Proposed 400kV power line between Narina and Gourikwa substations,

Western Cape Province

Vegetation Impact Assessment Report

Prepared by

P.J du Preez (Ph.D., Pr.Sci.Nat.)

PostNet Suite 208

Private Bag x 15

Hemel & Aarde Estate,

Hermanus, 7200

for

Envirolution Consulting (Pty) Ltd

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ENVIRO-NICHE CONSULTING
(Sandersonia Trust trading as Enviro-Niche)
BIODIVERSITY AND ENVIRONMENTAL CONSULTANTS

PO BOX 11945
UNIVERSITAS
BLOEMFONTEIN
9321
greenrsa@gmail.com
Contact no.: 0823764404
Fax: 0866452222

ABSTRACT

The proposed establishment of 400kV powerline triggers a number of listed activities as included in the Environmental Impact Assessment Regulations (08 December 2014), GN R 982 – 985, in accordance with the National Environmental Management Act, No. 107 of 1998 (NEMA), as amended. The appointed Environmental Assessment Practitioner, Envirolution Consulting (Pty) Ltd, commissioned EnviroNiche Consulting, to undertake a floristic impact assessment to determine the impacts which may be triggered by the proposed development. The requirements of this assessment were to undertake a specialist study to assess the floristic biodiversity and ecology of this proposed linear development as well as to determine the significance of the impacts this proposed 400kV powerline will have within the identified project site. The project site is a 2 000m wide corridor situated between the Narina distribution centre west of Blanco near George and the Gourikwa distribution centre west of the Mossgas industry. Four alternative route options were investigated. Routes 1 and 2 are both longer routes, further inland. Route 3 is a shorter, more direct route while route 4 is a similar route as number 3 but joins route 1 and 2 near the Narina distribution centre. Along some of these routes are already existing powerlines and the proposed new route will be parallel to some of these powerlines.

The ancient coastal terrace between the Outeniqua Mountains and the present coastline has been eroded over millions of years to form an extensive undulating coastal plain dissected by numerous streams. This created a landscape of roundish crests, gentle slopes and relatively deep valleys. Almost all the vegetation types in the project area between the two distribution centres are listed as Critical Biodiversity Areas (CBAs) and threatened ecosystems. All four route alternatives cut across several Critical Biodiversity Areas (CBAs), Ecological Support Areas (ESAs). Some sensitive systems are listed as threatened ecosystems. Alternatives 1 and 2 are the only two of the four alternatives that cut across the Swellendam Silcrete Fynbos. Alternative 1 is the only alternative that does not affect the South Outeniqua Sandstone Fynbos. The Gourikwa distribution centre is situated on the Albertinia Sand Fynbos (Status: Vulnerable). The other vegetation types are the Swellendam Silcrete Fynbos (Status: Vulnerable), the Mossel Bay Shale Renosterveld (Status: Endangered), Groot Brak Duine Strandveld (Status: Endangered), Garden Route Granite Fynbos (Status: Endangered), and the Garden Route Shale Fynbos (Status: Vulnerable). All these vegetation types are situated on crests and slopes in the landscape. The only vegetation type restricted to the drainage lines (rivers and streams) is the Cape Lowland Alluvial Vegetation (Status: Critically Rare). This particular vegetation type is dominated by shrubs and trees which occur along the steep

slopes and in deep sheltered valleys. Not much of this Cape Lowland Alluvial Vegetation will be negatively affected by any of the power line alternatives because most of these streams are flowing in deep valleys and the riparian shrubs and trees would not necessarily be destroyed where the powerline will cross the stream. It is only where the valleys are more open that the trees and shrubs at stream crossings will have to be cut. There are also a large number of NFEPA-listed perennial and seasonal streams as well as ephemeral pans present along the proposed power line routes.

The entire landscape has been transformed. Almost all areas, with arable soil, have been ploughed and subsequently the natural vegetation has been destroyed. Agricultural activities (crop and planted pasture production) have destroyed most of region's natural vegetation. Isolated pockets of natural vegetation (fynbos, renosterveld and riparian vegetation) remain in those areas unsuitable for crop production (rocky outcrops and steep slopes). This is the reason why most of the natural vegetation between Gourikwa and Narina distribution centres are listed as Critical Biodiversity areas (CBAs) and Ecological Support Areas (ESAs).

According to the Plants of South Africa species list (POSA) the total number of Red Data plant species present in the quarter degree squares which will be crossed by the power line alternatives are 173. The majority of these Red Data plant species present in the quarter degree squares are bulbs, forbs, succulents and creepers. However a number shrubs which are dominated by proteas and ericas also occur. Protected trees, in terms of the Forest Act, also occur in the region. They are *Widdringtonia nodiflora* and *Sideroxylon inerme*. This means that if the power line corridor will be cleared of shrub vegetation, a relatively large portion of Red Data species would not be destroyed.

In terms of the environmental impacts of the powerline alternatives 1 and 2 cut across larger portions of natural vegetation (CBAs & ESAs). It is therefore recommended that Alternative 3 or 4 be considered as the preferred power line routes.

RECOMMENDATIONS

The following is recommended:

General

- An Environmental Control Officer (ECO) must be appointed to oversee that the aspects stipulated in the Environmental Permit be carried out properly;

- Preconstruction environmental induction for all construction staff on site to ensure that basic environmental principles are adhered to;
- The areas to be cleared as well as the construction area should be clearly demarcated;
- All construction vehicles should adhere to clearly defined and demarcated roads;
- Dust suppression and erosion management should be an integrated component of the construction approach;
- No dumping of building waste or spoil material from the development should take place on areas other than a licenced landfill site;
- All hazardous materials should be stored appropriately to prevent contamination of the project site. Any accidental chemical, fuel and oil spills that occur at the project site should be cleaned up appropriately as related to the nature of the spill.

Flora

- Bush clearing must be kept to the minimum. This is to protect the rare shrubs and other plants;
- There should be a preconstruction walk-through of the development footprint/project site in order to assess the pylon footprint areas for Red Data species as well as sensitive ecosystems such as streams, wetlands, etc.
- Weed control measures must be applied to eradicate the noxious weeds (category 1a &1b species) on disturbed areas;

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1. INTRODUCTION

In July 2016 EnviroNiche Consulting was appointed by **Envirolution Consulting (Pty) Ltd** to conduct an ecological impact assessment of the project site as part of an EIA process to obtain authorisation for the proposed establishment of a 400kV power line between the Gourikwa distribution centre west of Mossgas and the Narina substation near Blanco west of George.

1.2. Objectives of the report

An assessment into the status of the vegetation located within the project site was undertaken, including:

- Assessment of the natural vegetation;
- General floristic diversity;
- Habitat suitability for Red Data flora species;
- Potential presence of Red Data flora species;
- Potential presence of sensitive ecosystems

1.3. Legislative framework

Acts such as those listed below (Table 1); ensure the protection of ecological processes, natural systems and natural beauty as well as the preservation of biotic diversity in the natural environment. It also ensures the protection of the environment against disturbance, deterioration, defacement or destruction as a result of man-made structures, installations, processes or products or human activities.

Table 1.1: List of relevant legislation

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management Act, No. 107 of 1998 (NEMA), as amended & NEMA EIA Regulations, 2014: GN544, published in Government Gazette 33306 in 2014	A full Environmental Impact Assessment Report (EIA) is required for this project	Department of Environmental Affairs (DEA)	2014
National Environmental Management: Biodiversity Act (10/2004): Amendmended, 2014	Protected species may occur on site	Department of Environment Affairs and Development Planning (EAPD)	2014
National Water Act, No. 36 of 1998	The proposed development may trigger a section	Department of Water Affairs (DWA)	1998

	21(C and/or i) water use.		
National Heritage Resources Act (Act No 25 of 1999)	Resources could be identified during construction phase	South African Heritage Resources Agency	1999
Western Cape Nature Conservation Ordinance (No 19 of 1974) and its amendments	Protected species could occur on the proposed sites	Cape Nature & Department of Environment Affairs and Development Planning (EAPD)	2009
National Forests Act (Act 84 of 1998)	Protected trees could occur on the proposed sites	Department of Agriculture, Forestry and Fisheries (DAFF)	1998

1.4. STUDY APPROACH AND METHODOLOGY

1.4.1 Vegetation survey

Date of fieldwork: 10 -12 August 2016.

Satellite imagery (Google Earth photos) and 1:50 000 topographic maps were used to find features within the project site.

Quantitative data was collected in each quadrat by undertaking vegetation sampling according to the Braun-Blanquet approach (Mueller-Dombois & Ellenberg 1974; Westhoff & van der Maarel 1978). In each sample site the following data was collected:

Habitat data:

- amount of bare soil;
- rock cover;
- slope;
- aspect in degrees;
- latitude and longitude position (from GPS) in decimal degrees;
- presence of biotic disturbances, e.g. grazing, animal burrows, etc.

Vegetation data

- species present;
- cover estimation of each species according to the Braun-Blanquet scale;
- vegetation height.

Data analysis

- The plant communities that were identified were described using the vegetation sample data.
- Additional checklists of plant species were compiled by traversing the project site on foot and recording species as they were encountered. Plant names follow those of POSA (2015).
- All exotic species categorised as alien invaders or weeds as listed in the *National Environmental Management: Biodiversity Act (10/2004): Alien and Invasive Species Regulations, 2014* were also recorded.

Due to the brief duration of the survey, the species list provided for the project site cannot be regarded as comprehensive, but is nevertheless likely to include the majority of the dominant and common species present.

1.4.2 Red Data plant species

A list of species collected within the relevant quarter degree squares are listed together with the species noted during the site visit. For all threatened plants that occur in the general geographical area of the project site, a rating of the likelihood of it occurring within the project site is given as follows:

- LOW: no suitable habitats occur on site / habitats on site do not match habitat description for species;
- MEDIUM: habitats on site match the general habitat description for species (e.g. grassland), but detailed microhabitat requirements (e.g. rocky grassland on shallow soils overlying dolomite or dolerite) are absent on the site or are unknown from the descriptions given in the literature or from the authorities;
- HIGH: habitats found on site match very strongly the general and microhabitat description for the species (e.g. rocky grassland on shallow soils overlying granite);
- DEFINITE: species found on site.

Impact rating methodology

Direct, indirect and cumulative impacts of the issues identified in the EIA phase must be assessed in terms of the following criteria:

- The **nature**, which shall include a description of what causes the effect, what will be affected and how it will be affected.
- The **extent**, wherein it will be indicated whether the impact will be local (limited to the immediate area or site of development) or regional, and a value between 1 and 5 will be assigned as appropriate (with 1 being low and 5 being high):
- The **duration**, wherein it will be indicated whether:
  - the lifetime of the impact will be of a very short duration (0–1 years) – assigned a score of 1

    - the lifetime of the impact will be of a short duration (2-5 years) - assigned a score of 2;
    - medium-term (5–15 years) – assigned a score of 3
    - long term (> 15 years) - assigned a score of 4; or
    - permanent - assigned a score of 5;
- The **consequences (magnitude)**, quantified on a scale from 0-10, where 0 is small and will have no effect on the environment, 2 is minor and will not result in an impact on processes, 4 is low and will cause a slight impact on processes, 6 is moderate and will result in processes continuing but in a modified way, 8 is high (processes are altered to the extent that they temporarily cease), and 10 is very high and results in complete destruction of patterns and permanent cessation of processes.
- The **probability** of occurrence, which shall describe the likelihood of the impact actually occurring. Probability will be estimated on a scale of 1–5, where 1 is very improbable (probably will not happen), 2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).
- The **significance**, which shall be determined through a synthesis of the characteristics described above and can be assessed as low, medium or high; and
- The **status**, which will be described as either positive, negative or neutral.
- The *degree* to which the impact can be **reversed**.
- The *degree* to which the impact may cause **irreplaceable loss of resources**.
- The *degree* to which the impact can be **mitigated**.

The significance is calculated by combining the criteria in the following formula:

S=(E+D+M)P
S = Significance weighting
E = Extent
D = Duration
M = Magnitude
P = Probability

The significance weightings for each potential impact are as follows:

- < 30 points: Low (i.e. where this impact would not have a direct influence on the decision to develop in the area),
- 30-60 points: Medium (i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated),
- > 60 points: High (i.e. where the impact must have an influence on the decision process to develop in the area).

1.5. ASSUMPTIONS

- The biodiversity at the project site (pylons) will be destroyed.
- The biodiversity between pylons will be largely impacted by an access road and bush clearing actions

1.6 LIMITATIONS

- Detailed line routes were not available only four alternatives each 2 000m wide

2. DESCRIPTION OF THE PROJECT

There is a need to strengthen the ESKOM infrastructure and supply of electricity to the southern Cape. The aim of this project is to construct a 400kV powerline between the Gourikwa distribution centre west of Mossgas and Narina distribution centre near Blanco west of George.

2.1 Location

The project site is a 2 000m wide corridor situated between the existing Gourikwa substation west of Mossgas and a proposed new substation (Narina) at Blanco near George. There are four alternative route options. Routes 1 and 2 are both longer routes, further inland. Route 3 is a shorter, more direct route while route 4 is a similar route as number 3 but joins route 1 and 2 near the Narina substation. Along these routes are already existing powerlines and the proposed new route will be parallel to some of these powerlines.

The project site cuts across several quarter degree squares. Table 2 indicates the quarter degree squares. Figure 1 is a Google Earth photo of the two alternative routes for the proposed power line.

Table 2: Quarter degree squares over which the power line alternatives could go.

No	**Alternative 1, 2 3 & 4**
1	3421BB
2	3422AA
3	3322CC
4	3322CD

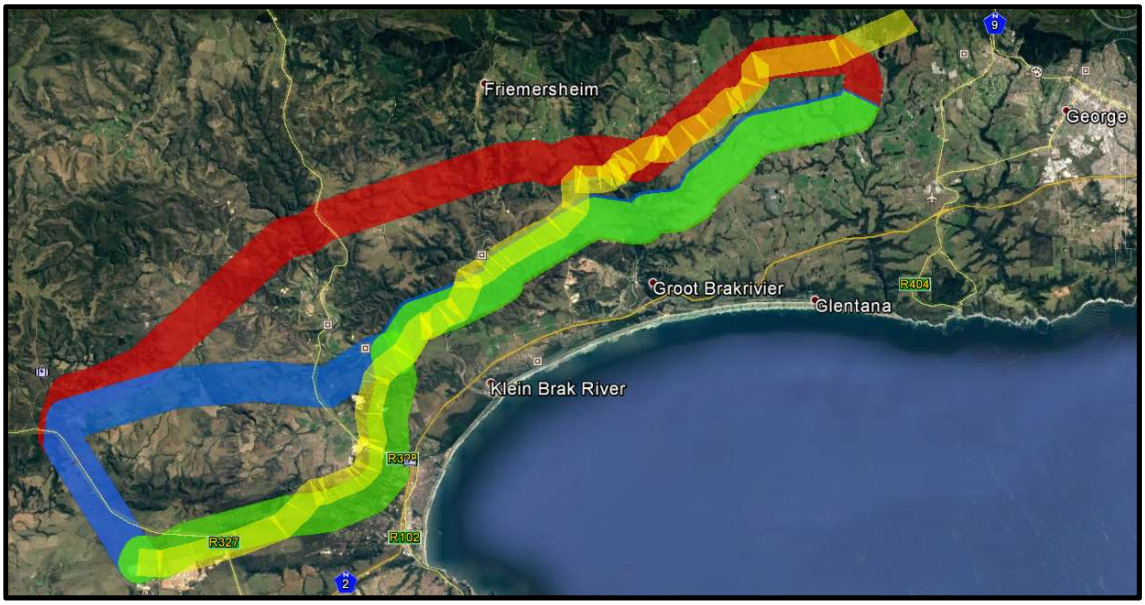

Figure 2.1: A satellite image of alternative routes 1 (red), 2 (blue), 3 (green) & 4 (yellow) in relation to the landscape and main roads (Google Earth).

3. DESCRIPTION OF THE AFFECTED ENVIRONMENT

3.1 Description of the broader study area and project site

3.1.1 Topography, geology & soils

The project site is a linear project and it cuts across the ancient coastal plain between the Outeniqua Mountain range and the ocean. The altitude vary between 200m.a.s.l. at Gourikwa substation site and 250m.a.s.l. at the Narina substation site. The topography between the two substations is undulating. The coastal plain has been eroded by numerous streams. The dominant geology is shale deposits of the Bokkeveld and Uitenhage Groups while the soils are clays and loams of the Glenrosa and Mispah soil forms (Mucina & Rutherford 2006).

3.1.2 Climate (Rainfall & temperatures)

The project area receives rain throughout the year and varies from 270 – 620mm per year. The mean annual temperature is 16.9°C.

3.1.3 Land use & land cover

The main land use in the study area over which the powerline is planned is agriculture with cattle farming as the main sources of revenue. Almost all arable soils were ploughed and it is used for crop and planted pasture production.

3.1.4 Vegetation, biogeography and conservation value

The most recent description of the broader study area's vegetation is the general description by Mucina & Rutherford (2006) relating to the vegetation which is considered to be the

"Vegetation of South Africa, Lesotho and Swaziland" as well as its accompanying map of the country by (Mucina *et al.*, 2005). This memoir contains species information and a comprehensive conservation assessment of all vegetation types.

The most recent description of the broader study area's vegetation is the general description by Mucina & Rutherford (2006) relating to the vegetation which is considered to be the "Vegetation of South Africa, Lesotho and Swaziland" as well as its accompanying map of the country by (Mucina *et al.*, 2005). This memoir contains species information and a comprehensive conservation assessment of all vegetation types.

Table 3.2: Vegetation types over which the power line alternatives routes could go (Mucina & Rutherford 2006).

	Alternative Route 1 & 2			**Alternative Route 3 & 4**		
No	**Name**	**Code**	**Status**	**Name**	**Code**	**Status**
1	Cape Lowland Alluvial vegetation	AZa2	Critically END	Cape Lowland Alluvial vegetation	AZa2	Critically END
2	Albertinia Sand Fynbos	FFd9	VUL	Albertinia Sand Fynbos	FFd9	VUL
3	Swellendam Silcrete Fynbos	FFc1	END		-	
4	Mossel Bay Shale Renosterveld	FRs14	END	Mossel Bay Shale Renosterveld	FRs14	END
5	Groot Brak DuineStrandveld	FS9	END	Groot Brak DuineStrandveld	FS9	END
6	Garden Route Granite Fynbos	FFg5	END	Garden Route Granite Fynbos	FFg5	END
7	Garden Route Shale Fynbos	FFh9	END	Garden Route Shale Fynbos	FFh9	END
8		-		South Outeniqua Sandstone Fynbos (+ Alt 2)	FFs19	VUL
9	Southern Afrotemperate Forest	FOz1	LT	Southern Afrotemperate Forest	FOz1	LT

LT - Least Threatened

VUL - Vulnerable

END - Endangered and critically endangered

4. FINDINGS

4.1 Vegetation overview

4.1.1 Alien trees & weeds

The largest concentration of alien plant species is in the valleys of the streams and rivers as well as on the verges of crop fields and around small holdings and farmsteads. Woody species such as *Acacia cyclops, A. mearnsii, A. longifolia, Sesbania punicea, Pinus* spp. *Eucalyptus* spp. and weeds such as *Sonchus oleraceus Solanum pseudo-capsicum, Tropaeolum majus*, *Pennisetum clandestinum* and other were noted.

4.1.2 Cultivation

Almost all arable soils have been ploughed. Most of the transformed land has been converted to crop fields. Towards the west the main crops being produced are wheat and canola and to a lesser extent planted pasture. Towards George more crop fields with planted pasture occur. The planted pasture is used to feed cattle and sheep.

4.1.3 Streams & Wetlands

Streams on the southern slopes of the Outeniqua Mountains drain towards the ocean. The coastal plain has been eroded and numerous tributaries drain into the larger streams and rivers that flow towards the sea. Wetland such as small pans occur ob the flat plateau areas whicle hil-slope seeps form wetlands along slopes.

4.1.4 Flora and diversity of the specific project site

The plant species found in the quarter degree squares over which the four route options planned are listed in **Annexure B.** It the plant species of South Africa (POSA) list those on its SANBI's website. It provides a good indication of the species diversity and composition along the powerline routes.

4.1.5 Protected species

The aim of this section is to list those plant species for which there is conservation concern that may be affected by the establishment of the proposed 400 kV power line. This includes threatened, rare, declining and protected plant species.

a) Red List Plant Species

There are three basic rules of conservation that apply to populations of Red List Plant Species. Should any Red List plant species be recorded within the project site then these guidelines would apply. The guidelines are as follows:

1. All populations of Near Threatened and Threatened plant taxa must be conserved *in situ*.
2. All populations of Near Threatened and Threatened plant taxa must be protected with a buffer zone in accordance with guidelines as set out in the Policy.

3. An Ecological Management Plan must be compiled in respect of all actions that affect populations of Red List Plant Species, and such Ecological Management Plans must conform to the Guidelines.

b) Protected species in terms of the National Forests Act (Act 84 of 1998)

The various route alternatives cross numerous streams and small rivers between Gourikwa and Narina distribution centres. Most of these streams are situated in deep ravines and the pylons will be erected on high ground, meaning that the riparian forests along these streams will not need to be cleared. Thus the chance of affecting this vegetation type is slim.

c) Western Cape Nature Conservation ordinance (No19 of 1974)

A number of protected species occur in the plant communities as listed by POSA. Appendix B lists the species present at the project site. The protected species are marked by a yellow flag.

