbing Mouse	LC	LC
<i>Dendromus mesomelas</i>	Brant's Climbing Mouse	LC	LC
<i>Dendromus mystacalis</i>	Chestnut Climbing Mouse	LC	LC
<i>Diceros bicornis</i>	Black Rhinoceros	EN	CR
<i>Epomophorus crypturus</i>	Gambian epauletted fruit bat	LC	LC
<i>Epomophorus wahlbergi</i>	Wahlberg's epauletted fruit bat	LC	LC
<i>Equus quagga</i>	Plains Zebra	LC	NT
<i>Felis silvestris</i>	African Wildcat	LC	LC
<i>Genetta tigrina</i>	Cape Genet	LC	LC
<i>Grammomys dolichurus</i>	Woodland Mouse	LC	LC
<i>Graphiurus murinus</i>	Woodland Dormouse	LC	LC
<i>Herpestes ichneumon</i>	Large Grey Mongoose	LC	LC
<i>Herpestes sanguineus</i>	Slender Mongoose	LC	LC
<i>Hipposideros caffer</i>	Sundevall's Leaf-nosed Bat	LC	LC
<i>Hystrix africaeaustralis</i>	Cape Porcupine	LC	LC
<i>Ichneumia albicauda</i>	White-tailed Mongoose	LC	LC
<i>Ictonyx striatus</i>	Striped Polecat	LC	LC
<i>Lemniscomys rosalia</i>	Single-striped Mouse	LC	LC
<i>Leptailurus serval</i>	Serval	NT	LC
<i>Lepus saxatilis</i>	Scrub Hare	LC	LC
<i>Lepus victoriae</i>	African Savanna Hare	LC	LC
<i>Lycaon pictus</i>	African Wild Dog	EN	EN
<i>Mastomys natalensis</i>	Natal Multimammate Mouse	LC	LC
<i>Mellivora capensis</i>	Honey Badger	LC	LC
<i>Mus minutoides</i>	Pygmy Mouse	LC	LC
<i>Mus musculus</i>	House Mouse	Unlisted	LC
<i>Myosorex cafer</i>	Dark-footed Forest Shrew	VU	LC
<i>Myosorex varius</i>	Forest Shrew	LC	LC

<i>Myotis tricolor</i>	Temminck's Hairy Bat	LC	LC
<i>Neoromicia capensis</i>	Cape Serotine Bat	LC	LC
<i>Neoromicia nana</i>	Banana Bat	LC	LC
<i>Neoromicia zuluensis</i>	Aloe Bat	LC	LC
<i>Nycteris thebaica</i>	Egyptian Slit-faced Bat	LC	LC
<i>Orycteropus afer</i>	Aardvark	LC	LC
<i>Otomys angoniensis</i>	Angoni Vlei Rat	LC	LC
<i>Otomys irroratus</i>	Vlei Rat (Fynbos type)	LC	LC
<i>Otomys laminatus</i>	Laminate Vlei Rat	NT	LC
<i>Panthera pardus</i>	Leopard	VU	VU
<i>Papio ursinus</i>	Chacma Baboon	LC	LC
<i>Philantomba monticola</i>	Blue Duiker	VU	LC
<i>Pipistrellus hesperidus</i>	African Pipistrelle	LC	LC
<i>Poecilogle albinucha</i>	African Striped Weasel	NT	LC
<i>Procavia capensis</i>	Rock Hyrax	LC	LC
<i>Pronolagus crassicaudatus</i>	Natal Red Rock Rabbit	LC	LC
<i>Proteles cristata</i>	Aardwolf	LC	LC
<i>Rattus rattus</i>	House Rat	Exotic (Not listed)	LC
<i>Redunca arundinum</i>	Southern Reedbuck	LC	LC
<i>Rhodomys pumilio</i>	Xeric Four-striped Mouse	LC	LC
<i>Rhinolophus clivus</i>	Geoffroy's Horseshoe Bat	LC	LC
<i>Rhinolophus simulator</i>	Bushveld Horseshoe Bat	LC	LC
<i>Rhinolophus swinnyi</i>	Swinny's horseshoe bat	VU	LC
<i>Rousettus aegyptiacus</i>	Egyptian Fruit Bat	LC	LC
<i>Scotophilus dinganii</i>	Yellow House Bat	LC	LC
<i>Suncus infinitesimus</i>	Least Dwarf Shrew	LC	LC
<i>Suncus varilla</i>	Lesser Dwarf Shrew	LC	LC
<i>Sylvicapra grimmia</i>	Common Duiker	LC	LC
<i>Tadarida aegyptiaca</i>	Egyptian Free-tailed Bat	LC	LC
<i>Thryonomys swinderianus</i>	Greater Cane Rat	LC	LC
<i>Tragelaphus oryx</i>	Eland	LC	LC
<i>Tragelaphus scriptus</i>	Cape Bushbuck	LC	LC