4.2. CRITICAL BIODIVERSITY AREAS AND BROAD–SCALE ECOLOGICAL PROCESSES

4.2.1 Definitions and descriptions of Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs)

Critical Biodiversity Areas (CBAs) are terrestrial and aquatic features in the landscape that are critical for retaining biodiversity and supporting continued ecosystem functioning and services. These form the key output of a systematic conservation assessment and are the biodiversity sectors inputs into multi-sectoral planning and decision making tools. The use of CBAs within the province follows the definition laid out in the guideline for publishing bioregional plans (Anon, 2008).

The identification and mapping of CBAs forms part of the biodiversity assessment of the province which will be used to inform the development of the Provincial Biodiversity Sector plans, bioregional plans, and also be used to inform Spatial Development Frameworks (SDFs), Environmental Management Frameworks (EMFs), Strategic Environmental Assessments (SEAs) and in the Environmental Impact Assessment (EIA) process in the province.

Simply put, the purpose of the CBA is to indicate spatially the location of critical or important areas for biodiversity in the landscape. The CBA, through the underlying land management objectives that define the CBA, prescribes the desired ecological state in which the province would like to keep this biodiversity. Therefore, the desired ecological state or land management objective determines which land-use activities are compatible with each CBA category based on the perceived impact of each activity on biodiversity pattern and process.

According to the guidelines for bioregional plans, three basic CBA categories can be identified based on three high-level and management objectives (Table 4.1).

Table 4.1: Definitions and framework for linking CBAs to land-use planning and decision-making guidelines based on a set of high-level land biodiversity management objectives (Adapted from the guidelines for bioregional plans (Anon 2008)).

CBA category	**Land Management Objective**
Critical Biodiversity Areas (CBAs) Definition: CBAs are areas of the landscape that need to be maintained in a natural or near-natural state in order to ensure the continued existence and functioning of species and ecosystems and the delivery of ecosystem services. In other words, if these areas are not maintained in a natural or near-natural state then biodiversity conservation targets cannot be met. Maintaining an area in a natural state can include a variety of biodiversity-compatible land uses and resource uses.	
Protected Areas (PA) & CBA 1	**Natural landscapes:** Ecosystems and species are fully intact and undisturbed. These are areas with high irreplaceability or low flexibility in terms of meeting biodiversity pattern targets. If the biodiversity features targeted in these areas are lost then targets will not be met. These are landscapes that are at or past their limits of acceptable change.
CBA 2	**Near-natural landscapes:** Ecosystems and species are largely intact and undisturbed. Areas with intermediate irreplaceability or some flexibility in terms of the area required to meet biodiversity targets. There are options for loss of some components of biodiversity in these landscapes without compromising the ability to achieve targets. These are landscapes that are approaching but have not passed their limits of acceptable change.
Ecological Support Areas (ESAs) Definition: ESAs are areas that are not essential for meeting biodiversity representation targets/thresholds but which nevertheless play an important role in supporting the ecological functioning of critical biodiversity areas and / or in delivering ecosystem services that support socio-economic development, such as water provision, food mitigation or carbon sequestration. The degree of restriction on land use and resource use in these areas may be lower than that recommended for critical biodiversity areas.	
ESA	**Functional landscapes:** Ecosystem is moderately to significantly disturb but still able to maintain basic functionality. Individual species or other biodiversity indicators may be severely disturbed or reduced. These are areas with a low irreplaceability with respect to biodiversity pattern targets only.
ONA (Other Natural Areas) and Transformed	Production landscapes: Manage land to optimise sustainable utilisation of natural resources.

According to the Western Cape Biodiversity Sector Plan (WCBSP) (2017) the power line corridors (Alternatives 1, 2, 3 & 4) cut across many Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ECAs) as well as protected areas.

4.4. ECOLOGICAL SENSITIVITY ANALYSIS (Figure 4.4.1)

The sensitivity assessment identifies those parts of the project site that will a have a medium to high conservation value or that will be sensitive to disturbance. Areas containing untransformed natural vegetation, high diversity or habitat complexity, Red List organisms or systems vital to sustaining ecological functions are considered sensitive. In contrast, any transformed area that has no importance for the functioning of ecosystems is considered to have a low sensitivity. The habitat sensitivity assessment was done according to the rules provided in the "Sensitivity mapping rules for biodiversity assessments". There are features within the project site or just outside of the project site that may be considered to have a medium conservation value, as follows:

4.4.1 Streams (perennial & seasonal) and wetlands (pans)(Fig 4.1)

Episodic streams and pans with a medium to high sensitivity occur on the plains between Gourikwa and Narina distribution centres.

Potential impacts:

1. Pollutants from the construction 400 kV power line may end up in these streams. From here the downstream aquatic system of perennial streams might be affected.
2. Bank disturbance and clearing of vegetation could cause soil erosion
3. Removal of vegetation could hamper ecosystem functions

Mitigation measures:

a) Care must be taken not to drive through the veld unnecessary.

b) The construction vehicles must stick to existing tracks as far as possible.

c) The areas to be cleared as well as the construction area should be clearly demarcated;

d) All construction vehicles should adhere to clearly defined and demarcated roads

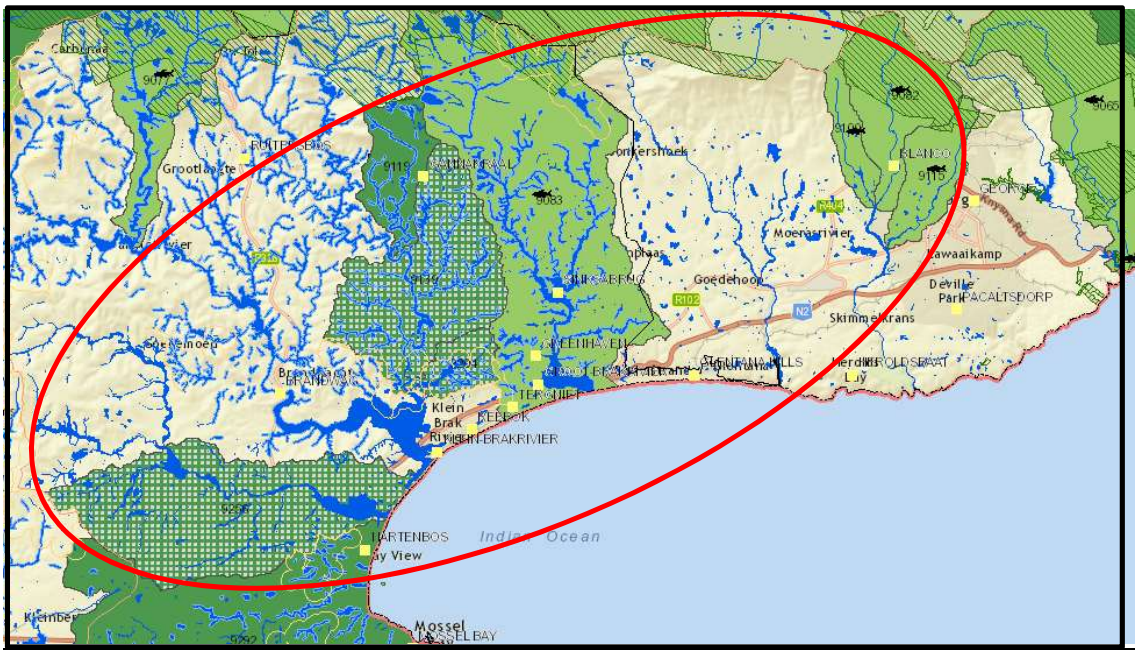

Figure 4.1: The sensitive NFEPA listed aquatic systems present within the project site. The red polygon indicates the project area (BGIS 2015)

4.4.2 Sensitive terrestrial vegetation:

The plant communities in the Fynbos, Renosterbos and riparian vegetation can all be regarded as sensitive.

a) Fynbos and Renosterbos

Potential impacts: The natural vegetation will be destroyed at the footprints of the power line pylons because construction vehicles and people will be moving around the construction site. The clearing of shrubs and trees under power lines is an ESKOM's maintenance policy. The aim is to lower the fuel load of the vegetation. By doing so they want to prevent fires to occur under or near power lines. This activity can potentially destroy shrubs such as *Protea, Leucodendron, Erica, Brunia* and other shrubs. Because both actions (the cutting of shrubs as well as the prevention of fire) may destroy fynbos species. Fynbos is fire dependent and requires fire to stimulate seed germination and the vigor of fynbos vegetation.

Mitigation measures:

a) There should be a preconstruction walk-through of the development footprint/project site in order to assess the pylon footprint areas for protected and Red Data species as well as sensitive ecosystems such as streams, wetlands, etc.
b) A search and rescue exercise must take place before construction commences.
c) The construction site at each pylon position must be clearly demarcated to avoid accidental destruction of vegetation.
d) All construction vehicles should adhere to clearly defined and demarcated roads

e) Care must be taken not to drive through the veld unnecessary

f) Bush clearing must be kept to the minimum. This is to protect the rare shrubs and other plants

g) Weed control measures must be applied to eradicate the noxious weeds (category 1a &1b species) on disturbed areas;

b) Riparian vegetation

Potential impacts: Most of the streams flow from north-western direction towards the sea. The powerline altenatives follows a more or less east-west direction. Most of these streams are flowing in deep valley and the riparian shrubs and trees would not necessarily be destroyed where the powerline will cross the stream. It is only where the valleys are more open that the trees and shrubs at stream crossings will have to be cut.

Trees and shrubs present in the riparian communities include species such as *Cassine peragua, Diospyros dichrophylla, Diospyros lycioides, Gymnosporea buxifolia, Laurophyllus capensis, Metalasia muricata, Osteospermum monilifera, Maytenus procumbens, Pterocelastrus tricuspidatus, Putterlickia pyracantha, Robsonodendron eucleiforme, Schotia afra, Searsia glauca, S. laevigata, S. pallens, S. lucida,* and many more.

Mitigation measures:

a) There should be a preconstruction walk-through of the development footprint/project site in order to assess the pylon footprint areas for protected and Red Data species as well as sensitive ecosystems such as streams, wetlands, etc.
b) A search and rescue exercise must take place before construction commences.
c) The construction site at each pylon position must be clearly demarcated to avoid accidental destruction of vegetation.
d) All construction vehicles should adhere to clearly defined and demarcated roads
e) Care must be taken not to drive through the veld unnecessary
f) Bush clearing must be kept to the minimum. This is to protect the rare shrubs and other plants
g) Weed control measures must be applied to eradicate the noxious weeds (category 1a &1b species) on disturbed areas;

c) Afromontane forests

The four alternatives do not affect any Afromontane forests patches.

4.4.3 Threatened and protected plant species:

There are a number of protected and Red Data species present along the powerline routes. There are **173 Red Data** species noted in the quarter degree squares over which the alternative routes are planned.

Potential impacts: This proposed establishment of the 400kV powerline will have a negative impact on these species in case they present at the construction sites.

Mitigation measures:

a) There must be a preconstruction walk-through of the development footprint/project site in order to assess the pylon footprint areas for red Data species as well as sensitive ecosystems such as streams, wetlands, etc.;
b) A search and rescue exercise must take place before construction commences. This is;
c) The construction site at each pylon position must be clearly demarcated and properly protected from accidental destruction;
d) Bush clearing must be kept to the minimum. This is to minimise the destruction of the rare shrubs and other plants.

4.4.3 Critical Biodiversity areas (CBAs), Ecological support areas, Threatened Ecosystems and Protected areas:

Cape Nature published a new biodiversity sector plan for the Western Province. According to the Western Cape Biodiversity Sector Plan (WCBSP) (2017) the power line corridors (Alternatives 1, 2, 3 & 4) cut across many newly identified Critical Biodiversity Areas (CBAs), Ecological Support Areas (ECAs) as well as protected areas (WCBSP) (2017)(Fig 4.1,.4.2, 4.3, 4.4, 4.5, 4.6, & 4,7).

Potential impacts: The biodiversity (vegetation and fauna, as well as their habitats) will be destroyed at the footprints of the power line pylons because construction vehicles and people will do excavations and other disturbances at construction sites. Bush clearing will also destroy the trees and shrubs under power line conductors to lower the fuel load of the vegetation. This could cause habitat destruction, change in species composition and could create potential for alien invasive species to establish on disturbed areas. The prevention of fire cutting the shrubs and trees can potentially destroy many trees, shrubs, and fynbos species. Fynbos species are fire dependent and requires fire to stimulate seed germination and vigor of fynbos vegetation. Fire suppression actions in the long run could cause species composition change in the proximity of the power line.

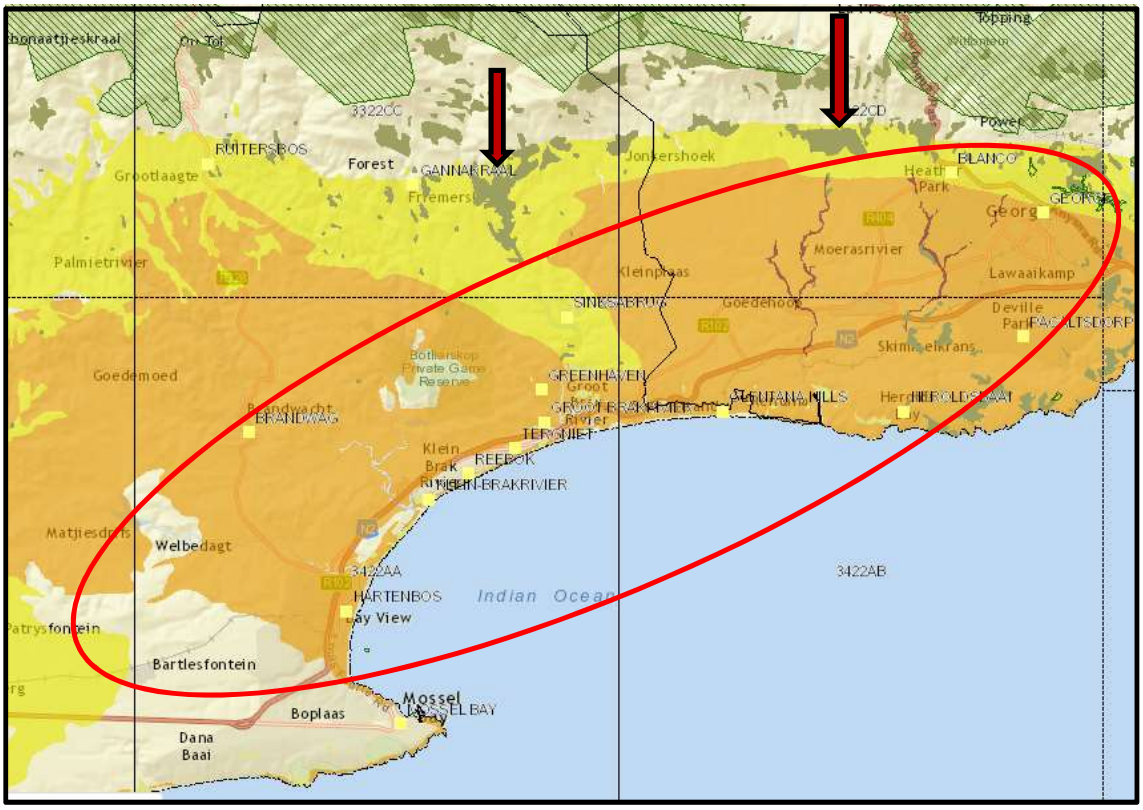

Figure 4.2: The sensitive systems (yellow & orange shaded areas) present within the project site. Arrows indicate forest patches. The four alternatives do not affect Afromontane forests. The red polygon indicates the project area (BGIS 2015).

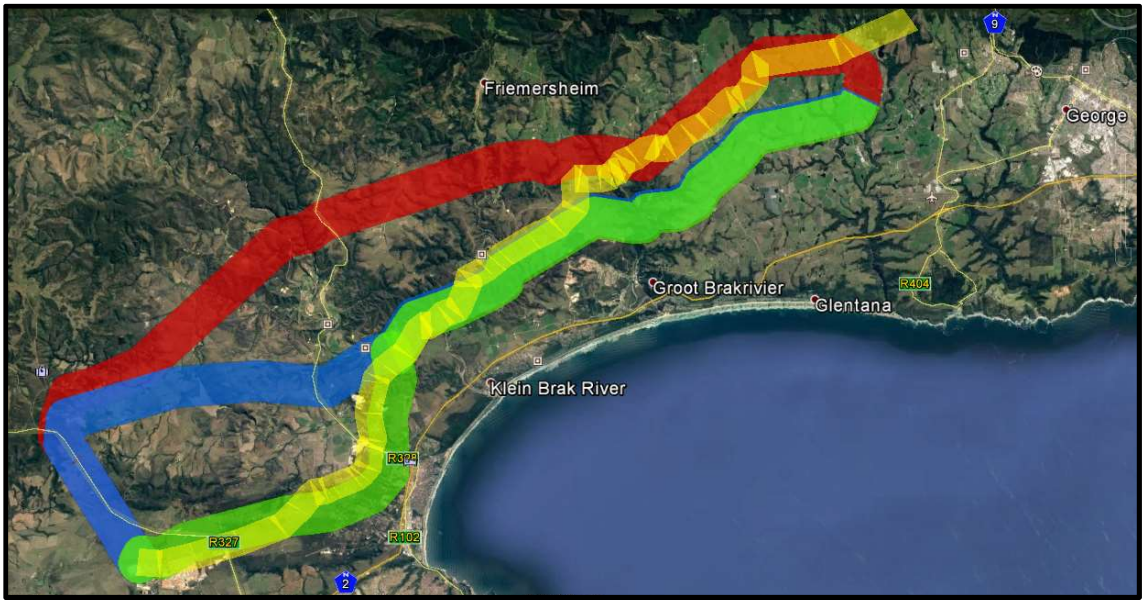

Figure 4.3: A satellite image of alternative routes 1 (red), 2 (blue), 3 (green) & 4 (yellow) in relation to the landscape and main roads (Google Earth).

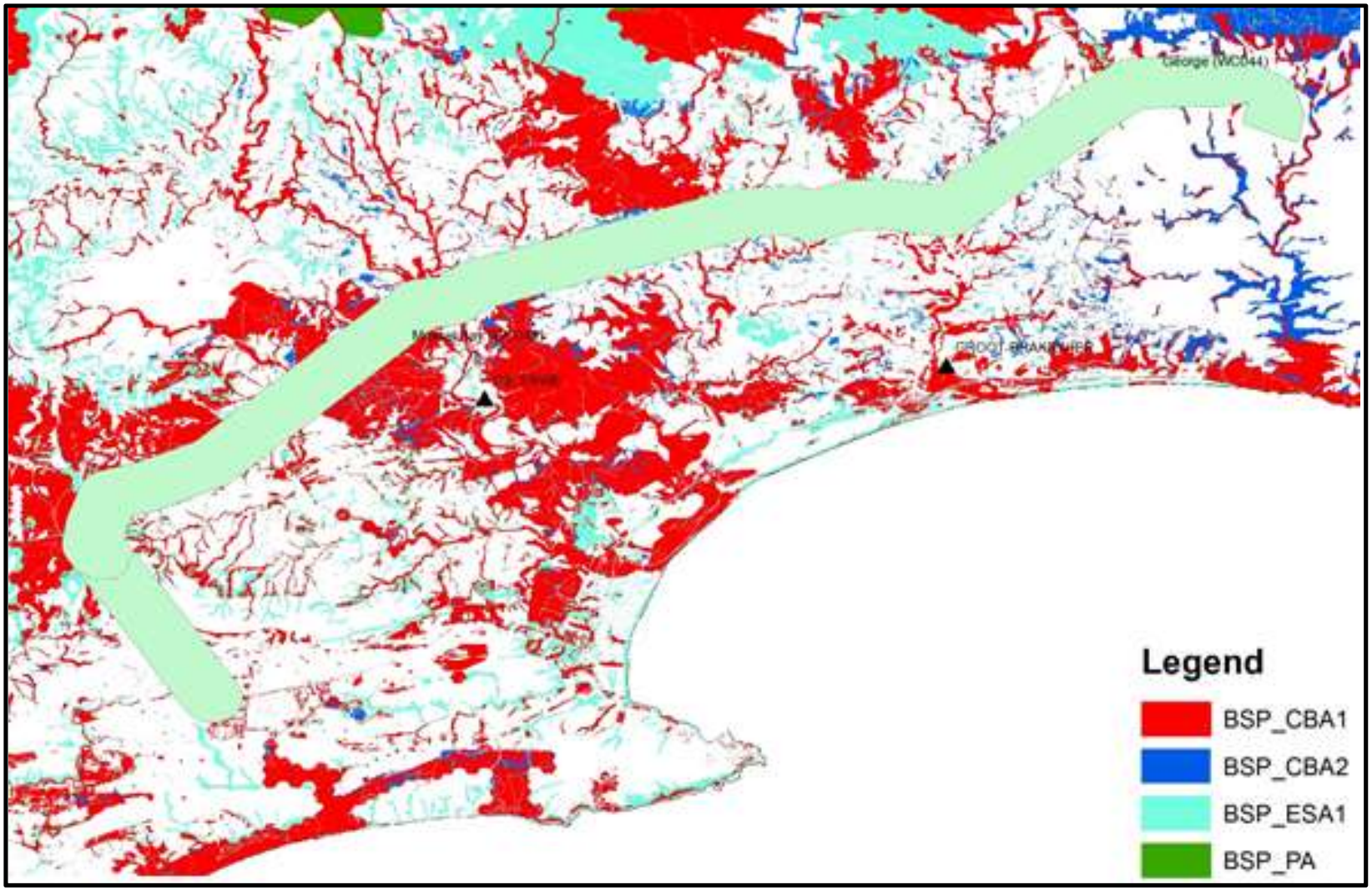

Figure 4.4: Alternative 1 in relation to the WCBSP – listed CBAs, ECAs & Protected areas (WCBSP 2017)

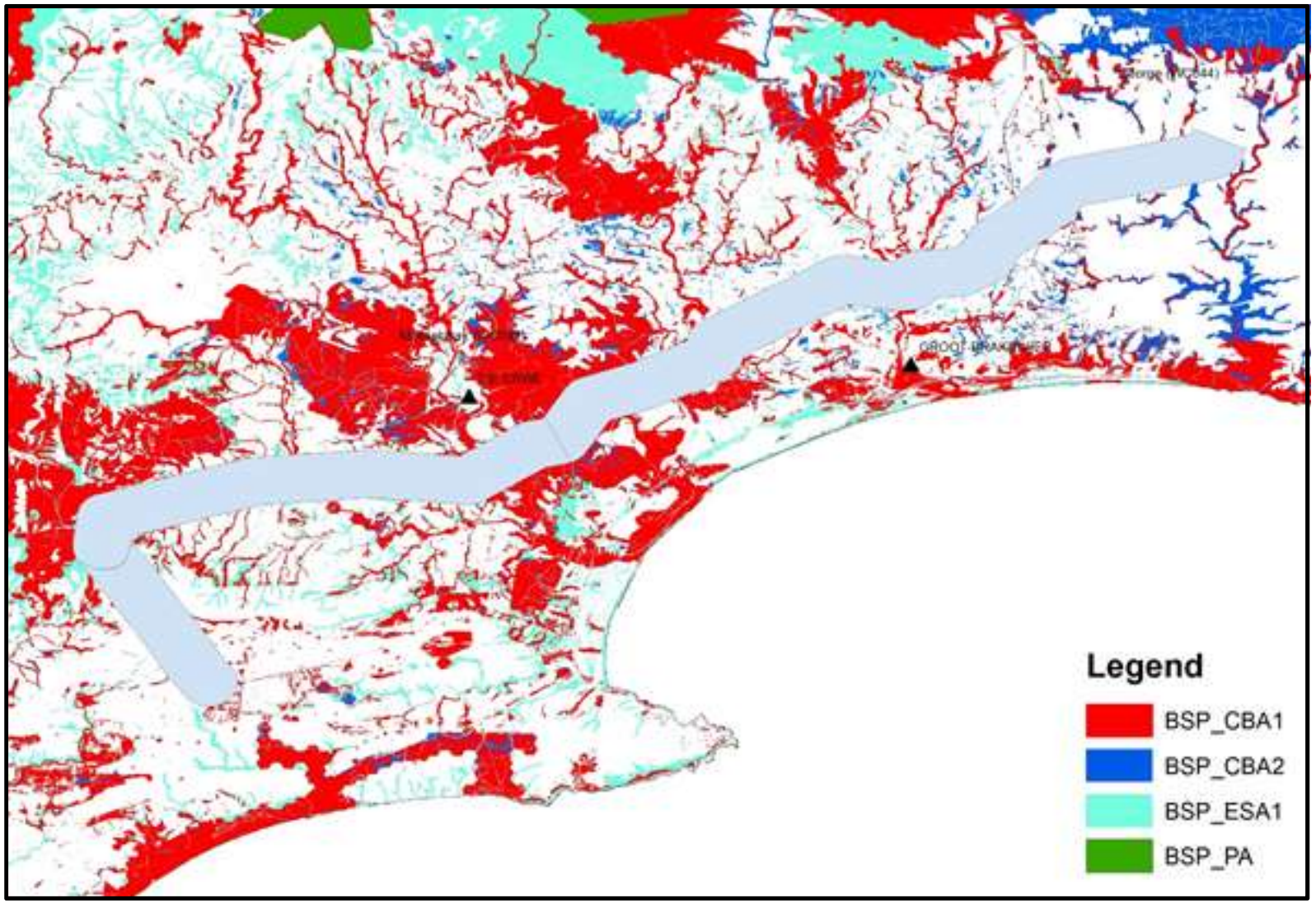

Figure 4.5: Alternative 2 in relation to the WCBSP – listed CBAs, ECAs & Protected areas (WCBSP 2017)

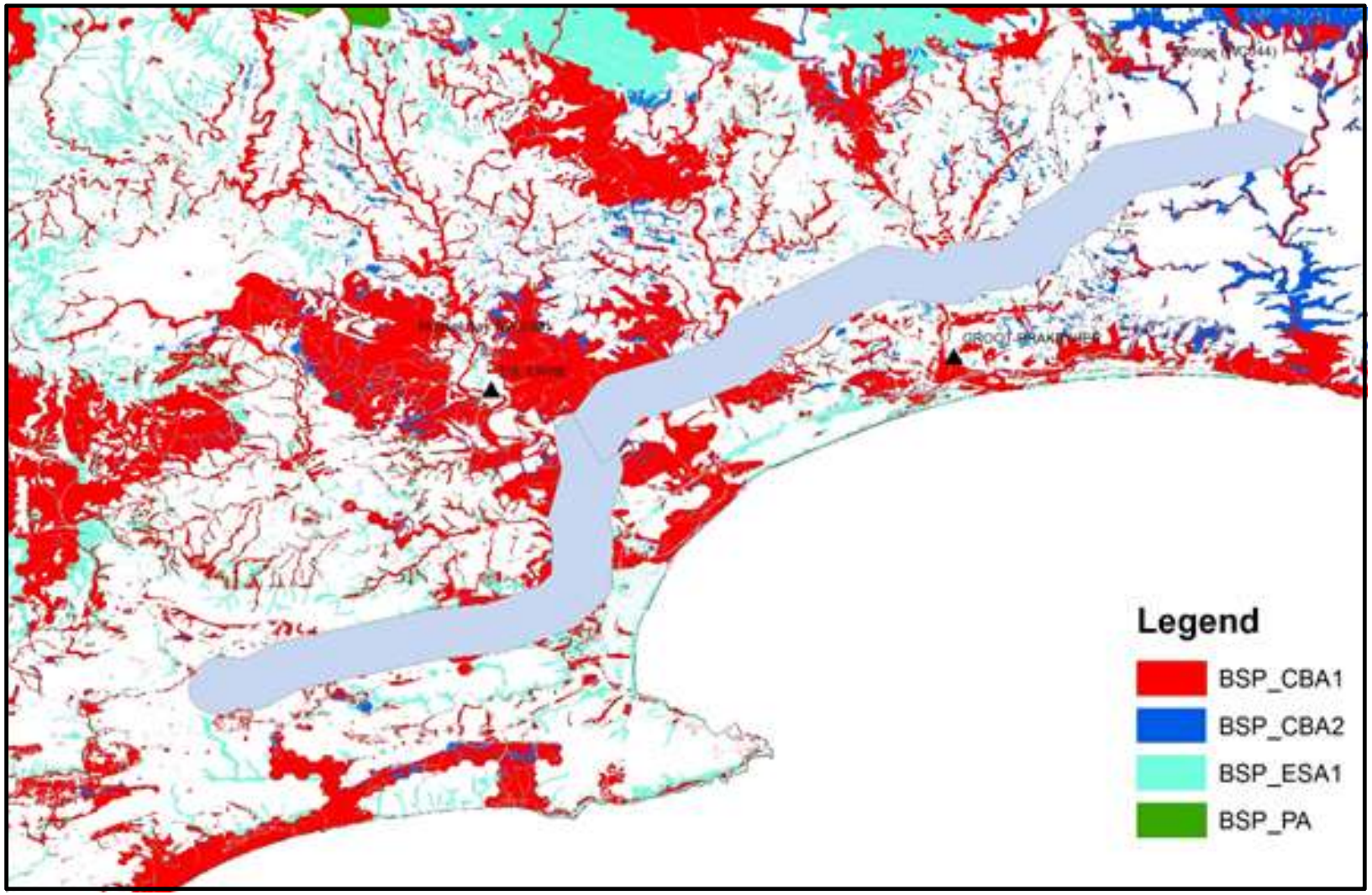

Figure 4.6: Alternative 3 in relation to the WCBSP – listed CBAs, ECAs & Protected areas (WCBSP 2017)

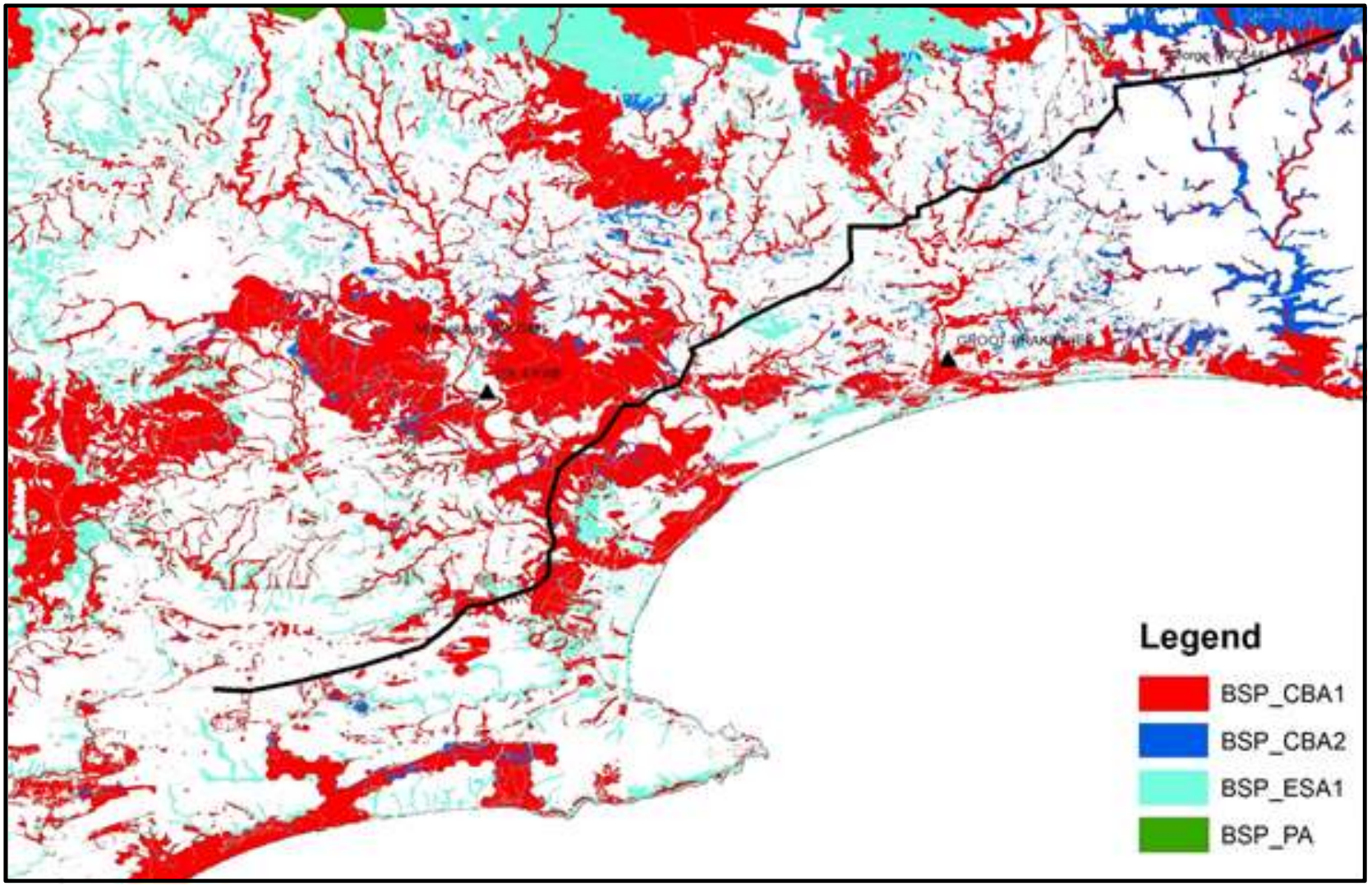

Figure 4.7: Alternative 4 in relation to the WCBSP – listed CBAs, ECAs & Protected areas (WCBSP 2017)

Along some of these route alternative there are existing power lines. These existing powerline corridors already cut through the protected areas and Critical Biodiversity Areas (CBAs). In terms of the impacts on the plants and vegetation types which could be affected by the proposed power line all the alternative routes will have relatively similar impacts, namely disturbance of natural vegetation (trampling, road construction, bush clearing), creation of disturbed habitats which will be susceptible for alien species invasion.

The first third of Alternatives 1 and 2 goes through larger patches of natural vegetation. These patches are classified as Critical Biodiversity areas (CBa1 & CBA2)(Fig 4.4 & 4.5). There is also parts of these CBA areas which are protected areas (private nature reserves). Alternative 3 and 4 are missing large parts of the mapped CBAs. Alternative 4 is going over the largest percentage of transformed land meaning that this alternative has to lowest impact upon natural vegetation. The only large CBA area affected by Alternative 4 is in the region of Bottelierskop nature reserve.

Mitigation measures:

a) There should be a preconstruction walk-through of the development footprint/project site in order to assess the pylon footprint areas for red Data species as well as sensitive ecosystems such as streams, wetlands, etc.
b) A search and rescue exercise must take place before construction commences. This is
c) The construction site at each pylon position must be clearly demarcated and properly protected from accidental destruction.
d) Bush clearing must be kept to the minimum. This is to minimise the destruction of the rare shrubs and other plants.

5. SITE ASSESSMENT OF IMPACTS

5.1 Overview of the most significant effects of the proposed development

Possible impacts of the proposed prospecting activities

a) Impacts on vegetation and protected plant species

This power line development will have a high impact on the vegetation at the pylon sites because of the destruction of plants present.

- **Construction phase**

  The vegetation of sections of the powerline routes are in a degraded state while the rocky outcrops and steep-sloped areas are in a pristine condition. Construction will impact the vegetation along the powerline route (destruction of the vegetation at pylon positions, access roads and bush clearing).

The proposed development will lead to a direct loss of vegetation.

Consequences of the impact occurring may include:

- general loss of habitat for plant and animal species;
- general reduction in biodiversity;
- disturbance to processes maintaining biodiversity and ecosystem goods and services; and
- loss of ecosystem goods and services: Loss of connectivity and habitat fragmentation happened already because it is a transformed area situated under the existing power lines (construction scars, access roads and bush clearing)
- erosion risk may result due to the loss of plant cover and soil disturbance created during the construction phase especially win areas where the vegetation cover is already sparse;
- bush clearing will also destroy the trees and shrubs under power line. This could cause:
  - habitat destruction,
  - change in species composition and
  - could create potential for alien invasive species to establish on disturbed areas.
- The prevention of fire by cutting the shrubs and trees can potentially eliminate *Protea, Leucodendron, Erica, Brunia* and other shrub species from the power line corridor. Fynbos species are fire dependent and requires fire to stimulate seed germination and vigor of fynbos vegetation. Fire suppression actions in the long run could cause species composition change in the close proximity of the power line;
- Major factors contributing to an invasion by alien invader plants include habitat disturbance and associated destruction of indigenous vegetation. Consequences of this may include:
  - further loss and displacement of indigenous vegetation;
  - change in vegetation structure leading to change in various habitat characteristics;
  - change in plant species composition;

- change in soil chemistry properties;
- loss of sensitive habitats;
- loss or disturbance to individuals of rare, endangered, endemic and/or protected species;
- fragmentation of sensitive habitats;
- change in flammability of vegetation, depending on alien species;
- hydrological impacts due to increased transpiration and runoff; and
- impairment of wetland function.

- **Operational phase**

The regular inspection and maintenance of the power line required that the access road along the round must be kept open. The bush clearing activities would also have an impact upon the biodiversity of the fynbos, riparian vegetation and renosterveld vegetation. Maintenance activities may include:

- bush clearing will also destroy the trees and shrubs under power line. This could cause:
  - habitat destruction,
  - change in species composition and
  - could create potential for alien invasive species to establish on disturbed areas.
- The prevention of fire by cutting the shrubs and trees can potentially eliminate *Protea, Leucodendron, Erica, Brunia* and other shrub species from the power line corridor. Fynbos species are fire dependent and requires fire to stimulate seed germination and vigor of fynbos vegetation. Fire suppression actions in the long run could cause species composition change in the proximity of the power line;

- **De-commissioning phase**

The demolishing of the powerline could create disturbed areas and erosion and dust pollution may occur.

- Regular monitoring of these disturbed areas must take place to ensure successful rehabilitation.

- **Cumulative impacts**

As the power line development is proposed to be located along some existing power lines it can be expected that wider areas will be cleared to prevent fires;

- The prevention of fire by cutting the shrubs and trees can potentially eliminate *Protea, Leucodendron, Erica, Brunia* and other shrub species from the power line corridor. Fynbos species are fire dependent and requires fire to stimulate seed germination and vigor of fynbos vegetation. Fire suppression actions in the long run could cause species composition change in the proximity of the power line;

6. MITIGATION AND MANAGEMENT MEASURES

6.1 Impacts of the proposed power line construction activities, access roads and associated infrastructure

Table 6.1: List of impacts and mitigation measures

ALTERNATIVE 1

1. Activity: Construction and operation of power line in Critical Biodiversity Areas (CBAs), Ecological support areas (ESAs) and protected areas (PAs)		
Environmental Aspect: Removal of / or excessive damage to vegetation in CBAs, ESAs and Protected Areas.		
Environmental impact: CBAs & ESAs are sensitive areas which support ecosystems and unique habitats. The loss of vegetation and/or species of conservation concern, loss of and alteration of microhabitats, altered vegetation cover, site-specific altered distribution of rainfall and resultant runoff patterns, general increase in runoff from hard surfaces and/or bare areas and associated accelerated erosion, reduction of habitat and resource availability for terrestrial fauna, possible increase of detrimental effects during periods of extreme weather events, e.g. increased flooding, severe erosion or dust due to lower buffering capacity of sparser vegetation		
	Without mitigation	**With mitigation**
Extent (E)	Local (2)	Local (1)
Duration (D)	Long-term (5)	Long-term (3)
Magnitude (M)	Moderate (8)	Low (4)
Probability (P)	Definite (5)	Definite (5)
Significance (S = E+D+M)*P	**High (75)**	**Medium (40)**
Status (positive, neutral or negative)	Positive	Positive
Reversibility	Non-reversible	Non-reversible
Irreplaceable loss of resources?	Highly Probable	Highly Probability
Can impacts be mitigated?	Reasonably	
Mitigation: • After the final layout has been approved, conduct a thorough footprint investigation to detect and map (by GPS) any protected plant species and active animal burrows. • Protected plant species must be relocated if possible. • Animal burrows must be monitored by the ECO prior to construction for activity/presence of animal species. If detected, such animals must be removed and relocated by a qualified professional/contractor. • Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated footprint area. • Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMPr, if possible.		

- Remove all invasive vegetation before and after construction and continuously up to decommissioning.
- If filling material is to be used, this should be sourced from areas free of invasive species.
- Topsoil (the upper 25 cm of soil) is an important natural resource; where it must be stripped, never mix it with subsoil or any other material, store and protect it separately until it can be re-applied, minimise the handling of topsoil.
- Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan.
- Monitor the area regularly after larger rainfall events to determine where erosion may be initiated and then mitigate by modifying the soil micro-topography and revegetation or soil erosion control efforts accordingly.
- Prevent leakage of oil or other chemicals, and strictly prohibit littering of any kind.
- Monitor the establishment of all invasive species and remove as soon as detected, whenever possible before regenerative material can be formed

Cumulative impacts:

If mitigation measures are not strictly followed the following could occur:

- erosion of areas and continued erosion of the development area with associated siltation and/or erosion of lower-lying wetlands located outside of the project site.
- contamination of drainage lines, lower-lying rivers or wetlands located outside of the project site.
- alteration of occupancy by terrestrial fauna beyond the project site, possible reduction of available habitat and food availability to terrestrial fauna.
- spread and establishment of invasive species.

Residual impacts:

- Altered topsoil characteristics.
- Altered vegetation composition.

2. Activity: Construction and operation of power line

Environmental Aspect: Removal of / or excessive damage to vegetation, compaction of topsoil, creation of runoff zone, redistribution and concentration of runoff from surfaces, displacement of terrestrial vertebrates, reduced buffering capacities of the landscapes during extreme weather events.