APPENDIX D: Reptile species expected to occur within the project area

Species	Common Name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2017)
<i>Acanthocercus atricollis atricollis</i>	Southern Tree Agama	LC	LC
<i>Acontias poecilus</i>	Variable Legless Skink	EN	EN
<i>Afroedura nivaria</i>	Drankensberg Flat Gecko	LC	LC
<i>Afroedura pondolia</i>	Pondo Flat Gecko	LC	LC
<i>Afrotyphlops bibronii</i>	Bibron's Blind Snake	LC	LC
<i>Agama aculeata distantii</i>	Eastern Ground Agama	LC	LC
<i>Agama atra</i>	Southern Rock Agama	LC	LC
<i>Amblyodipsas concolor</i>	Kwazulu-Natal Purple-Glossed Snake	LC	LC
<i>Amblyodipsas polylepsis polylepsis</i>	Common Purple-Glossed Snake	LC	LC
<i>Aparallactus capensis</i>	Black-headed Centipede-eater	LC	LC
<i>Bitis arietans arietans</i>	Puff Adder	LC	Unlisted
<i>Boaedon capensis</i>	Brown House Snake	LC	LC
<i>Bradypodion melanocephalum</i>	KwaZulu Dwarf Chameleon	VU	VU
<i>Causus rhombeatus</i>	Rhombic Night Adder	LC	LC
<i>Chamaeleo dilepis</i>	Common Flap-neck Chameleon	LC	LC
<i>Chamaesaura anguina anguina</i>	Cape Grass Lizard	LC	Unlisted
<i>Chamaesaura macrolepis</i>	Large-scaled Grass Lizard	NT	NT
<i>Crocodylus niloticus</i>	Nile Crocodile	VU	LC
<i>Crotaphopeltis hotamboeia</i>	Red-lipped Snake	LC	Unlisted
<i>Dasypeltis inornata</i>	Southern Brown Egg-eater	LC	LC
<i>Dendroaspis angusticeps</i>	Eastern Green Mamba	VU	Unlisted
<i>Dendroaspis polylepis</i>	Black Mamba	LC	LC
<i>Dispholidus typus typus</i>	Boomslang	LC	Unlisted
<i>Duberria lutrix</i>	Common Slug-eater	LC	LC
<i>Elapsoidea sundevallii sundevallii</i>	Sundevall's Garter Snake	LC	Unlisted
<i>Gerrhosaurus flavigularis</i>	Yellow-throated Plated Lizard	LC	Unlisted
<i>Hemachatus haemachatus</i>	Rinkhals	LC	LC
<i>Hemidactylus mabouia</i>	Common Tropical House Gecko	LC	Unlisted
<i>Lamprophis aurora</i>	Aurora House Snake	LC	LC
<i>Leptotyphlops scutifrons scutifrons</i>	Peters' Thread Snake	LC	Unlisted
<i>Leptotyphlops sylvicolus</i>	Forest Thread Snake	DD	DD
<i>Lycodonomorphus inornatus</i>	Olive House Snake	LC	LC
<i>Lycodonomorphus laevisissimus</i>	Dusky-bellied Water Snake	LC	LC
<i>Lycodonomorphus rufulus</i>	Brown Water Snake	LC	Unlisted
<i>Lycophidion capense capense</i>	Cape Wolf Snake	LC	Unlisted
<i>Lygodactylus capensis capensis</i>	Common Dwarf Gecko	LC	Unlisted
<i>Macrelaps microlepidotus</i>	Kwazulu-Natal Black Snake	NT	NT
<i>Naja mossambica</i>	Mozambique Spitting Cobra	LC	Unlisted
<i>Nucras lalandii</i>	Delalande's Sandveld Lizard	LC	LC
<i>Pachydactylus maculatus</i>	Spotted Gecko	LC	LC
<i>Panaspis wahlbergii</i>	Wahlberg's Snake-eyed Skink	LC	Unlisted
<i>Pelomedusa subrufa</i>	Central Marsh Terrapin	LC	Unlisted