Environmental impact: Loss of vegetation and/or species of conservation concern, loss of and alteration of microhabitats, altered vegetation cover, site-specific altered distribution of rainfall and resultant runoff patterns, general increase in runoff from hard surfaces and/or bare areas and associated accelerated erosion, reduction of habitat and resource availability for terrestrial fauna, possible increase of detrimental effects during periods of extreme weather events, e.g. increased flooding, severe erosion or dust due to lower buffering capacity of sparser vegetation

	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (5)	Long-term (5)
Magnitude (M)	Moderate (4)	Low (4)
Probability (P)	Definite (5)	Definite (5)
Significance (S = E+D+M)*P	**Medium (55)**	**Medium (50)**

Status (positive, neutral or negative)	Positive	Positive
Reversibility	Non-reversible	Non-reversible
Irreplaceable loss of resources?	Highly Probable	Highly Probability
Can impacts be mitigated?	Reasonably	

Mitigation:

- After the final layout has been approved, conduct a thorough footprint investigation to detect and map (by GPS) any protected plant species and active animal burrows.
- Protected plant species must be relocated if possible.
- Animal burrows must be monitored by the ECO prior to construction for activity/presence of animal species. If detected, such animals must be removed and relocated by a qualified professional/contractor.
- Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated footprint area.
- Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMPr, if possible.
- Remove all invasive vegetation before and after construction and continuously up to decommissioning.
- If filling material is to be used, this should be sourced from areas free of invasive species.
- Topsoil (the upper 25 cm of soil) is an important natural resource; where it must be stripped, never mix it with subsoil or any other material, store and protect it separately until it can be re-applied, minimise the handling of topsoil.
- Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan.
- Monitor the area regularly after larger rainfall events to determine where erosion may be initiated and then mitigate by modifying the soil micro-topography and revegetation or soil erosion control efforts accordingly.
- Prevent leakage of oil or other chemicals, and strictly prohibit littering of any kind.
- Monitor the establishment of all invasive species and remove as soon as detected, whenever possible before regenerative material can be formed

Cumulative impacts:

If mitigation measures are not strictly followed the following could occur:

- erosion of areas and continued erosion of the development area with associated siltation and/or erosion of lower-lying wetlands located outside of the project site.
- contamination of drainage lines, lower-lying rivers or wetlands located outside of the project site.
- alteration of occupancy by terrestrial fauna beyond the project site, possible reduction of available habitat and food availability to terrestrial fauna.
- spread and establishment of invasive species.

Residual impacts:

- Altered topsoil characteristics.
- Altered vegetation composition.

3. Activity: Transport of materials to site, movement of vehicles on site during construction and operation.

Environmental Aspect: Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.

Environmental impact: Loss of vegetation, increase in runoff and erosion, disturbance or possible mortality incidents of terrestrial fauna, possible contamination of soil and groundwater by oil- or fuel spillages, possible establishment and spread of undesirable weeds and alien invasive species that could further damage ecosystem functionality.

	Without mitigation	**With mitigation**
Extent (E)	Regional (1)	Local (1)
Duration (D)	Long-term (5)	Short term (2)
Magnitude (M)	Moderate (6)	Small (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**High (60)**	**Low (28)**
Status (positive, neutral or negative)	positive	neutral
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	

Mitigation:

- Restrict all movement of vehicles and heavy machinery to permissible areas, these being designated access roads, maintenance roads, turning points and parking areas. No off-road driving beyond designated areas may be allowed.
- Parking areas should be regularly inspected for oil spills and covered with an impermeable or absorbent layer (with the necessary storm water control) if oil and fuel spillages are highly likely to occur.
- Strict speed limits must be set and adhered to.
- Driving between dusk and dawn should be permissible to emergency situations only.
- Prevent spillage of any, oils or other chemicals, strictly prohibit other pollution.
- Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed, destroy all material to prevent re-establishment.

Cumulative impacts:

- Possible pollution of surrounding areas if no mitigation is implemented.
- Compaction of soil
- Contamination of groundwater which is an extremely important source of water supply for the region.
- Possible spread of alien invasive species beyond the site if no mitigation is implemented.

Residual impacts:

- Related to access roads and internal maintenance tracks only.

4. Activity: Impacts on natural vegetation and ecosystems by invasive alien species.

Environmental Aspect: Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.

Environmental impact: : A decline in ecosystem functionality of natural vegetation could be the result of disturbance of the natural vegetation which create opportunities for alien invasive species to invade because of the lack of competition

Direct and Indirect impacts on the se natural ecosystems may include the following:

» Once established the invasion of alien species could spread and put the natural vegetation under pressure
» Alien invasive species could alter the habitat to suit them better than the natural species
» Alien invasives produce high amounts of seed and these seeds could stay for long in the seedbank and when conditions are suitable they will germinated in high numbers
» disturbance to processes maintaining biodiversity and ecosystem goods and services, and;
» a local loss of ecosystem goods and services

	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	medium-term (2)
Magnitude (M)	Moderate (5)	Low (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**Medium (50)**	**Low (28)**
Status (positive, neutral or negative)	positive	positive
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	

Mitigation:

- Do regular monitoring for alien species infestations
- Determine the best practice to eradicate alien species
- Restrict the spread of alien species by eradicate them before they form seed

Cumulative impacts:

- There could be some areas where alien invasives already occur and when the corridor under the conductors are being cleared it could create an ideal habitat for the invaders to spread
- Possible damage to indigenous species by the incorrect use of herbicides.

Residual impacts:

- Herbicide may remain in the soil and prevent the colonization of indigenous species

5. Activity: Impacts on ephemeral streams and drainage lines.

Environmental Aspect: The power line route cross many streams and wetlands. An accociated access road could cause impacts to these streams. Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.

Environmental impact: Loss of vegetation (bush clearing), increase in runoff and erosion, possible contamination of surface and groundwater by oil- or fuel spillages, possible establishment and spread of undesirable weeds and alien invasive species that could further damage ecosystem functionality.		
	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	Medium-term (2)
Magnitude (M)	Moderate (6)	Low (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**Medium (55)**	**Low (28)**
Status (positive, neutral or negative)	positive	positive
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	

Mitigation:

- Restrict all movement of vehicles and heavy machinery to permissible areas, these being designated access roads, maintenance roads, turning points and parking areas. No off-road driving beyond designated areas may be allowed.
- Avoid pylon positions within streams or on stream banks
- Stream crossings must be constructed in such a way that not bank erosion occur.
- Prevent spillage of any, oils or other chemicals, strictly prohibit other pollution.
- Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed, destroy all material to prevent re-establishment.

Cumulative impacts:

- Possible pollution of surrounding areas if no mitigation is implemented.
- Compaction of soil
- Contamination of surface and/or groundwater which is an extremely important source of water supply for the region.
- Possible spread of alien invasive species beyond the site if no mitigation is implemented.

Residual impacts:

- Related to access roads and internal maintenance tracks only.

Assessment of Cumulative Impacts

1. Nature: Reduced ability to meet conservation targets
Environmental Aspect: Reduced ability to meet conservation targets of the province
Environmental impact: The loss of unprotected vegetation types on a cumulative basis from the broad area may impact the countries' ability to meet its conservation targets. The area is not included within a National Protected Areas Expansion Strategy focus area, and falls outside any threatened and or endangered ecosystem type / vegetation type. Although the vegetation type in the study area are classified as Least Threatened, it is poorly protected and certain habitats or communities may be subsequently affected.

	Overall impact of the proposed project considered in isolation	Cumulative Impact of the project and other projects in the area
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	Long-term (4)
Magnitude (M)	Medium (5)	Low (5)
Probability (P)	Probable (3)	Probable (3)
Significance (S = E+D+M)*P	**Low (30)**	**Low (30)**
Status (positive, neutral or negative)	Negative	Negative
Reversibility	Partially reversible	Low reversibility
Irreplaceable loss of resources?	Not Likely	Probable
Confidence in finding	High	
Mitigation: • Implementation of the required mitigation measures for all developments within the area. • Preconstruction walk-through to ensure that sensitive habitats are avoided. • Minimise the development footprint as far as possible.		

ALTERNATIVE 2

1. Activity: Construction and operation of power line in Critical Biodiversity Areas (CBAs), Ecological support areas (ESAs) and protected areas (PAs)		
Environmental Aspect: Removal of / or excessive damage to vegetation in CBAs, ESAs and Protected Areas.		
Environmental impact: CBAs & ESAs are sensitive areas which support ecosystems and unique habitats. The loss of vegetation and/or species of conservation concern, loss of and alteration of microhabitats, altered vegetation cover, site-specific altered distribution of rainfall and resultant runoff patterns, general increase in runoff from hard surfaces and/or bare areas and associated accelerated erosion, reduction of habitat and resource availability for terrestrial fauna, possible increase of detrimental effects during periods of extreme weather events, e.g. increased flooding, severe erosion or dust due to lower buffering capacity of sparser vegetation		
	Without mitigation	**With mitigation**
Extent (E)	Local (2)	Local (1)
Duration (D)	Long-term (5)	Long-term (3)
Magnitude (M)	Moderate (7)	Low (4)
Probability (P)	Definite (5)	Definite (5)
Significance (S = E+D+M)*P	**High (70)**	**Medium (40)**
Status (positive, neutral or negative)	Positive	Positive

Reversibility	Non-reversible	Non-reversible
Irreplaceable loss of resources?	Highly Probable	Highly Probability
Can impacts be mitigated?	Reasonably	

Mitigation:

- After the final layout has been approved, conduct a thorough footprint investigation to detect and map (by GPS) any protected plant species and active animal burrows.
- Protected plant species must be relocated if possible.
- Animal burrows must be monitored by the ECO prior to construction for activity/presence of animal species. If detected, such animals must be removed and relocated by a qualified professional/contractor.
- Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated footprint area.
- Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMPr, if possible.
- Remove all invasive vegetation before and after construction and continuously up to decommissioning.
- If filling material is to be used, this should be sourced from areas free of invasive species.
- Topsoil (the upper 25 cm of soil) is an important natural resource; where it must be stripped, never mix it with subsoil or any other material, store and protect it separately until it can be re-applied, minimise the handling of topsoil.
- Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan.
- Monitor the area regularly after larger rainfall events to determine where erosion may be initiated and then mitigate by modifying the soil micro-topography and revegetation or soil erosion control efforts accordingly.
- Prevent leakage of oil or other chemicals, and strictly prohibit littering of any kind.
- Monitor the establishment of all invasive species and remove as soon as detected, whenever possible before regenerative material can be formed

Cumulative impacts:

If mitigation measures are not strictly followed the following could occur:

- erosion of areas and continued erosion of the development area with associated siltation and/or erosion of lower-lying wetlands located outside of the project site.
- contamination of drainage lines, lower-lying rivers or wetlands located outside of the project site.
- alteration of occupancy by terrestrial fauna beyond the project site, possible reduction of available habitat and food availability to terrestrial fauna.
- spread and establishment of invasive species.

Residual impacts:

- Altered topsoil characteristics.
- Altered vegetation composition.

2. Activity: Construction and operation of power line

Environmental Aspect: Removal of / or excessive damage to vegetation, compaction of topsoil, creation of runoff zone, redistribution and concentration of runoff from surfaces, displacement of terrestrial vertebrates, reduced buffering capacities of the landscapes during extreme weather events.

Environmental impact: Loss of vegetation and/or species of conservation concern, loss of and alteration of microhabitats, altered vegetation cover, site-specific altered distribution of rainfall and resultant runoff patterns, general increase in runoff from hard surfaces and/or bare areas and associated accelerated erosion, reduction of habitat and resource availability for terrestrial fauna, possible increase of detrimental effects during periods of extreme weather events, e.g. increased flooding, severe erosion or dust due to lower buffering capacity of sparser vegetation

	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (5)	Long-term (5)
Magnitude (M)	Moderate (4)	Low (4)
Probability (P)	Definite (5)	Definite (5)
Significance (S = E+D+M)*P	**Medium (55)**	**Medium (50)**
Status (positive, neutral or negative)	Positive	Positive
Reversibility	Non-reversible	Non-reversible
Irreplaceable loss of resources?	Highly Probable	Highly Probability
Can impacts be mitigated?	Reasonably	

Mitigation:

- After the final layout has been approved, conduct a thorough footprint investigation to detect and map (by GPS) any protected plant species and active animal burrows.
- Protected plant species must be relocated if possible.
- Animal burrows must be monitored by the ECO prior to construction for activity/presence of animal species. If detected, such animals must be removed and relocated by a qualified professional/contractor.
- Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated footprint area.
- Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMPr, if possible.
- Remove all invasive vegetation before and after construction and continuously up to decommissioning.
- If filling material is to be used, this should be sourced from areas free of invasive species.
- Topsoil (the upper 25 cm of soil) is an important natural resource; where it must be stripped, never mix it with subsoil or any other material, store and protect it separately until it can be re-applied, minimise the handling of topsoil.
- Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan.
- Monitor the area regularly after larger rainfall events to determine where erosion may be initiated and then mitigate by modifying the soil micro-topography and revegetation or soil erosion control efforts accordingly.
- Prevent leakage of oil or other chemicals, and strictly prohibit littering of any kind.
- Monitor the establishment of all invasive species and remove as soon as detected, whenever possible before regenerative material can be formed

Cumulative impacts:

If mitigation measures are not strictly followed the following could occur:

- erosion of areas and continued erosion of the development area with associated siltation and/or erosion of lower-lying wetlands located outside of the project site.
- contamination of drainage lines, lower-lying rivers or wetlands located outside of the project site.
- alteration of occupancy by terrestrial fauna beyond the project site, possible reduction of available habitat and food availability to terrestrial fauna.
- spread and establishment of invasive species.

Residual impacts:

- Altered topsoil characteristics.
- Altered vegetation composition.

3. Activity: Transport of materials to site, movement of vehicles on site during construction and operation.

Environmental Aspect: Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.

Environmental impact: Loss of vegetation, increase in runoff and erosion, disturbance or possible mortality incidents of terrestrial fauna, possible contamination of soil and groundwater by oil- or fuel spillages, possible establishment and spread of undesirable weeds and alien invasive species that could further damage ecosystem functionality.

	Without mitigation	**With mitigation**
Extent (E)	Regional (1)	Local (1)
Duration (D)	Long-term (5)	Short term (2)
Magnitude (M)	Moderate (6)	Small (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**High (60)**	**Low (28)**
Status (positive, neutral or negative)	positive	neutral
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	

Mitigation:

- Restrict all movement of vehicles and heavy machinery to permissible areas, these being designated access roads, maintenance roads, turning points and parking areas. No off-road driving beyond designated areas may be allowed.
- Parking areas should be regularly inspected for oil spills and covered with an impermeable or absorbent layer (with the necessary storm water control) if oil and fuel spillages are highly likely to occur.
- Strict speed limits must be set and adhered to.
- Driving between dusk and dawn should be permissible to emergency situations only.
- Prevent spillage of any, oils or other chemicals, strictly prohibit other pollution.

- Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed, destroy all material to prevent re-establishment.

Cumulative impacts:

- Possible pollution of surrounding areas if no mitigation is implemented.
- Compaction of soil
- Contamination of groundwater which is an extremely important source of water supply for the region.
- Possible spread of alien invasive species beyond the site if no mitigation is implemented.

Residual impacts:

- Related to access roads and internal maintenance tracks only.

4. Activity: Impacts on natural vegetation and ecosystems by invasive alien species.

Environmental Aspect: Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.

Environmental impact: : A decline in ecosystem functionality of natural vegetation could be the result of disturbance of the natural vegetation which create opportunities for alien invasive species to invade because of the lack of competition

Direct and Indirect impacts on the se natural ecosystems may include the following:

» Once established the invasion of alien species could spread and put the natural vegetation under pressure

» Alien invasive species could alter the habitat to suit them better than the natural species

» Alien invasives produce high amounts of seed and these seeds could stay for long in the seedbank and when conditions are suitable they will germinated in high numbers

» disturbance to processes maintaining biodiversity and ecosystem goods and services, and;

» a local loss of ecosystem goods and services

	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	medium-term (2)
Magnitude (M)	Moderate (5)	Low (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**Medium (50)**	**Low (28)**
Status (positive, neutral or negative)	positive	positive
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	

Mitigation:

- Do regular monitoring for alien species infestations
- Determine the best practice to eradicate alien species
- Restrict the spread of alien species by eradicate them before they form seed

Cumulative impacts:

- There could be some areas where alien invasives already occur and when the corridor under the conductors are being cleared it could create an ideal habitat for the invaders to spread
- Possible damage to indigenous species by the incorrect use of herbicides.

Residual impacts:

- Herbicide may remain in the soil and prevent the colonization of indigenous species

5. Activity: Impacts on ephemeral streams and drainage lines.

Environmental Aspect: The power line route cross many streams and wetlands. An accociated access road could cause impacts to these streams. Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.

Environmental impact: Loss of vegetation (bush clearing), increase in runoff and erosion, possible contamination of surface and groundwater by oil- or fuel spillages, possible establishment and spread of undesirable weeds and alien invasive species that could further damage ecosystem functionality.

	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	Medium-term (2)
Magnitude (M)	Moderate (6)	Low (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**Medium (55)**	**Low (28)**
Status (positive, neutral or negative)	positive	positive
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	

Mitigation:

- Restrict all movement of vehicles and heavy machinery to permissible areas, these being designated access roads, maintenance roads, turning points and parking areas. No off-road driving beyond designated areas may be allowed.
- Avoid pylon positions within streams or on stream banks
- Stream crossings must be constructed in such a way that not bank erosion occur.
- Prevent spillage of any, oils or other chemicals, strictly prohibit other pollution.
- Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed, destroy all material to prevent re-establishment.

Cumulative impacts:

- Possible pollution of surrounding areas if no mitigation is implemented.
- Compaction of soil
- Contamination of surface and/or groundwater which is an extremely important source of water supply for the region.
- Possible spread of alien invasive species beyond the site if no mitigation is implemented.

Residual impacts: • Related to access roads and internal maintenance tracks only.

Assessment of Cumulative Impacts

1. Nature: Reduced ability to meet conservation targets		
Environmental Aspect: Reduced ability to meet conservation targets of the province		
Environmental impact: The loss of unprotected vegetation types on a cumulative basis from the broad area may impact the countries' ability to meet its conservation targets. The area is not included within a National Protected Areas Expansion Strategy focus area, and falls outside any threatened and or endangered ecosystem type / vegetation type. Although the vegetation type in the study area are classified as Least Threatened, it is poorly protected and certain habitats or communities may be subsequently affected.		
	Overall impact of the proposed project considered in isolation	**Cumulative Impact of the project and other projects in the area**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	Long-term (4)
Magnitude (M)	Medium (5)	Low (5)
Probability (P)	Probable (3)	Probable (3)
Significance (S = E+D+M)*P	**Low (30)**	**Low (30)**
Status (positive, neutral or negative)	Negative	Negative
Reversibility	Partially reversible	Low reversibility
Irreplaceable loss of resources?	Not Likely	Probable
Confidence in finding	High	
Mitigation: • Implementation of the required mitigation measures for all developments within the area. • Preconstruction walk-through to ensure that sensitive habitats are avoided. • Minimise the development footprint as far as possible.		

ALTERNATIVE 3

1. Activity: Construction and operation of power line in Critical Biodiversity Areas (CBAs), Ecological support areas (ESAs) and protected areas (PAs)
Environmental Aspect: Removal of / or excessive damage to vegetation in CBAs, ESAs and Protected Areas.
Environmental impact: CBAs & ESAs are sensitive areas which support ecosystems and unique habitats. The loss of vegetation and/or species of conservation concern, loss of and alteration of microhabitats, altered vegetation cover, site-specific altered distribution of rainfall and resultant runoff patterns, general increase in runoff from hard surfaces and/or bare areas and associated accelerated erosion, reduction of habitat and resource availability for terrestrial fauna, possible increase of detrimental

effects during periods of extreme weather events, e.g. increased flooding, severe erosion or dust due to lower buffering capacity of sparser vegetation

	Without mitigation	**With mitigation**
Extent (E)	Local (2)	Local (1)
Duration (D)	Long-term (5)	Long-term (3)
Magnitude (M)	Moderate (6)	Low (4)
Probability (P)	Definite (5)	Definite (5)
Significance (S = E+D+M)*P	**High (65)**	**Medium (40)**
Status (positive, neutral or negative)	Positive	Positive
Reversibility	Non-reversible	Non-reversible
Irreplaceable loss of resources?	Highly Probable	Highly Probability
Can impacts be mitigated?	Reasonably	

Mitigation:

- After the final layout has been approved, conduct a thorough footprint investigation to detect and map (by GPS) any protected plant species and active animal burrows.
- Protected plant species must be relocated if possible.
- Animal burrows must be monitored by the ECO prior to construction for activity/presence of animal species. If detected, such animals must be removed and relocated by a qualified professional/contractor.
- Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated footprint area.
- Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMPr, if possible.
- Remove all invasive vegetation before and after construction and continuously up to decommissioning.
- If filling material is to be used, this should be sourced from areas free of invasive species.
- Topsoil (the upper 25 cm of soil) is an important natural resource; where it must be stripped, never mix it with subsoil or any other material, store and protect it separately until it can be re-applied, minimise the handling of topsoil.
- Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan.
- Monitor the area regularly after larger rainfall events to determine where erosion may be initiated and then mitigate by modifying the soil micro-topography and revegetation or soil erosion control efforts accordingly.
- Prevent leakage of oil or other chemicals, and strictly prohibit littering of any kind.
- Monitor the establishment of all invasive species and remove as soon as detected, whenever possible before regenerative material can be formed

Cumulative impacts:

If mitigation measures are not strictly followed the following could occur:

- erosion of areas and continued erosion of the development area with associated siltation and/or erosion of lower-lying wetlands located outside of the project site.

- contamination of drainage lines, lower-lying rivers or wetlands located outside of the project site.
- alteration of occupancy by terrestrial fauna beyond the project site, possible reduction of available habitat and food availability to terrestrial fauna.
- spread and establishment of invasive species.

Residual impacts:

- Altered topsoil characteristics.
- Altered vegetation composition.

2. Activity: Construction and operation of power line

Environmental Aspect: Removal of / or excessive damage to vegetation, compaction of topsoil, creation of runoff zone, redistribution and concentration of runoff from surfaces, displacement of terrestrial vertebrates, reduced buffering capacities of the landscapes during extreme weather events.

Environmental impact: Loss of vegetation and/or species of conservation concern, loss of and alteration of microhabitats, altered vegetation cover, site-specific altered distribution of rainfall and resultant runoff patterns, general increase in runoff from hard surfaces and/or bare areas and associated accelerated erosion, reduction of habitat and resource availability for terrestrial fauna, possible increase of detrimental effects during periods of extreme weather events, e.g. increased flooding, severe erosion or dust due to lower buffering capacity of sparser vegetation

	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (5)	Long-term (5)
Magnitude (M)	Moderate (4)	Low (4)
Probability (P)	Definite (5)	Definite (5)
Significance (S = E+D+M)*P	**Medium (55)**	**Medium (50)**
Status (positive, neutral or negative)	Positive	Positive
Reversibility	Non-reversible	Non-reversible
Irreplaceable loss of resources?	Highly Probable	Highly Probability
Can impacts be mitigated?	Reasonably	

Mitigation:

- After the final layout has been approved, conduct a thorough footprint investigation to detect and map (by GPS) any protected plant species and active animal burrows.
- Protected plant species must be relocated if possible.
- Animal burrows must be monitored by the ECO prior to construction for activity/presence of animal species. If detected, such animals must be removed and relocated by a qualified professional/contractor.
- Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated footprint area.
- Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMPr, if possible.

- Remove all invasive vegetation before and after construction and continuously up to decommissioning.
- If filling material is to be used, this should be sourced from areas free of invasive species.
- Topsoil (the upper 25 cm of soil) is an important natural resource; where it must be stripped, never mix it with subsoil or any other material, store and protect it separately until it can be re-applied, minimise the handling of topsoil.
- Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan.
- Monitor the area regularly after larger rainfall events to determine where erosion may be initiated and then mitigate by modifying the soil micro-topography and revegetation or soil erosion control efforts accordingly.
- Prevent leakage of oil or other chemicals, and strictly prohibit littering of any kind.
- Monitor the establishment of all invasive species and remove as soon as detected, whenever possible before regenerative material can be formed

Cumulative impacts:

If mitigation measures are not strictly followed the following could occur:

- erosion of areas and continued erosion of the development area with associated siltation and/or erosion of lower-lying wetlands located outside of the project site.
- contamination of drainage lines, lower-lying rivers or wetlands located outside of the project site.
- alteration of occupancy by terrestrial fauna beyond the project site, possible reduction of available habitat and food availability to terrestrial fauna.
- spread and establishment of invasive species.

Residual impacts:

- Altered topsoil characteristics.
- Altered vegetation composition.

3. Activity: Transport of materials to site, movement of vehicles on site during construction and operation.

Environmental Aspect: Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.

Environmental impact: Loss of vegetation, increase in runoff and erosion, disturbance or possible mortality incidents of terrestrial fauna, possible contamination of soil and groundwater by oil- or fuel spillages, possible establishment and spread of undesirable weeds and alien invasive species that could further damage ecosystem functionality.

	Without mitigation	**With mitigation**
Extent (E)	Regional (1)	Local (1)
Duration (D)	Long-term (5)	Short term (2)
Magnitude (M)	Moderate (6)	Small (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**High (60)**	**Low (28)**
Status (positive, neutral or negative)	positive	neutral
Reversibility	Partially reversible	Reversible

Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	

Mitigation:

- Restrict all movement of vehicles and heavy machinery to permissible areas, these being designated access roads, maintenance roads, turning points and parking areas. No off-road driving beyond designated areas may be allowed.
- Parking areas should be regularly inspected for oil spills and covered with an impermeable or absorbent layer (with the necessary storm water control) if oil and fuel spillages are highly likely to occur.
- Strict speed limits must be set and adhered to.
- Driving between dusk and dawn should be permissible to emergency situations only.
- Prevent spillage of any, oils or other chemicals, strictly prohibit other pollution.
- Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed, destroy all material to prevent re-establishment.

Cumulative impacts:

- Possible pollution of surrounding areas if no mitigation is implemented.
- Compaction of soil
- Contamination of groundwater which is an extremely important source of water supply for the region.
- Possible spread of alien invasive species beyond the site if no mitigation is implemented.

Residual impacts:

- Related to access roads and internal maintenance tracks only.

4. Activity: Impacts on natural vegetation and ecosystems by invasive alien species.

Environmental Aspect: Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.

Environmental impact: : A decline in ecosystem functionality of natural vegetation could be the result of disturbance of the natural vegetation which create opportunities for alien invasive species to invade because of the lack of competition

Direct and Indirect impacts on the se natural ecosystems may include the following:

» Once established the invasion of alien species could spread and put the natural vegetation under pressure
» Alien invasive species could alter the habitat to suit them better than the natural species
» Alien invasives produce high amounts of seed and these seeds could stay for long in the seedbank and when conditions are suitable they will germinated in high numbers
» disturbance to processes maintaining biodiversity and ecosystem goods and services, and;
» a local loss of ecosystem goods and services

	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	medium-term (2)
Magnitude (M)	Moderate (5)	Low (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**Medium (50)**	**Low (28)**

Status (positive, neutral or negative)	positive	positive
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	
Mitigation: • Do regular monitoring for alien species infestations • Determine the best practice to eradicate alien species • Restrict the spread of alien species by eradicate them before they form seed		
Cumulative impacts: • There could be some areas where alien invasives already occur and when the corridor under the conductors are being cleared it could create an ideal habitat for the invaders to spread • Possible damage to indigenous species by the incorrect use of herbicides.		
Residual impacts: • Herbicide may remain in the soil and prevent the colonization of indigenous species		

5. Activity: Impacts on ephemeral streams and drainage lines.		
Environmental Aspect: The power line route cross many streams and wetlands. An accociated access road could cause impacts to these streams. Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.		
Environmental impact: Loss of vegetation (bush clearing), increase in runoff and erosion, possible contamination of surface and groundwater by oil- or fuel spillages, possible establishment and spread of undesirable weeds and alien invasive species that could further damage ecosystem functionality.		
	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	Medium-term (2)
Magnitude (M)	Moderate (6)	Low (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**Medium (55)**	**Low (28)**
Status (positive, neutral or negative)	positive	positive
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	
Mitigation:		

- Restrict all movement of vehicles and heavy machinery to permissible areas, these being designated access roads, maintenance roads, turning points and parking areas. No off-road driving beyond designated areas may be allowed.
- Avoid pylon positions within streams or on stream banks
- Stream crossings must be constructed in such a way that not bank erosion occur.
- Prevent spillage of any, oils or other chemicals, strictly prohibit other pollution.
- Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed, destroy all material to prevent re-establishment.

Cumulative impacts:

- Possible pollution of surrounding areas if no mitigation is implemented.
- Compaction of soil
- Contamination of surface and/or groundwater which is an extremely important source of water supply for the region.
- Possible spread of alien invasive species beyond the site if no mitigation is implemented.

Residual impacts:

- Related to access roads and internal maintenance tracks only.

Assessment of Cumulative Impacts

1. Nature: Reduced ability to meet conservation targets

Environmental Aspect: Reduced ability to meet conservation targets of the province

Environmental impact: The loss of unprotected vegetation types on a cumulative basis from the broad area may impact the countries' ability to meet its conservation targets. The area is not included within a National Protected Areas Expansion Strategy focus area, and falls outside any threatened and or endangered ecosystem type / vegetation type. Although the vegetation type in the study area are classified as Least Threatened, it is poorly protected and certain habitats or communities may be subsequently affected.

	Overall impact of the proposed project considered in isolation	**Cumulative Impact of the project and other projects in the area**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	Long-term (4)
Magnitude (M)	Low (4)	Low (4)
Probability (P)	Probable (3)	Probable (3)
Significance (S = E+D+M)*P	**Low (27)**	**Low (27)**
Status (positive, neutral or negative)	Negative	Negative
Reversibility	Partially reversible	Low reversibility
Irreplaceable loss of resources?	Not Likely	Probable
Confidence in finding	High	

Mitigation:

- Implementation of the required mitigation measures for all developments within the area.

- Preconstruction walk-through to ensure that sensitive habitats are avoided.
- Minimise the development footprint as far as possible.

ALTERNATIVE 4

1. Activity: Construction and operation of power line in Critical Biodiversity Areas (CBAs), Ecological support areas (ESAs) and protected areas (PAs)

Environmental Aspect: Removal of / or excessive damage to vegetation in CBAs, ESAs and Protected Areas.

Environmental impact: CBAs & ESAs are sensitive areas which support ecosystems and unique habitats. The loss of vegetation and/or species of conservation concern, loss of and alteration of microhabitats, altered vegetation cover, site-specific altered distribution of rainfall and resultant runoff patterns, general increase in runoff from hard surfaces and/or bare areas and associated accelerated erosion, reduction of habitat and resource availability for terrestrial fauna, possible increase of detrimental effects during periods of extreme weather events, e.g. increased flooding, severe erosion or dust due to lower buffering capacity of sparser vegetation

	Without mitigation	**With mitigation**
Extent (E)	Local (2)	Local (1)
Duration (D)	Long-term (5)	Long-term (3)
Magnitude (M)	Moderate (4)	Low (4)
Probability (P)	Definite (5)	Definite (5)
Significance (S = E+D+M)*P	**Medium (55)**	**Medium (40)**
Status (positive, neutral or negative)	Positive	Positive
Reversibility	Non-reversible	Non-reversible
Irreplaceable loss of resources?	Highly Probable	Highly Probability
Can impacts be mitigated?	Reasonably	

Mitigation:

- After the final layout has been approved, conduct a thorough footprint investigation to detect and map (by GPS) any protected plant species and active animal burrows.
- Protected plant species must be relocated if possible.
- Animal burrows must be monitored by the ECO prior to construction for activity/presence of animal species. If detected, such animals must be removed and relocated by a qualified professional/contractor.
- Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated footprint area.
- Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMPr, if possible.
- Remove all invasive vegetation before and after construction and continuously up to decommissioning.
- If filling material is to be used, this should be sourced from areas free of invasive species.

- Topsoil (the upper 25 cm of soil) is an important natural resource; where it must be stripped, never mix it with subsoil or any other material, store and protect it separately until it can be re-applied, minimise the handling of topsoil.
- Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan.
- Monitor the area regularly after larger rainfall events to determine where erosion may be initiated and then mitigate by modifying the soil micro-topography and revegetation or soil erosion control efforts accordingly.
- Prevent leakage of oil or other chemicals, and strictly prohibit littering of any kind.
- Monitor the establishment of all invasive species and remove as soon as detected, whenever possible before regenerative material can be formed

Cumulative impacts:

If mitigation measures are not strictly followed the following could occur:

- erosion of areas and continued erosion of the development area with associated siltation and/or erosion of lower-lying wetlands located outside of the project site.
- contamination of drainage lines, lower-lying rivers or wetlands located outside of the project site.
- alteration of occupancy by terrestrial fauna beyond the project site, possible reduction of available habitat and food availability to terrestrial fauna.
- spread and establishment of invasive species.

Residual impacts:

- Altered topsoil characteristics.
- Altered vegetation composition.

2. Activity: Construction and operation of power line

Environmental Aspect: Removal of / or excessive damage to vegetation, compaction of topsoil, creation of runoff zone, redistribution and concentration of runoff from surfaces, displacement of terrestrial vertebrates, reduced buffering capacities of the landscapes during extreme weather events.

Environmental impact: Loss of vegetation and/or species of conservation concern, loss of and alteration of microhabitats, altered vegetation cover, site-specific altered distribution of rainfall and resultant runoff patterns, general increase in runoff from hard surfaces and/or bare areas and associated accelerated erosion, reduction of habitat and resource availability for terrestrial fauna, possible increase of detrimental effects during periods of extreme weather events, e.g. increased flooding, severe erosion or dust due to lower buffering capacity of sparser vegetation

	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (5)	Long-term (5)
Magnitude (M)	Moderate (4)	Low (4)
Probability (P)	Definite (5)	Definite (5)
Significance (S = E+D+M)*P	**Medium (55)**	**Medium (50)**
Status (positive, neutral or negative)	Positive	Positive
Reversibility	Non-reversible	Non-reversible

Irreplaceable loss of resources?	Highly Probable	Highly Probability
Can impacts be mitigated?	Reasonably	

Mitigation:

- After the final layout has been approved, conduct a thorough footprint investigation to detect and map (by GPS) any protected plant species and active animal burrows.
- Protected plant species must be relocated if possible.
- Animal burrows must be monitored by the ECO prior to construction for activity/presence of animal species. If detected, such animals must be removed and relocated by a qualified professional/contractor.
- Keep areas affected to a minimum, strictly prohibit any disturbance outside the demarcated footprint area.
- Clear as little indigenous vegetation as possible, aim to maintain vegetation where it will not interfere with the construction or operation of the development, rehabilitate an acceptable vegetation layer according to rehabilitation recommendations of the relevant EMPr, if possible.
- Remove all invasive vegetation before and after construction and continuously up to decommissioning.
- If filling material is to be used, this should be sourced from areas free of invasive species.
- Topsoil (the upper 25 cm of soil) is an important natural resource; where it must be stripped, never mix it with subsoil or any other material, store and protect it separately until it can be re-applied, minimise the handling of topsoil.
- Temporarily stored topsoil must be re-applied within 6 months, topsoil stored for longer need to be managed according to a detailed topsoil management plan.
- Monitor the area regularly after larger rainfall events to determine where erosion may be initiated and then mitigate by modifying the soil micro-topography and revegetation or soil erosion control efforts accordingly.
- Prevent leakage of oil or other chemicals, and strictly prohibit littering of any kind.
- Monitor the establishment of all invasive species and remove as soon as detected, whenever possible before regenerative material can be formed

Cumulative impacts:

If mitigation measures are not strictly followed the following could occur:

- erosion of areas and continued erosion of the development area with associated siltation and/or erosion of lower-lying wetlands located outside of the project site.
- contamination of drainage lines, lower-lying rivers or wetlands located outside of the project site.
- alteration of occupancy by terrestrial fauna beyond the project site, possible reduction of available habitat and food availability to terrestrial fauna.
- spread and establishment of invasive species.

Residual impacts:

- Altered topsoil characteristics.
- Altered vegetation composition.

3. Activity: Transport of materials to site, movement of vehicles on site during construction and operation.

Environmental Aspect: Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.

Environmental impact: Loss of vegetation, increase in runoff and erosion, disturbance or possible mortality incidents of terrestrial fauna, possible contamination of soil and groundwater by oil- or fuel

spillages, possible establishment and spread of undesirable weeds and alien invasive species that could further damage ecosystem functionality.

	Without mitigation	**With mitigation**
Extent (E)	Regional (1)	Local (1)
Duration (D)	Long-term (5)	Short term (2)
Magnitude (M)	Moderate (6)	Small (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**High (60)**	**Low (28)**
Status (positive, neutral or negative)	positive	neutral
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	

Mitigation:

- Restrict all movement of vehicles and heavy machinery to permissible areas, these being designated access roads, maintenance roads, turning points and parking areas. No off-road driving beyond designated areas may be allowed.
- Parking areas should be regularly inspected for oil spills and covered with an impermeable or absorbent layer (with the necessary storm water control) if oil and fuel spillages are highly likely to occur.
- Strict speed limits must be set and adhered to.
- Driving between dusk and dawn should be permissible to emergency situations only.
- Prevent spillage of any, oils or other chemicals, strictly prohibit other pollution.
- Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed, destroy all material to prevent re-establishment.

Cumulative impacts:

- Possible pollution of surrounding areas if no mitigation is implemented.
- Compaction of soil
- Contamination of groundwater which is an extremely important source of water supply for the region.
- Possible spread of alien invasive species beyond the site if no mitigation is implemented.

Residual impacts:

- Related to access roads and internal maintenance tracks only.

4. Activity: Impacts on natural vegetation and ecosystems by invasive alien species.

Environmental Aspect: Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.

Environmental impact: : A decline in ecosystem functionality of natural vegetation could be the result of disturbance of the natural vegetation which create opportunities for alien invasive species to invade because of the lack of competition

Direct and Indirect impacts on the se natural ecosystems may include the following:

» Once established the invasion of alien species could spread and put the natural vegetation under pressure » Alien invasive species could alter the habitat to suit them better than the natural species » Alien invasives produce high amounts of seed and these seeds could stay for long in the seedbank and when conditions are suitable they will germinated in high numbers » disturbance to processes maintaining biodiversity and ecosystem goods and services, and; » a local loss of ecosystem goods and services		
	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	medium-term (2)
Magnitude (M)	Moderate (5)	Low (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance **(S = E+D+M)*P**	**Medium (50)**	**Low (28)**
Status (positive, neutral or negative)	positive	positive
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	
Mitigation: • Do regular monitoring for alien species infestations • Determine the best practice to eradicate alien species • Restrict the spread of alien species by eradicate them before they form seed		
Cumulative impacts: • There could be some areas where alien invasives already occur and when the corridor under the conductors are being cleared it could create an ideal habitat for the invaders to spread • Possible damage to indigenous species by the incorrect use of herbicides.		
Residual impacts: • Herbicide may remain in the soil and prevent the colonization of indigenous species		

5. Activity: Impacts on ephemeral streams and drainage lines.		
Environmental Aspect: The power line route cross many streams and wetlands. An accociated access road could cause impacts to these streams. Compaction of soils, possible contamination by oils or fuels, possible introduction and spread of weeds and alien invasive species, temporary disturbance of terrestrial fauna.		
Environmental impact: Loss of vegetation (bush clearing), increase in runoff and erosion, possible contamination of surface and groundwater by oil- or fuel spillages, possible establishment and spread of undesirable weeds and alien invasive species that could further damage ecosystem functionality.		
	Without mitigation	**With mitigation**
Extent (E)	Local (1)	Local (1)

Duration (D)	Long-term (4)	Medium-term (2)
Magnitude (M)	Moderate (6)	Low (4)
Probability (P)	Definite (5)	Highly Probable (4)
Significance (S = E+D+M)*P	**Medium (55)**	**Low (28)**
Status (positive, neutral or negative)	positive	positive
Reversibility	Partially reversible	Reversible
Irreplaceable loss of resources?	Probable	Not likely
Can impacts be mitigated?	Reasonably	

Mitigation:

- Restrict all movement of vehicles and heavy machinery to permissible areas, these being designated access roads, maintenance roads, turning points and parking areas. No off-road driving beyond designated areas may be allowed.
- Avoid pylon positions within streams or on stream banks
- Stream crossings must be constructed in such a way that not bank erosion occur.
- Prevent spillage of any, oils or other chemicals, strictly prohibit other pollution.
- Monitor the establishment of invasive species and remove as soon as detected, whenever possible before regenerative material can be formed, destroy all material to prevent re-establishment.

Cumulative impacts:

- Possible pollution of surrounding areas if no mitigation is implemented.
- Compaction of soil
- Contamination of surface and/or groundwater which is an extremely important source of water supply for the region.
- Possible spread of alien invasive species beyond the site if no mitigation is implemented.

Residual impacts:

- Related to access roads and internal maintenance tracks only.

Assessment of Cumulative Impacts

1. Nature: Reduced ability to meet conservation targets

Environmental Aspect: Reduced ability to meet conservation targets of the province

Environmental impact: The loss of unprotected vegetation types on a cumulative basis from the broad area may impact the countries' ability to meet its conservation targets. The area is not included within a National Protected Areas Expansion Strategy focus area, and falls outside any threatened and or endangered ecosystem type / vegetation type. Although the vegetation type in the study area are classified as Least Threatened, it is poorly protected and certain habitats or communities may be subsequently affected.

	Overall impact of the proposed project considered in isolation	**Cumulative Impact of the project and other projects in the area**
Extent (E)	Local (1)	Local (1)
Duration (D)	Long-term (4)	Long-term (4)

Magnitude (M)	Low (3)	Low (3)
Probability (P)	Probable (3)	Probable (3)
Significance (S = E+D+M)*P	**Low (24)**	**Low (24)**
Status (positive, neutral or negative)	Negative	Negative
Reversibility	Partially reversible	Low reversibility
Irreplaceable loss of resources?	Not Likely	Probable
Confidence in finding	High	
Mitigation: • Implementation of the required mitigation measures for all developments within the area. • Preconstruction walk-through to ensure that sensitive habitats are avoided. • Minimise the development footprint as far as possible.		

Table 6.2 Impact table for the four alternative options

	Impact on CBAs, ESAs & protected areas	Mitigation	Impact by construction activities	Mitigation	Impact by vehicles on site	Mitigation	Impact by alien invasive species	Mitigation	Impact on streams & wetlands	Mitigation	Cumulative impacts	Mitigation	Average TOTAL
Option													
1	75	40	55	28	60	28	50	28	55	28	30	30	42.25
2	70	40	55	28	60	28	50	28	55	28	30	30	41.83
3	65	40	55	28	60	28	50	28	55	28	27	27	40.92
4	55	40	55	28	60	28	50	28	55	28	24	24	39.58

Overall Alternatives 3 & 4 has scorred the lowest points in terms of their impacts. Alternatives 1 & 2 have a larger impact on the natural vegetation because they cur through larger portions of CBAs, ESAs and protected areas.