<i>Philothamnus hoplogaster</i>	South Eastern Green Snake	LC	Unlisted
<i>Philothamnus natalensis natalensis</i>	Eastern Natal Green Snake	LC	Unlisted
<i>Philothamnus natalensis occidentalis</i>	Western Natal Green Snake	LC	Unlisted
<i>Philothamnus semivariatus</i>	Spotted Bush Snake	LC	Unlisted
<i>Psammophis brevirostris</i>	Short-snouted Grass Snake	LC	Unlisted
<i>Psammophylax rhombeatus rhombeatus</i>	Spotted Grass Snake	LC	Unlisted
<i>Pseudaspis cana</i>	Mole Snake	LC	Unlisted
<i>Pseudocordylus spinosus</i>	Spiny Crag Lizard	NT	NT
<i>Scelotes inornatus</i>	Durban Dwarf Burrowing Skink	CR	CR
<i>Tetradactylus africanus</i>	Eastern Long-tailed Seps	LC	LC
<i>Thelotornis capensis</i>	Southern Twig Snake	LC	LC
<i>Trachylepis homalocephala</i>	Red-sided Skink	LC	LC
<i>Trachylepis punctatissima</i>	Speckled Rock Skink	LC	LC
<i>Trachylepis striata</i>	Striped Skink	LC	Unlisted
<i>Trachylepis varia</i>	Variable Skink	LC	LC
<i>Tropidosaura montana</i>	Common Mountain Lizard	LC	LC
<i>Varanus albigularis albigularis</i>	Southern Rock Monitor	LC	Unlisted
<i>Varanus niloticus</i>	Water Monitor	LC	Unlisted

APPENDIX E: Amphibian species expected to occur within the project area

Species	Common Name	Conservation Status	
		Regional (SANBI, 2016)	IUCN (2017)
<i>Afrivalus fornasinii</i>	Greater Leaf-folding Frog	LC	Unlisted
<i>Afrivalus spinifrons</i>	Natal Leaf-folding Frog	VU	LC
<i>Amietia delalandii</i>	Delalande's River Frog	LC	Unlisted
<i>Amietia fuscigula</i>	Cape River Frog	LC	LC
<i>Anhydrophryne hewitti</i>	Hewitt's Moss Frog	Unlisted	LC
<i>Anhydrophryne ngongoniensis</i>	Ngongoni Moss Frog	EN	EN
<i>Arthroleptella hewitti</i>	Natal Moss Frog	LC	LC
<i>Arthroleptis wahlbergii</i>	Bush Squeaker	LC	LC
<i>Breviceps adpersus</i>	Bushveld Rain Frog	LC	LC
<i>Breviceps mossambicus</i>	Mozambique Rain Frog	LC	LC
<i>Breviceps verrucosus</i>	Plaintive Rain Frog	LC	LC
<i>Cacosternum boettgeri</i>	Common Caco	LC	LC
<i>Cacosternum nanum nanum</i>	Bronze Caco	LC	LC
<i>Cacosternum striatum</i>	Striped Caco	DD	LC
<i>Hadromophryne natalensis</i>	Natal Ghost Frog	LC	LC
<i>Hyperolius marmoratus</i>	Painted Reed Frog	LC	LC
<i>Hyperolius microps</i>	Sharp-headed Long Reed Frog	LC	Unlisted
<i>Hyperolius pickersgilli</i>	Pickersgill's Reed Frog	EN	EN
<i>Hyperolius poweri</i>	Power's Reed Frog	LC	LC
<i>Hyperolius pusillus</i>	Water Lily Frog	LC	LC
<i>Hyperolius semidiscus</i>	Yellowstriped Reed Frog	LC	LC
<i>Hyperolius tuberilinguis</i>	Tinker Reed Frog	LC	LC
<i>Kassina senegalensis</i>	Bubbling Kassina	LC	LC
<i>Leptopelis natalensis</i>	Natal Tree Frog	LC	LC
<i>Limnonectes magnus</i>	Mindanao Fanged Frog	NT	NT
<i>Natalobatrachus bonebergi</i>	Kloof Frog	EN	EN
<i>Phrynobatrachus mababiensis</i>	Dwarf Puddle Frog	LC	LC
<i>Phrynobatrachus natalensis</i>	Snoring Puddle Frog	LC	LC
<i>Ptychadena oxyrhynchus</i>	Sharp-nosed Grass Frog	LC	LC
<i>Ptychadena porosissima</i>	Striped Grass Frog	LC	LC
<i>Schismaderma carens</i>	African Red Toad	LC	LC
<i>Sclerophrys capensis</i>	Raucous Toad	LC	LC
<i>Sclerophrys garmani</i>	Olive Toad	LC	LC
<i>Sclerophrys gutturalis</i>	Guttural Toad	LC	LC
<i>Semnodactylus wealii</i>	Rattling Frog	LC	LC
<i>Strongylopus fasciatus</i>	Striped Stream Frog	LC	LC
<i>Strongylopus grayii</i>	Clicking Stream Frog	LC	LC
<i>Tomopterna natalensis</i>	Natal Sand Frog	LC	LC
<i>Xenopus laevis</i>	Common Platanna	LC	LC