7. DISCUSSION AND CONCLUSION

The proposed establishment of 400kV powerline triggers a number of listed activities as included in the Environmental Impact Assessment Regulations (08 December 2014), GN R 982 – 985, in accordance with the National Environmental Management Act, No. 107 of 1998 (NEMA), as amended. The appointed Environmental Assessment Practitioner, Envirolution Consulting (Pty) Ltd, commissioned EnviroNiche Consulting, to undertake a floristic impact assessment to determine the impacts which may be triggered by the proposed development. The requirements of this assessment were to undertake a specialist study to assess the floristic biodiversity and ecology of this proposed linear development as well as to determine the significance of the impacts this proposed 400kV powerline will have within the identified project site. The project site is a 2 000m wide corridor situated between the Narina distribution centre west of Blanco near George and the Gourikwa distribution centre west of the Mossgas industry. Four alternative route options were investigated. Routes 1 and 2 are both longer routes, further inland. Route 3 is a shorter, more direct route while route 4 is a similar route as number 3 but joins route 1 and 2 near the Narina distribution centre. Along some of these routes are already existing powerlines and the proposed new route will be parallel to some of these powerlines.

The ancient coastal terrace between the Outeniqua Mountains and the present coastline has been eroded over millions of years to form an extensive undulating coastal plain dissected by numerous streams. This created a landscape of roundish crests, gentle slopes and relatively deep valleys. Almost all the vegetation types in the project area between the two distribution centres are listed as Critical Biodiversity Areas (CBAs) and threatened ecosystems. All four route alternatives cut across several Critical Biodiversity Areas (CBAs), Ecological Support Areas (ESAs). Some sensitive systems are listed as threatened ecosystems. Alternatives 1 and 2 are the only two of the four alternatives that cut across the Swellendam Silcrete Fynbos. Alternative 1 is the only alternative that does not affect the South Outeniqua Sandstone Fynbos. The Gourikwa distribution centre is situated on the Albertinia Sand Fynbos (Status: Vulnerable). The other vegetation types are the Swellendam Silcrete Fynbos (Status: Vulnerable), the Mossel Bay Shale Renosterveld (Status: Endangered), Groot Brak Duine Strandveld (Status: Endangered), Garden Route Granite Fynbos (Status: Endangered), and the Garden Route Shale Fynbos (Status: Vulnerable). All these vegetation types are situated on crests and slopes in the landscape. The only vegetation type restricted to the drainage lines (rivers and streams) is the Cape Lowland Alluvial Vegetation (Status: Critically Rare). This particular vegetation type is dominated by shrubs and trees which occur along the steep

slopes and in deep sheltered valleys. Not much of this Cape Lowland Alluvial Vegetation will be negatively affected by any of the power line alternatives because most of these streams are flowing in deep valleys and the riparian shrubs and trees would not necessarily be destroyed where the powerline will cross the stream. It is only where the valleys are more open that the trees and shrubs at stream crossings will have to be cut. There are also a large number of NFEPA-listed perennial and seasonal streams as well as ephemeral pans present along the proposed power line routes.

The entire landscape has been transformed. Almost all areas, with arable soil, have been ploughed and subsequently the natural vegetation has been destroyed. Agricultural activities (crop and planted pasture production) have destroyed most of region's natural vegetation. Isolated pockets of natural vegetation (fynbos, renosterveld and riparian vegetation) remain in those areas unsuitable for crop production (rocky outcrops and steep slopes). This is the reason why most of the natural vegetation between Gourikwa and Narina distribution centres are listed as Critical Biodiversity areas (CBAs) and Ecological Support Areas (ESAs).

According to the Plants of South Africa species list (POSA) the total number of Red Data plant species present in the quarter degree squares which will be crossed by the power line alternatives are 173. The majority of these Red Data plant species present in the quarter degree squares are bulbs, forbs, succulents and creepers. However a number shrubs which are dominated by proteas and ericas also occur. Protected trees, in terms of the Forest Act, also occur in the region. They are *Widdringtonia nodiflora* and *Sideroxylon inerme*. This means that if the power line corridor will be cleared of shrub vegetation, a relatively large portion of Red Data species would not be destroyed.

In terms of the environmental impacts of the powerline alternatives 1 and 2 cut across larger portions of natural vegetation (CBAs & ESAs). It is therefore recommended that Alternative 3 or 4 be considered as the preferred power line routes.

No-go Option

The No-Go Option means that the *status quo* in terms of ecosystem functioning and the existence of protected species remains on the project site as the proposed project site will not be developed nor rehabilitated.

However, if the no-go option is applied then the economic benefits and potential growth of the greater Southern Cape region will not be released and it will be considered as a lost opportunity for progress in the region.

Therefore, due to the acceptability of the project site for the development and the overall sensitivity of the project site the no-go option is not considered as being feasible and will therefore not be recommended.

8. RECOMMENDATIONS

General

- An Environmental Control Officer (ECO) must be appointed to oversee that the aspects stipulated in the Environmental Permit be carried out properly;
- Preconstruction environmental induction for all construction staff on site to ensure that basic environmental principles are adhered to;
- The areas to be cleared as well as the construction area should be clearly demarcated;
- All construction vehicles should adhere to clearly defined and demarcated roads;
- Dust suppression and erosion management should be an integrated component of the construction approach;
- No dumping of building waste or spoil material from the development should take place on areas other than a licenced landfill site;
- All hazardous materials should be stored appropriately to prevent contamination of the project site. Any accidental chemical, fuel and oil spills that occur at the project site should be cleaned up appropriately as related to the nature of the spill.

Flora

- Bush clearing must be kept to the minimum. This is to protect the rare shrubs and other plants;
- There should be a preconstruction walk-through of the development footprint/project site in order to assess the pylon footprint areas for Red Data species as well as sensitive ecosystems such as streams, wetlands, etc.
- Weed control measures must be applied to eradicate the noxious weeds (category 1a &1b species) on disturbed areas;

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ANNEXURE A:

Figure A1: An example of the highly transformed state of the vegetation near the Gourikwa substation.

Figure A2: Remnants of fynbos in the Mossel Bay Shale Renosterveld

Figure A3: Shrub vegetation along the edges of crop fields

Figure A4: Riparian vegetation along the Klein Brak River

Figure A5: Dense low forest vegetation sheltered in deep valleys

Figure A6: Transformed vegetation near Blanco

Figure A7: A small pan in the foreground and some transformed vegetation in the background

Figure A8: Existing power lines in the Bottelierskop nature reserve

ANNEXURE B:

Alternative routes 1, 2, 3, 4: List of plant species of quarter degree squares where List derived from the POSA website

Colours Relate as follows:

Threatened Status: Critically (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Critically Rare, Rare, Declining and Data Deficient (DDD), NE (NE)

Protected trees (Forest Act)

Family	Naturalised	Species	Threat status
ACANTHACEAE		Barleria pungens L.f.	LC
ACANTHACEAE		Blepharis ilicina Oberm.	LC
ACANTHACEAE		Chaetacanthus costatus Nees	LC
ACANTHACEAE		Chaetacanthus setiger (Pers.) Lindl.	LC
ACANTHACEAE		Hypoestes aristata (Vahl) Sol. ex Roem. & Schult. var. aristata	LC
ACANTHACEAE		Hypoestes aristata (Vahl) Sol. ex Roem. & Schult. var. thiniorum K.Balkwill	LC
ACANTHACEAE		Hypoestes forskaolii (Vahl) R.Br.	LC
ACANTHACEAE		Ruellia pilosa L.f.	VU
AIZOACEAE		Aizoon rigidum L.f.	LC
AIZOACEAE		Galenia herniariaefolia (C.Presl) Fenzl	LC
AIZOACEAE		Galenia secunda (L.f.) Sond.	LC
AIZOACEAE		Tetragonia decumbens Mill.	LC
AIZOACEAE		Tetragonia fruticosa L.	LC
AIZOACEAE		Tetragonia virgata Schltr.	LC
ALLIACEAE		Tulbaghia violacea Harv. var. violacea	LC
AMARANTHACEAE		Sericocoma avolans Fenzl	LC
AMARANTHACEAE	*	Amaranthus hybridus L. subsp. hybridus var. hybridus	Not Evaluated
AMARYLLIDACEAE		Apodolirion lanceolatum (Thunb.) Baker	DDT
AMARYLLIDACEAE		Brunsvigia litoralis R.A.Dyer	EN
AMARYLLIDACEAE		Brunsvigia orientalis (L.) Aiton ex Eckl.	LC
AMARYLLIDACEAE		Brunsvigia striata (Jacq.) Aiton	LC
AMARYLLIDACEAE		Brunsvigia striata (Jacq.) Aiton	LC
AMARYLLIDACEAE		Crossyne guttata (L.) D. & U.Müll.-Doblies	LC
AMARYLLIDACEAE		Cyrtanthus collinus Ker Gawl.	LC
AMARYLLIDACEAE		Cyrtanthus debilis Snijman	Rare
AMARYLLIDACEAE		Cyrtanthus elatus (Jacq.) Traub	LC
AMARYLLIDACEAE		Cyrtanthus fergusoniae L.Bolus	LC
AMARYLLIDACEAE		Gethyllis spiralis (Thunb.) Thunb.	LC
AMARYLLIDACEAE		Haemanthus albiflos Jacq.	LC
AMARYLLIDACEAE		Haemanthus sanguineus Jacq.	LC
AMARYLLIDACEAE		Strumaria gemmata Ker Gawl.	LC
ANACARDIACEAE		Laurophyllus capensis Thunb.	LC
ANACARDIACEAE		Searsia crenata (Thunb.) Moffett	LC
ANACARDIACEAE		Searsia glauca (Thunb.) Moffett	LC

ANACARDIACEAE		Searsia glauca (Thunb.) Moffett	LC
ANACARDIACEAE		Searsia incisa (L.f.) F.A.Barkley var. effusa (C.Presl) Moffett	LC
ANACARDIACEAE		Searsia laevigata (L.) F.A.Barkley var. laevigata forma laevigata	Not Evaluated
ANACARDIACEAE		Searsia laevigata (L.) F.A.Barkley var. villosa (L.f.) Moffett	LC
ANACARDIACEAE		Searsia longispina (Eckl. & Zeyh.) Moffett	LC
ANACARDIACEAE		Searsia lucida (L.) F.A.Barkley forma lucida	Not Evaluated
ANACARDIACEAE		Searsia lucida (L.) F.A.Barkley forma scoparia (Eckl. & Zeyh.) Moffett	Not Evaluated
ANACARDIACEAE		Searsia pallens (Eckl. & Zeyh.) Moffett	LC
ANACARDIACEAE		Searsia rehmanniana (Engl.) Moffett var. glabrata (Sond.) Moffett	LC
ANEMIACEAE		Mohria caffrorum (L.) Desv.	LC
ANTHERICACEAE		Chlorophytum cooperi (Baker) Nordal	LC
APIACEAE		Alepidea capensis (P.J.Bergius) R.A.Dyer var. capensis	LC
APIACEAE		Anginon difforme (L.) B.L.Burtt	LC
APIACEAE		Anginon fruticosum I.Allison & B.-E.van Wyk	LC
APIACEAE		Centella asiatica (L.) Urb.	LC
APIACEAE		Centella debilis (Eckl. & Zeyh.) Drude	LC
APIACEAE		Centella eriantha (Rich.) Drude var. rotundifolia Adamson	DDT
APIACEAE		Centella lanata Compton	LC
APIACEAE		Centella sessilis Adamson	LC
APIACEAE		Centella virgata (L.f.) Drude var. virgata	LC
APIACEAE		Chamarea capensis (Thunb.) Eckl. & Zeyh.	LC
APIACEAE		Dasispermum suffruticosum (P.J.Bergius) B.L.Burtt	LC
APIACEAE		Hermas capitata L.f.	LC
APIACEAE		Nanobubon strictum (Spreng.) Magee	LC
APOCYNACEAE		Acokanthera oblongifolia (Hochst.) Codd	LC
APOCYNACEAE		Carissa bispinosa (L.) Desf. ex Brenan	LC
APOCYNACEAE		Cynanchum obtusifolium L.f.	LC
APOCYNACEAE		Duvalia immaculata (C.A.Lückh.) Bayer ex L.C.Leach	EN
APOCYNACEAE		Duvalia maculata N.E.Br.	LC
APOCYNACEAE		Gomphocarpus cancellatus (Burm.f.) Bruyns	LC
APOCYNACEAE		Orbea variegata (L.) Haw.	LC
APOCYNACEAE		Quaqua pillansii (N.E.Br.) Bruyns	LC
APOCYNACEAE		Riocreuxia torulosa (E.Mey.) Decne. var. torulosa	LC
APOCYNACEAE		Sarcostemma viminale (L.) R.Br. subsp. viminale	LC
APOCYNACEAE		Tylophora cordata (Thunb.) Druce	LC
APONOGETONACEAE		Aponogeton distachyos L.f.	LC
ARALIACEAE		Cussonia thyrsiflora Thunb.	LC
ASPARAGACEAE		Asparagus aethiopicus L.	LC
ASPARAGACEAE		Asparagus lignosus Burm.f.	LC
ASPARAGACEAE		Asparagus mariae (Oberm.) Fellingham & N.L.Mey.	LC
ASPARAGACEAE		Asparagus mucronatus Jessop	LC
ASPARAGACEAE		Asparagus recurvispinus (Oberm.) Fellingham & N.L.Mey.	LC
ASPARAGACEAE		Asparagus scandens Thunb.	LC

ASPARAGACEAE		Asparagus stipulaceus Lam.	NT
ASPARAGACEAE		Asparagus striatus (L.f.) Thunb.	LC
ASPARAGACEAE		Asparagus suaveolens Burch.	LC
ASPHODELACEAE		Aloe africana Mill.	LC
ASPHODELACEAE		Aloe arborescens Mill.	LC
ASPHODELACEAE		Aloe humilis (L.) Mill.	LC
ASPHODELACEAE		Bulbine frutescens (L.) Willd.	LC
ASPHODELACEAE		Bulbine lagopus (Thunb.) N.E.Br.	LC
ASPHODELACEAE		Bulbine longifolia Schinz	LC
ASPHODELACEAE		Bulbine sedifolia Schltr. ex Poelln.	LC
ASPHODELACEAE		Bulbinella cauda-felis (L.f.) T.Durand & Schinz	LC
ASPHODELACEAE		Gasteria carinata (Mill.) Duval var. carinata	LC
ASPHODELACEAE		Gasteria carinata (Mill.) Duval var. verrucosa (Mill.) Van Jaarsv.	LC
ASPHODELACEAE		Gasteria disticha (L.) Haw. var. disticha	
ASPHODELACEAE		Haworthia angustifolia Haw. var. angustifolia	DDT
ASPHODELACEAE		Haworthia arachnoidea (L.) Duval var. aranea (A.Berger) M.B.Bayer	DDT
ASPHODELACEAE		Haworthia attenuata (Haw.) Haw. var. attenuata	EN
ASPHODELACEAE		Haworthia chloracantha Haw. var. chloracantha	DDT
ASPHODELACEAE		Haworthia chloracantha Haw. var. denticulifera (Poelln.) M.B.Bayer	EN
ASPHODELACEAE		Haworthia chloracantha Haw. var. subglauca Poelln.	EN
ASPHODELACEAE		Haworthia emelyae Poelln. var. emelyae	VU
ASPHODELACEAE		Haworthia floribunda Poelln. var. dentata M.B.Bayer	LC
ASPHODELACEAE		Haworthia kingiana Poelln.	CR
ASPHODELACEAE		Haworthia magnifica Poelln. var. magnifica	LC
ASPHODELACEAE		Haworthia outeniquensis M.B.Bayer	VU
ASPHODELACEAE		Haworthia parksiana Poelln.	CR
ASPHODELACEAE		Haworthia pygmaea Poelln. var. argenteo-maculosa (G.G.Sm.) M.B.Bayer	CR
ASPHODELACEAE		Haworthia pygmaea Poelln. var. pygmaea	CR
ASPHODELACEAE		Haworthia scabra Haw. var. scabra	LC
ASPHODELACEAE		Haworthia turgida Haw. var. suberecta Poelln.	VU
ASPHODELACEAE		Haworthia viscosa (L.) Haw. var. viscosa	LC
ASPHODELACEAE		Kniphofia uvaria (L.) Oken	LC
ASPLENIACEAE		Asplenium adiantum-nigrum L. var. adiantum-nigrum	LC
ASPLENIACEAE		Asplenium aethiopicum (Burm.f.) Bech.	LC
ASPLENIACEAE		Asplenium erectum Bory ex Willd. var. erectum	LC
ASPLENIACEAE		Asplenium monanthes L.	LC
ASPLENIACEAE		Asplenium rutifolium (P.J.Bergius) Kunze	LC
ASTERACEAE		Osteospermum pterigoideum Klatt	EN
ASTERACEAE		Stoebe rugulosa Harv.	EN
ASTERACEAE		Amellus strigosus (Thunb.) Less. subsp. strigosus	LC
ASTERACEAE		Arctotheca calendula (L.) Levyns	LC
ASTERACEAE		Arctotheca populifolia (P.J.Bergius) Norl.	LC
ASTERACEAE		Arctotheca prostrata (Salisb.) Britten	LC
ASTERACEAE		Arctotis cuneata DC.	LC

ASTERACEAE		Arctotis discolor (Less.) Beauverd	LC
ASTERACEAE		Arctotis linearis Thunb.	LC
ASTERACEAE		Arctotis perfoliata (Less.) Beauverd	LC
ASTERACEAE		Athanasia cochlearifolia Källersjö	EN
ASTERACEAE		Athanasia dentata (L.) L.	LC
ASTERACEAE		Athanasia juncea (DC.) D.Dietr.	LC
ASTERACEAE		Athanasia linifolia Burm.	LC
ASTERACEAE		Athanasia microcephala (DC.) D.Dietr.	LC
ASTERACEAE		Athanasia pectinata L.f.	LC
ASTERACEAE		Athanasia quinquedentata Thunb. subsp. quinquedentata	LC
ASTERACEAE		Athanasia tomentosa Thunb.	LC
ASTERACEAE		Athanasia trifurcata (L.) L.	LC
ASTERACEAE		Athanasia vestita (Thunb.) Druce	LC
ASTERACEAE		Athrixia capensis Ker Gawl.	LC
ASTERACEAE		Athrixia heterophylla (Thunb.) Less. subsp. heterophylla	LC
ASTERACEAE		Berkheya armata (Vahl) Druce	LC
ASTERACEAE		Berkheya carlinoides (Vahl) Willd.	LC
ASTERACEAE		Berkheya coriacea Harv.	LC
ASTERACEAE		Brachylaena neriifolia (L.) R.Br.	LC
ASTERACEAE		Chrysanthemoides monilifera (L.) Norl. subsp. pisifera (L.) Norl.	LC
ASTERACEAE		Chrysocoma ciliata L.	LC
ASTERACEAE		Cineraria geifolia (L.) L.	LC
ASTERACEAE		Cineraria lobata L'Hér. subsp. lobata	LC
ASTERACEAE		Corymbium africanum L. subsp. africanum	LC
ASTERACEAE		Corymbium glabrum L. var. glabrum	LC
ASTERACEAE		Cotula coronopifolia L.	LC
ASTERACEAE		Cotula nigellifolia (DC.) K.Bremer & Humphries var. nigellifolia	LC
ASTERACEAE		Cotula sororia DC.	LC
ASTERACEAE		Cotula turbinata L.	LC
ASTERACEAE		Cullumia aculeata (Houtt.) Roessler var. aculeata	LC
ASTERACEAE		Cullumia aculeata (Houtt.) Roessler var. sublanata (DC.) Roessler	LC
ASTERACEAE		Cymbopappus adenosolen (Harv.) B.Nord.	LC
ASTERACEAE		Dicerothamnus rhinocerotis (L.f.) Koekemoer	Not Evaluated
ASTERACEAE		Didelta carnosa (L.f.) Aiton var. tomentosa (Less.) Roessler	LC
ASTERACEAE		Disparago kraussii Sch.Bip.	LC
ASTERACEAE		Disparago tortilis (DC.) Sch.Bip.	LC
ASTERACEAE		Elytropappus gnaphaloides (L.) Levyns	LC
ASTERACEAE		Eriocephalus africanus L. var. africanus	LC
ASTERACEAE		Eriocephalus africanus L. var. paniculatus (Cass.) M.A.N.Müll.,P.P.J.Herman & Kolberg	LC
ASTERACEAE		Euryops ericoides (L.f.) B.Nord.	LC
ASTERACEAE		Felicia aethiopica (Burm.f.) Bolus & Wolley-Dod ex Adamson & T.M.Salter subsp. ecklonis (Less.) Grau	LC
ASTERACEAE		Felicia amoena (Sch.Bip.) Levyns subsp. amoena	LC
ASTERACEAE		Felicia amoena (Sch.Bip.) Levyns subsp. latifolia Grau	LC

ASTERACEAE		Felicia fascicularis DC.	LC
ASTERACEAE		Felicia filifolia (Vent.) Burtt Davy subsp. bodkinii (Compton) Grau	LC
ASTERACEAE		Felicia hirsuta DC.	LC
ASTERACEAE		Felicia muricata (Thunb.) Nees subsp. muricata	LC
ASTERACEAE		Garuleum bipinnatum (Thunb.) Less.	LC
ASTERACEAE		Gazania rigens (L.) Gaertn. var. leucolaena (DC.) Roessler	LC
ASTERACEAE		Gazania rigens (L.) Gaertn. var. uniflora (L.f.) Roessler	LC
ASTERACEAE		Gerbera cordata (Thunb.) Less.	LC
ASTERACEAE		Gerbera serrata (Thunb.) Druce	LC
ASTERACEAE		Gnaphalium declinatum L.f.	NT
ASTERACEAE		Helichrysum anomalum Less.	LC
ASTERACEAE		Helichrysum asperum (Thunb.) Hilliard & B.L.Burtt var. comosum (Sch.Bip.) Hilliard	LC
ASTERACEAE		Helichrysum capense Hilliard	LC
ASTERACEAE		Helichrysum cymosum (L.) D.Don subsp. cymosum	LC
ASTERACEAE		Helichrysum dasyanthum (Willd.) Sweet	LC
ASTERACEAE		Helichrysum excisum (Thunb.) Less.	LC
ASTERACEAE		Helichrysum felinum Less.	LC
ASTERACEAE		Helichrysum foetidum (L.) Moench var. foetidum	Not Evaluated
ASTERACEAE		Helichrysum niveum (L.) Less.	LC
ASTERACEAE		Helichrysum nudifolium (L.) Less. var. nudifolium	LC
ASTERACEAE		Helichrysum odoratissimum (L.) Sweet var. odoratissimum	Not Evaluated
ASTERACEAE		Helichrysum patulum (L.) D.Don	LC
ASTERACEAE		Helichrysum petiolare Hilliard & B.L.Burtt	LC
ASTERACEAE		Helichrysum plebeium DC.	LC
ASTERACEAE		Helichrysum rosum (P.J.Bergius) Less. var. arcuatum Hilliard	LC
ASTERACEAE		Helichrysum rosum (P.J.Bergius) Less. var. rosum	LC
ASTERACEAE		Helichrysum rutilans (L.) D.Don	LC
ASTERACEAE		Helichrysum simulans Harv. & Sond.	LC
ASTERACEAE		Helichrysum spiralepis Hilliard & B.L.Burtt	LC
ASTERACEAE		Helichrysum teretifolium (L.) D.Don	LC
ASTERACEAE		Helichrysum tinctum (Thunb.) Hilliard & B.L.Burtt	LC
ASTERACEAE		Helichrysum zeyheri Less.	LC
ASTERACEAE		Hertia alata (Thunb.) Kuntze	LC
ASTERACEAE		Hippia pilosa (P.J.Bergius) Druce	LC
ASTERACEAE		Hymenolepis parviflora (L.) DC.	LC
ASTERACEAE		Hypochaeris radicata L.	Not Evaluated
ASTERACEAE		Inuloides tomentosa (L.f.) B.Nord.	LC
ASTERACEAE		Macledium spinosum (L.) S.Ortíz	LC
ASTERACEAE		Mairia crenata (Thunb.) Nees	LC
ASTERACEAE		Metalasia acuta P.O.Karis	LC
ASTERACEAE		Metalasia brevifolia (Lam.) Levyns	LC
ASTERACEAE		Metalasia densa (Lam.) P.O.Karis	LC
ASTERACEAE		Metalasia galpinii L.Bolus	VU

ASTERACEAE		Metalasia massonii S.Moore	LC
ASTERACEAE		Metalasia muricata (L.) D.Don	LC
ASTERACEAE		Metalasia pallida Bolus	LC
ASTERACEAE		Metalasia pulcherrima Less. forma pallescens (Harv.) P.O.Karis	Not Evaluated
ASTERACEAE		Metalasia pulcherrima Less. forma pulcherrima	Not Evaluated
ASTERACEAE		Metalasia pungens D.Don	LC
ASTERACEAE		Metalasia trivialis P.O.Karis	LC
ASTERACEAE		Nidorella undulata (Thunb.) Sond. ex Harv.	LC
ASTERACEAE		Oedera capensis (L.) Druce	LC
ASTERACEAE		Oedera genistifolia (L.) Anderb. & K.Bremer	LC
ASTERACEAE		Oedera imbricata Lam.	LC
ASTERACEAE		Oedera squarrosa (L.) Anderb. & K.Bremer	LC
ASTERACEAE		Oldenburgia paradoxa Less.	LC
ASTERACEAE		Oligocarpus calendulaceus (L.f.) Less.	LC
ASTERACEAE		Oncosiphon piluliferum (L.f.) Källersjö	LC
ASTERACEAE		Osmitopsis osmitoides (Less.) K.Bremer	LC
ASTERACEAE		Osteospermum aciphyllum DC.	NT
ASTERACEAE		Osteospermum bolusii (Compton) Norl.	LC
ASTERACEAE		Osteospermum corymbosum L.	LC
ASTERACEAE		Osteospermum glabrum N.E.Br.	LC
ASTERACEAE		Osteospermum imbricatum L. subsp. nervatum (DC.) Norl. var. nervatum	LC
ASTERACEAE		Osteospermum junceum P.J.Bergius	LC
ASTERACEAE		Osteospermum pyrifolium Norl.	VU
ASTERACEAE		Osteospermum triquetrum L.f.	LC
ASTERACEAE		Othonna carnosa Less. var. carnosa	LC
ASTERACEAE		Othonna parviflora P.J.Bergius	LC
ASTERACEAE		Othonna quinquedentata Thunb.	LC
ASTERACEAE		Pentzia dentata (L.) Kuntze	LC
ASTERACEAE		Phaenocoma prolifera (L.) D.Don	LC
ASTERACEAE		Phaenocoma prolifera (L.) D.Don	LC
ASTERACEAE		Phymaspermum leptophyllum (DC.) Benth. & Hook. ex B.D.Jacks.	Threatened
ASTERACEAE		Plecostachys polifolia (Thunb.) Hilliard & B.L.Burtt	LC
ASTERACEAE		Plecostachys serpyllifolia (P.J.Bergius) Hilliard & B.L.Burtt	LC
ASTERACEAE		Printzia polifolia (L.) Hutch.	LC
ASTERACEAE		Pseudognaphalium undulatum (L.) Hilliard & B.L.Burtt	LC
ASTERACEAE		Pteronia fasciculata L.f.	LC
ASTERACEAE		Pteronia flexicaulis L.f.	LC
ASTERACEAE		Pteronia hirsuta L.f.	LC
ASTERACEAE		Pteronia incana (Burm.) DC.	LC
ASTERACEAE		Pteronia paniculata Thunb.	LC
ASTERACEAE		Pteronia stricta Aiton var. stricta	LC
ASTERACEAE		Pulicaria scabra (Thunb.) Druce	LC
ASTERACEAE		Relhania calycina (L.f.) L'Hér. subsp. apiculata (DC.) K.Bremer	LC
ASTERACEAE		Relhania calycina (L.f.) L'Hér. subsp. calycina	LC

ASTERACEAE		Relhania garnotii (Less.) K.Bremer	VU
ASTERACEAE		Relhania pungens L'Hér. subsp. angustifolia (DC.) K.Bremer	LC
ASTERACEAE		Relhania pungens L'Hér. subsp. pungens	LC
ASTERACEAE		Relhania pungens L'Hér. subsp. trinervis (Thunb.) K.Bremer	LC
ASTERACEAE		Relhania pungens L'Hér. subsp. trinervis (Thunb.) K.Bremer	LC
ASTERACEAE		Rhynchopsidium pumilum (L.f.) DC.	LC
ASTERACEAE		Rhynchopsidium sessiliflorum (L.f.) DC.	LC
ASTERACEAE		Senecio angulatus L.f.	LC
ASTERACEAE		Senecio burchellii DC.	LC
ASTERACEAE		Senecio crenatus Thunb.	LC
ASTERACEAE		Senecio deltoideus Less.	LC
ASTERACEAE		Senecio elegans L.	LC
ASTERACEAE		Senecio erubescens Aiton var. erubescens	LC
ASTERACEAE		Senecio glastifolius L.f.	LC
ASTERACEAE		Senecio gramineus Harv.	LC
ASTERACEAE		Senecio ilicifolius L.	LC
ASTERACEAE		Senecio junceus (DC.) Harv.	LC
ASTERACEAE		Senecio laevigatus Thunb. var. laevigatus	LC
ASTERACEAE		Senecio leptophyllus DC.	LC
ASTERACEAE		Senecio pinifolius (L.) Lam.	LC
ASTERACEAE		Senecio subcanescens (DC.) Compton	LC
ASTERACEAE		Sonchus oleraceus L.	Not Evaluated
ASTERACEAE		Stoebe alopecuroides (Lam.) Less.	LC
ASTERACEAE		Stoebe microphylla DC.	LC
ASTERACEAE		Syncarpha canescens (L.) B.Nord. subsp. canescens	LC
ASTERACEAE		Syncarpha eximia (L.) B.Nord.	LC
ASTERACEAE		Syncarpha gnaphaloides (L.) DC.	LC
ASTERACEAE		Syncarpha paniculata (L.) B.Nord.	LC
ASTERACEAE	*	Syncarpha vestita (L.) B.Nord.	LC
ASTERACEAE		Tarchonanthus littoralis P.P.J.Herman	LC
ASTERACEAE		Ursinia chrysanthemoides (Less.) Harv.	LC
ASTERACEAE		Ursinia coronopifolia (Less.) N.E.Br.	Rare
ASTERACEAE		Ursinia discolor (Less.) N.E.Br.	LC
ASTERACEAE		Ursinia heterodonta (DC.) N.E.Br.	LC
ASTERACEAE		Ursinia heterodonta (DC.) N.E.Br.	LC
ASTERACEAE		Ursinia nana DC. subsp. nana	LC
ASTERACEAE		Ursinia paleacea (L.) Moench	LC
ASTERACEAE		Ursinia serrata (L.f.) Poir.	LC
ASTERACEAE		Ursinia trifida (Thunb.) N.E.Br. forma trifida	Not Evaluated
ASTERACEAE		Vellereophyton dealbatum (Thunb.) Hilliard & B.L.Burtt	LC
BALANOPHORACEAE		Mystropetalon thomii Harv.	LC
BLECHNACEAE		Blechnum punctulatum Sw. var. punctulatum	LC
BORAGINACEAE		Cynoglossum hispidum Thunb.	LC

BORAGINACEAE		Echium plantagineum L.	Not Evaluated
BORAGINACEAE		Lobostemon echioides Lehm.	LC
BORAGINACEAE		Lobostemon marlothii Levyns	LC
BORAGINACEAE		Lobostemon muirii Levyns	Rare
BORAGINACEAE		Lobostemon trigonus (Thunb.) H.Buek	LC
BORAGINACEAE		Myosotis arvensis (L.) Hill	Not Evaluated
BRASSICACEAE		Heliophila africana (L.) Marais	LC
BRASSICACEAE		Heliophila elongata (Thunb.) DC.	LC
BRASSICACEAE		Heliophila glauca Burch. ex DC.	LC
BRASSICACEAE		Heliophila linearis (Thunb.) DC. var. linearis	LC
BRASSICACEAE		Heliophila subulata Burch. ex DC.	LC
BRASSICACEAE	*	Raphanus raphanistrum L.	Not Evaluated
BRUNIACEAE		Berzelia galpinii Pillans	Rare
BRUNIACEAE		Berzelia intermedia (D.Dietr.) Schltdl.	LC
BRUNIACEAE		Berzelia lanuginosa (L.) Brongn.	LC
BRUNIACEAE		Brunia neglecta Schltr.	LC
BRUNIACEAE		Brunia noduliflora Goldblatt & J.C.Manning	LC
CAMPANULACEAE		Microcodon glomeratum A.DC.	LC
CAMPANULACEAE		Prismatocarpus candolleanus Cham.	LC
CAMPANULACEAE		Prismatocarpus cliffortioides Adamson	EN
CAMPANULACEAE		Prismatocarpus hispidus Adamson	DDT
CAMPANULACEAE		Prismatocarpus rogersii Fourc.	NT
CAMPANULACEAE		Wahlenbergia desmantha Lammers	LC
CAMPANULACEAE		Wahlenbergia desmantha Lammers	LC
CAMPANULACEAE		Wahlenbergia polyantha Lammers	VU
CAMPANULACEAE		Wahlenbergia procumbens (Thunb.) A.DC.	LC
CAMPANULACEAE		Wahlenbergia rubens (H.Buek) Lammers var. rubens	LC
CAMPANULACEAE		Wahlenbergia tenella (L.f.) Lammers var. tenella	LC
CAMPANULACEAE		Wahlenbergia thunbergii (Schult.) B.Nord. var. thunbergii	LC
CAPPARACEAE		Cadaba aphylla (Thunb.) Wild	LC
CAPPARACEAE		Capparis sepiaria L. var. citrifolia (Lam.) Toelken	LC
CARYOPHYLLACEAE		Dianthus albens Aiton	LC
CARYOPHYLLACEAE		Dianthus thunbergii S.S.Hooper forma thunbergii	Not Evaluated
CARYOPHYLLACEAE		Pollichia campestris Aiton	LC
CARYOPHYLLACEAE	*	Silene eckloniana Sond.	LC
CARYOPHYLLACEAE	*	Silene gallica L.	Not Evaluated
CARYOPHYLLACEAE		Silene undulata Aiton	LC
CARYOPHYLLACEAE	*	Spergula arvensis L.	Not Evaluated
CELASTRACEAE		Cassine peragua L. subsp. peragua	LC
CELASTRACEAE		Elaeodendron croceum (Thunb.) DC.	Declining
CELASTRACEAE		Gloveria integrifolia (L.f.) M.Jordaan	LC
CELASTRACEAE		Gymnosporia buxifolia (L.) Szyszyl.	LC

CELASTRACEAE		Maytenus acuminata (L.f.) Loes. var. acuminata	LC
CELASTRACEAE		Maytenus oleoides (Lam.) Loes.	LC
CELASTRACEAE		Maytenus oleoides (Lam.) Loes.	LC
CELASTRACEAE		Maytenus peduncularis (Sond.) Loes.	LC
CELASTRACEAE		Maytenus procumbens (L.f.) Loes.	LC
CELASTRACEAE		Mystroxylon aethiopicum (Thunb.) Loes. subsp. aethiopicum	LC
CELASTRACEAE		Pterocelastrus rostratus (Thunb.) Walp.	Declining
CELASTRACEAE		Pterocelastrus tricuspidatus (Lam.) Walp.	LC
CELASTRACEAE		Putterlickia pyracantha (L.) Szyszyl.	LC
CELASTRACEAE		Robsonodendron eucleiforme (Eckl. & Zeyh.) R.H.Archer	LC
CHENOPODIACEAE		Sarcocornia natalensis (Bunge ex Ung.-Sternb.) A.J.Scott var. natalensis	LC
CHENOPODIACEAE		Atriplex lindleyi Moq. subsp. inflata (F.Muell.) Paul G.Wilson	Not Evaluated
CHENOPODIACEAE		Atriplex semibaccata R.Br. var. appendiculata Aellen	LC
CHENOPODIACEAE		Salicornia meyeriana Moss	LC
CHENOPODIACEAE		Sarcocornia capensis (Moss) A.J.Scott	LC
CHENOPODIACEAE		Sarcocornia decumbens (Toelken) A.J.Scott	LC
CHENOPODIACEAE		Sarcocornia littorea (Moss) A.J.Scott	LC
CHENOPODIACEAE		Sarcocornia natalensis (Bunge ex Ung.-Sternb.) A.J.Scott var. natalensis	LC
CHENOPODIACEAE		Sarcocornia perennis (Mill.) A.J.Scott var. perennis	LC
CHENOPODIACEAE	*	Sarcocornia pillansii (Moss) A.J.Scott var. pillansii	LC
COLCHICACEAE		Ornithoglossum vulgare B.Nord.	LC
COMMELINACEAE		Commelina africana L. var. africana	LC
CONVOLVULACEAE		Convolvulus capensis Burm.f.	LC
CONVOLVULACEAE		Cuscuta appendiculata Engelm.	LC
CONVOLVULACEAE		Falkia repens Thunb.	LC
CRASSULACEAE		Adromischus caryophyllaceus (Burm.f.) Lem.	LC
CRASSULACEAE		Adromischus maculatus (Salm-Dyck) Lem.	LC
CRASSULACEAE		Adromischus triflorus (L.f.) A.Berger	LC
CRASSULACEAE		Cotyledon orbiculata L. var. orbiculata	LC
CRASSULACEAE		Crassula atropurpurea (Haw.) D.Dietr. var. atropurpurea	LC
CRASSULACEAE		Crassula biplanata Haw.	LC
CRASSULACEAE		Crassula capitella Thunb. subsp. thyrsiflora (Thunb.) Toelken	LC
CRASSULACEAE		Crassula decumbens Thunb. var. brachyphylla (Adamson) Toelken	NT
CRASSULACEAE		Crassula depressa (Eckl. & Zeyh.) Toelken	DDD
CRASSULACEAE		Crassula ericoides Haw. subsp. ericoides	LC
CRASSULACEAE		Crassula expansa Dryand. subsp. expansa	LC
CRASSULACEAE		Crassula lactea Sol.	LC
CRASSULACEAE		Crassula multicava Lem. subsp. multicava	LC
CRASSULACEAE		Crassula nudicaulis L. var. nudicaulis	LC
CRASSULACEAE		Crassula orbicularis L.	LC
CRASSULACEAE		Crassula orbicularis L.	LC
CRASSULACEAE		Crassula perforata Thunb. subsp. perforata	LC
CRASSULACEAE		Crassula pubescens Thunb. subsp. pubescens	LC
CRASSULACEAE		Crassula rubricaulis Eckl. & Zeyh.	LC

CRASSULACEAE		Crassula rupestris Thunb. subsp. rupestris	LC
CRASSULACEAE		Crassula socialis Schönland	Rare
CRASSULACEAE		Crassula southii Schönland subsp. sphaerocephala Toelken	LC
CRASSULACEAE		Crassula subulata L. var. fastigiata (Schönland) Toelken	LC
CRASSULACEAE		Crassula subulata L. var. subulata	LC
CRASSULACEAE		Crassula tetragona L. subsp. rudis (Schönland & Baker f.) Toelken	LC
CRASSULACEAE		Crassula tetragona L. subsp. tetragona	LC
CRASSULACEAE		Crassula umbella Jacq.	LC
CRASSULACEAE		Crassula vestita Thunb.	Rare
CUCURBITACEAE		Kedrostis nana (Lam.) Cogn. var. nana	LC
CUCURBITACEAE		Kedrostis nana (Lam.) Cogn. var. zeyheri (Schrad.) A.Meeuse	LC
CUNONIACEAE		Cunonia capensis L.	LC
CUPRESSACEAE		Widdringtonia nodiflora (L.) Powrie	LC
CYPERACEAE		Cyperus congestus Vahl	LC
CYPERACEAE		Cyperus thunbergii Vahl	LC
CYPERACEAE		Capeobolus brevicaulis (C.B.Clarke) Browning	LC
CYPERACEAE		Carex glomerabilis V.I.Krecz.	LC
CYPERACEAE		Carpha glomerata (Thunb.) Nees	LC
CYPERACEAE		Cyperus laevigatus L.	LC
CYPERACEAE		Cyperus sphaerospermus Schrad.	LC
CYPERACEAE		Cyperus thunbergii Vahl	LC
CYPERACEAE		Ficinia angustifolia (Schrad.) Levyns	LC
CYPERACEAE		Ficinia anysbergensis Muasya	Rare
CYPERACEAE		Ficinia bulbosa (L.) Nees	LC
CYPERACEAE		Ficinia fascicularis Nees	LC
CYPERACEAE		Ficinia gracilis Schrad.	LC
CYPERACEAE		Ficinia indica (Lam.) H.Pfeiff.	LC
CYPERACEAE		Ficinia laciniata (Thunb.) Nees	LC
CYPERACEAE		Ficinia lateralis (Vahl) Kunth	LC
CYPERACEAE		Ficinia nigrescens (Schrad.) J.Raynal	LC
CYPERACEAE		Ficinia quinquangularis Boeckeler	LC
CYPERACEAE		Ficinia ramosissima Kunth	LC
CYPERACEAE		Ficinia repens (Nees) Kunth	LC
CYPERACEAE		Ficinia secunda (Vahl) Kunth	LC
CYPERACEAE		Ficinia stolonifera Boeckeler	LC
CYPERACEAE		Ficinia tristachya (Rottb.) Nees	LC
CYPERACEAE		Ficinia zeyheri Boeckeler	LC
CYPERACEAE		Hellmuthia membranacea (Thunb.) R.W.Haines & Lye	LC
CYPERACEAE		Isolepis cernua (Vahl) Roem. & Schult. var. cernua	LC
CYPERACEAE		Isolepis ludwigii (Steud.) Kunth	LC
CYPERACEAE		Isolepis marginata (Thunb.) A.Dietr.	LC
CYPERACEAE		Isolepis sororia Kunth	LC
CYPERACEAE	*	Isolepis tenuissima (Nees) Kunth	LC
CYPERACEAE		Pycreus polystachyos (Rottb.) P.Beauv. var. polystachyos	LC

CYPERACEAE		Rhynchospora brownii Roem. & Schult.	LC
CYPERACEAE		Schoenoplectus paludicola (Kunth) Palla	LC
CYPERACEAE		Tetraria bolusii C.B.Clarke	LC
CYPERACEAE		Tetraria capillacea (Thunb.) C.B.Clarke	LC
CYPERACEAE		Tetraria cuspidata (Rottb.) C.B.Clarke var. cuspidata	LC
CYPERACEAE		Tetraria fasciata (Rottb.) C.B.Clarke	LC
CYPERACEAE		Tetraria involucrata (Rottb.) C.B.Clarke	LC
CYPERACEAE		Tetraria microstachys (Vahl) H.Pfeiff.	LC
CYPERACEAE		Tetraria robusta (Kunth) C.B.Clarke	LC
CYPERACEAE		Tetraria secans C.B.Clarke	LC
CYPERACEAE		Tetraria ustulata (L.) C.B.Clarke	LC
CYTINACEAE		Cytinus sanguineus (Thunb.) Fourc.	LC
DIOSCOREACEAE		Dioscorea elephantipes (L'Hér.) Engl.	Declining
DIPSACACEAE		Scabiosa columbaria L.	LC
DROSERACEAE		Drosera aliciae Raym.-Hamet	LC
DROSERACEAE		Drosera capensis L.	LC
DROSERACEAE		Drosera cistiflora L.	LC
DRYOPTERIDACEAE		Dryopteris inaequalis (Schltdl.) Kuntze	LC
DRYOPTERIDACEAE		Polystichum incongruum J.P.Roux	LC
EBENACEAE		Diospyros austro-africana De Winter var. austro-africana	LC
EBENACEAE		Diospyros dichrophylla (Gand.) De Winter	LC
EBENACEAE		Diospyros glabra (L.) De Winter	LC
EBENACEAE		Diospyros lycioides Desf. subsp. lycioides	LC
EBENACEAE		Euclea crispa (Thunb.) Gürke subsp. crispa	LC
EBENACEAE		Euclea polyandra (L.f.) E.Mey. ex Hiern	LC
ERICACEAE		Erica aneimena Dulfer	VU
ERICACEAE		Erica anguliger (N.E.Br.) E.G.H.Oliv.	LC
ERICACEAE		Erica anguliger (N.E.Br.) E.G.H.Oliv.	LC
ERICACEAE		Erica arcuata Compton	LC
ERICACEAE		Erica articularis L. var. articularis	LC
ERICACEAE		Erica axillaris Thunb.	LC
ERICACEAE		Erica benthamiana E.G.H.Oliv.	LC
ERICACEAE		Erica brachycentra Benth.	LC
ERICACEAE		Erica bracteolaris Lam.	LC
ERICACEAE		Erica brevifolia Sol. ex Salisb.	LC
ERICACEAE		Erica caffra L. var. caffra	LC
ERICACEAE		Erica canaliculata Andrews	LC
ERICACEAE		Erica cerinthoides L. var. cerinthoides	LC
ERICACEAE		Erica coccinea L. subsp. coccinea	LC
ERICACEAE		Erica coccinea L. subsp. uniflora E.G.H.Oliv. & I.M.Oliv.	LC
ERICACEAE		Erica conferta Andrews	LC
ERICACEAE		Erica copiosa J.C.Wendl. var. copiosa	LC
ERICACEAE		Erica cordata Andrews var. arachnoidea (Klotzsch) Dulfer	DDT
ERICACEAE		Erica cordata Andrews var. cordata	LC
ERICACEAE		Erica cruenta Sol.	LC

ERICACEAE		Erica cubica L. var. cubica	LC
ERICACEAE		Erica curviflora L.	LC
ERICACEAE		Erica curviflora L. var. curviflora	Not Evaluated
ERICACEAE		Erica deflexa Sinclair	LC
ERICACEAE		Erica demissa Klotzsch ex Benth. var. demissa	LC
ERICACEAE		Erica densifolia Willd.	LC
ERICACEAE		Erica diaphana Spreng.	LC
ERICACEAE		Erica dilatata H.L.Wendl. ex Benth.	
ERICACEAE		Erica dispar (N.E.Br.) E.G.H.Oliv.	NT
ERICACEAE		Erica ericoides (L.) E.G.H.Oliv.	LC
ERICACEAE		Erica fimbriata Andrews	LC
ERICACEAE		Erica formosa Thunb.	LC
ERICACEAE		Erica fuscescens (Klotzsch) E.G.H.Oliv.	LC
ERICACEAE		Erica georgica Guthrie & Bolus	LC
ERICACEAE		Erica gillii Benth.	VU
ERICACEAE		Erica glandulosa Thunb. subsp. fourcadei (L.Bolus) E.G.H.Oliv. & I.M.Oliv.	VU
ERICACEAE		Erica glandulosa Thunb. subsp. glandulosa	LC
ERICACEAE		Erica glomiflora Salisb. var. glomiflora	LC
ERICACEAE		Erica gracilis J.C.Wendl.	LC
ERICACEAE		Erica grata Guthrie & Bolus	Rare
ERICACEAE		Erica hispidula L. var. hispidula	LC
ERICACEAE		Erica imbricata L.	LC
ERICACEAE		Erica inflaticalyx E.G.H.Oliv.	Rare
ERICACEAE		Erica intermedia Klotzsch ex Benth. subsp. albiflora E.G.H.Oliv. & I.M.Oliv.	Rare
ERICACEAE		Erica intermedia Klotzsch ex Benth. subsp. intermedia	LC
ERICACEAE		Erica juniperina E.G.H.Oliv.	EN
ERICACEAE		Erica klotzschii (Alm & T.C.E.Fr.) E.G.H.Oliv.	LC
ERICACEAE		Erica lasciva Salisb.	LC
ERICACEAE		Erica lehmannii Klotzsch ex Benth.	LC
ERICACEAE		Erica leucopelta Tausch var. leucopelta	LC
ERICACEAE		Erica longimontana E.G.H.Oliv.	LC
ERICACEAE		Erica melanthera L.	LC
ERICACEAE		Erica mucronata Andrews	LC
ERICACEAE		Erica muirii L.Bolus	DDT
ERICACEAE		Erica muscosa (Aiton) E.G.H.Oliv.	LC
ERICACEAE		Erica nematophylla Guthrie & Bolus	VU
ERICACEAE		Erica nutans J.C.Wendl.	LC
ERICACEAE		Erica opulenta (J.C.Wendl. ex Klotzsch) Benth.	LC
ERICACEAE		Erica outeniquae (Compton) E.G.H.Oliv.	VU
ERICACEAE		Erica palliiflora Salisb.	LC
ERICACEAE		Erica pearsoniana L.Bolus	DDT
ERICACEAE		Erica peltata Andrews	LC
ERICACEAE		Erica penicilliformis Salisb. var. penicilliformis	LC
ERICACEAE		Erica petraea Benth.	LC

ERICACEAE		Erica plukenetii L. subsp. plukenetii	LC
ERICACEAE		Erica pulchella Houtt. var. pulchella	LC
ERICACEAE		Erica quadrangularis Salisb.	LC
ERICACEAE		Erica quadrifida (Benth.) E.G.H.Oliv.	LC
ERICACEAE		Erica rosacea (L.Guthrie) E.G.H.Oliv. subsp. glabrata E.G.H.Oliv.	LC
ERICACEAE		Erica rosacea (L.Guthrie) E.G.H.Oliv. subsp. rosacea	LC
ERICACEAE		Erica scabriuscula Lodd.	LC
ERICACEAE		Erica seriphiifolia Salisb.	LC
ERICACEAE		Erica seriphiifolia Salisb.	LC
ERICACEAE		Erica sessiliflora L.f.	LC
ERICACEAE		Erica similis (N.E.Br.) E.G.H.Oliv.	LC
ERICACEAE		Erica solandri Andrews	LC
ERICACEAE		Erica sparsa Lodd. var. sparsa	LC
ERICACEAE		Erica steinbergiana H.L.Wendl. ex Klotzsch var. abbreviata Bolus	DDT
ERICACEAE		Erica steinbergiana H.L.Wendl. ex Klotzsch var. steinbergiana	LC
ERICACEAE		Erica stylaris Spreng.	VU
ERICACEAE		Erica tenuis Salisb.	LC
ERICACEAE		Erica tetragona L.f.	LC
ERICACEAE		Erica tetrathecoides Benth.	VU
ERICACEAE		Erica tragulifera Salisb.	LC
ERICACEAE		Erica transparens P.J.Bergius	LC
ERICACEAE		Erica triceps Link	LC
ERICACEAE		Erica uberiflora E.G.H.Oliv.	LC
ERICACEAE		Erica umbelliflora Klotzsch ex Benth.	LC
ERICACEAE		Erica unicolor J.C.Wendl. subsp. mutica E.G.H.Oliv. & I.M.Oliv.	EN
ERICACEAE		Erica unicolor J.C.Wendl. subsp. unicolor	LC
ERICACEAE		Erica velatiflora E.G.H.Oliv.	VU
ERICACEAE		Erica vestita Thunb.	LC
ERICACEAE		Erica viridiflora Andrews subsp. viridiflora	LC
ERICACEAE		Erica viscosissima E.G.H.Oliv.	VU
ERICACEAE		Erica zebrensis Compton	EN
ERICACEAE		Erica zwartbergensis Bolus	Rare
ERIOSPERMACEAE		Eriospermum cordiforme Salter	LC
ERIOSPERMACEAE		Eriospermum vermiforme P.L.Perry	EN
EUPHORBIACEAE		Acalypha capensis (L.f.) Prain & Hutch.	LC
EUPHORBIACEAE		Adenocline acuta (Thunb.) Baill.	LC
EUPHORBIACEAE		Clutia affinis Sond.	LC
EUPHORBIACEAE		Clutia alaternoides L. var. alaternoides	LC
EUPHORBIACEAE		Clutia alaternoides L. var. brevifolia E.Mey. ex Sond.	LC
EUPHORBIACEAE		Clutia ericoides Thunb. var. ericoides	LC
EUPHORBIACEAE		Clutia laxa Eckl. ex Sond.	LC
EUPHORBIACEAE		Clutia polifolia Jacq.	LC
EUPHORBIACEAE		Clutia pterogona Müll.Arg.	LC
EUPHORBIACEAE		Clutia pulchella L. var. franksiae Prain	LC

EUPHORBIACEAE		Euphorbia barnardii A.C.White, R.A.Dyer & B.Sloane	EN
EUPHORBIACEAE		Euphorbia burmannii E.Mey. ex Boiss.	LC
EUPHORBIACEAE		Euphorbia clandestina Jacq.	LC
EUPHORBIACEAE		Euphorbia erythrina Link var. erythrina	LC
EUPHORBIACEAE		Euphorbia heptagona L. var. heptagona	LC
EUPHORBIACEAE		Euphorbia kraussiana Bernh. var. kraussiana	LC
EUPHORBIACEAE		Euphorbia mauritanica L. var. mauritanica	LC
EUPHORBIACEAE		Euphorbia peplus L.	Not Evaluated
EUPHORBIACEAE	*	Euphorbia silenifolia (Haw.) Sweet	LC
FABACEAE		Acacia cyclops A.Cunn. ex G.Don	Not Evaluated
FABACEAE		Acacia dealbata Link	Not Evaluated
FABACEAE		Acacia karroo Hayne	LC
FABACEAE		Acacia mearnsii De Wild.	Not Evaluated
FABACEAE		Amphithalea axillaris Granby	Rare
FABACEAE		Amphithalea ciliaris Eckl. & Zeyh.	LC
FABACEAE		Amphithalea flava (Granby) A.L.Schutte	VU
FABACEAE		Amphithalea fourcadei Compton	LC
FABACEAE		Amphithalea intermedia Eckl. & Zeyh.	LC
FABACEAE		Amphithalea micrantha Walp.	LC
FABACEAE		Amphithalea violacea (E.Mey.) Benth.	LC
FABACEAE		Amphithalea violacea (E.Mey.) Benth.	LC
FABACEAE		Argyrolobium argenteum Eckl. & Zeyh.	LC
FABACEAE		Argyrolobium pumilum Eckl. & Zeyh.	LC
FABACEAE		Aspalathus acutiflora R.Dahlgren	EN
FABACEAE		Aspalathus opaca Eckl. & Zeyh. subsp. pappeana (Harv.) R.Dahlgren	LC
FABACEAE		Cyclopia bowieana Harv.	LC
FABACEAE		Dipogon lignosus (L.) Verdc.	LC
FABACEAE		Dolichos hastaeformis E.Mey.	LC
FABACEAE		Hypocalyptus coluteoides (Lam.) R.Dahlgren	LC
FABACEAE		Hypocalyptus oxalidifolius (Sims) Baill.	LC
FABACEAE		Indigofera alopecuroides (Burm.f.) DC. var. minor E.Mey.	LC
FABACEAE		Indigofera alternans DC. var. alternans	LC
FABACEAE		Indigofera brachystachya (DC.) E.Mey.	LC
FABACEAE		Indigofera declinata E.Mey.	LC
FABACEAE		Indigofera denudata L.f.	LC
FABACEAE		Indigofera depressa Harv.	LC
FABACEAE		Indigofera digitata Thunb.	LC
FABACEAE		Indigofera flabellata Harv.	LC
FABACEAE		Indigofera hamulosa Schltr.	LC
FABACEAE		Indigofera heterophylla Thunb.	LC
FABACEAE		Indigofera incana Thunb.	LC
FABACEAE		Indigofera nigromontana Eckl. & Zeyh.	LC
FABACEAE		Indigofera pappei Fourc.	LC

FABACEAE		Indigofera porrecta Eckl. & Zeyh. var. porrecta	Not Evaluated
FABACEAE		Indigofera procumbens L.	LC
FABACEAE		Indigofera stricta L.f.	LC
FABACEAE		Indigofera sulcata DC.	LC
FABACEAE		Indigofera tomentosa Eckl. & Zeyh.	NT
FABACEAE		Indigofera verrucosa Eckl. & Zeyh.	LC
FABACEAE		Lablab purpureus (L.) Sweet subsp. purpureus	Not Evaluated
FABACEAE		Lebeckia meyeriana Eckl. & Zeyh.	EN
FABACEAE		Lebeckia pauciflora Eckl. & Zeyh.	LC
FABACEAE		Lessertia herbacea (L.) Druce	LC
FABACEAE		Liparia hirsuta Thunb.	LC
FABACEAE		Lotononis filiformis B.-E.van Wyk	EN
FABACEAE		Lotononis glabra (Thunb.) D.Dietr.	LC
FABACEAE		Lotononis pungens Eckl. & Zeyh.	LC
FABACEAE		Lotononis umbellata (L.) Benth.	LC
FABACEAE		Lotus subbiflorus Lag. subsp. subbiflorus	Not Evaluated
FABACEAE		Medicago sativa L.	Not Evaluated
FABACEAE		Melilotus indicus (L.) All.	Not Evaluated
FABACEAE		Melolobium exudans Harv.	LC
FABACEAE		Ornithopus sativus Brot.	Not Evaluated
FABACEAE		Otholobium bowieanum (Harv.) C.H.Stirt.	EN
FABACEAE		Otholobium bracteolatum (Eckl. & Zeyh.) C.H.Stirt.	LC
FABACEAE		Otholobium carneum (E.Mey.) C.H.Stirt.	Rare
FABACEAE		Otholobium prodiens C.H.Stirt.	Not Evaluated
FABACEAE		Otholobium racemosum (Thunb.) C.H.Stirt.	Rare
FABACEAE		Otholobium sericeum (Poir.) C.H.Stirt.	LC
FABACEAE		Podalyria burchellii DC.	LC
FABACEAE		Podalyria buxifolia (Retz.) Willd.	Not Evaluated
FABACEAE		Podalyria cordata R.Br.	VU
FABACEAE		Podalyria glauca DC.	Not Evaluated
FABACEAE		Podalyria hirsuta (Aiton) Willd.	LC
FABACEAE		Podalyria myrtillifolia (Retz.) Willd.	LC
FABACEAE		Podalyria sericea (Andrews) R.Br. ex Aiton f.	VU
FABACEAE		Psoralea affinis Eckl. & Zeyh.	LC
FABACEAE		Psoralea arborea Sims	LC
FABACEAE		Psoralea monophylla (L.) C.H.Stirt.	LC
FABACEAE		Psoralea oligophylla Eckl. & Zeyh.	LC
FABACEAE		Psoralea pinnata L. var. pinnata	LC
FABACEAE		Psoralea plauta C.H.Stirt.	LC
FABACEAE	*	Psoralea speciosa Eckl. & Zeyh.	LC
FABACEAE	*	Psoralea triflora Thunb.	LC

FABACEAE	*	Rafnia capensis (L.) Schinz subsp. capensis	LC
FABACEAE	*	Rafnia diffusa Thunb.	LC
FABACEAE	*	Rafnia racemosa Eckl. & Zeyh. subsp. racemosa	LC
FABACEAE		Rafnia vlokii G.J.Campbell & B.-E.van Wyk	VU
FABACEAE		Rhynchosia atropurpurea Germish.	LC
FABACEAE		Rhynchosia calvescens Meikle	LC
FABACEAE	*	Rhynchosia capensis (Burm.f.) Schinz	LC
FABACEAE		Rhynchosia chrysoscias Benth. ex Harv.	LC
FABACEAE	*	Rhynchosia ciliata (Thunb.) Schinz	LC
FABACEAE	*	Rhynchosia microscias Benth. ex Harv.	LC
FABACEAE	*	Rhynchosia totta (Thunb.) DC. var. totta	LC
FABACEAE		Schotia afra (L.) Thunb. var. afra	LC
FABACEAE	*	Senna multiglandulosa (Jacq.) H.S.Irwin & Barneby	Not Evaluated
FABACEAE	*	Senna occidentalis (L.) Link	Not Evaluated
FABACEAE	*	Sutherlandia frutescens (L.) R.Br.	LC
FABACEAE		Tephrosia capensis (Jacq.) Pers. var. capensis	LC
FABACEAE	*	Trifolium campestre Schreb. var. campestre	Not Evaluated
FABACEAE	*	Trifolium dubium Sibth.	Not Evaluated
FABACEAE	*	Trifolium glomeratum L.	Not Evaluated
FABACEAE	*	Trifolium repens L.	Not Evaluated
FABACEAE		Vicia hirsuta (L.) Gray	Not Evaluated
FABACEAE		Vicia sativa L. subsp. sativa	Not Evaluated
FABACEAE		Virgilia divaricata Adamson	LC
FABACEAE		Virgilia oroboides (P.J.Bergius) T.M.Salter subsp. oroboides	LC
FABACEAE		Wiborgia obcordata (P.J.Bergius) Thunb.	LC
FABACEAE		Wiborgiella fasciculata (Benth.) Boatwr. & B.-E.van Wyk	CR
FABACEAE		Xiphotheca phylicoides A.L.Schutte & B.-E.van Wyk	CR
FRANKENIACEAE		Frankenia pulverulenta L.	LC
FRANKENIACEAE		Frankenia repens (P.J.Bergius) Fourc.	LC
FUMARIACEAE	*	Fumaria muralis Sond. ex W.D.J.Koch subsp. muralis	Not Evaluated
FUNARIACEAE		Funaria hygrometrica Hedw.	
GENTIANACEAE		Chironia baccifera L.	LC
GENTIANACEAE		Chironia melampyrifolia Lam.	LC
GENTIANACEAE		Chironia melampyrifolia Lam.	LC
GENTIANACEAE		Sebaea aurea (L.f.) Roem. & Schult.	LC
GENTIANACEAE		Sebaea scabra Schinz	NT
GENTIANACEAE		Sebaea schlechteri Schinz	LC
GENTIANACEAE		Sebaea stricta (E.Mey.) Gilg	LC
GENTIANACEAE		Sebaea zeyheri Schinz subsp. acutiloba (Schinz) Marais	LC
GERANIACEAE		Geranium incanum Burm.f. var. incanum	LC
GERANIACEAE		Geranium molle L.	Not Evaluated

GERANIACEAE		Monsonia emarginata (L.f.) L'Hér.	LC
GERANIACEAE		Monsonia galpinii Schltr. ex R.Knuth	DDT
GERANIACEAE		Pelargonium abrotanifolium (L.f.) Jacq.	LC
GERANIACEAE		Pelargonium alchemilloides (L.) L'Hér.	LC
GERANIACEAE		Pelargonium betulinum (L.) L'Hér.	LC
GERANIACEAE		Pelargonium brevirostre R.A.Dyer	DDD
GERANIACEAE		Pelargonium candicans Spreng.	LC
GERANIACEAE		Pelargonium capitatum (L.) L'Hér.	LC
GERANIACEAE		Pelargonium carneum Jacq.	LC
GERANIACEAE		Pelargonium caucalifolium Jacq. subsp. caucalifolium	LC
GERANIACEAE		Pelargonium caucalifolium Jacq. subsp. convolvulifolium (Schltr. ex R.Knuth) J.J.A.van der Walt	LC
GERANIACEAE		Pelargonium cordifolium (Cav.) Curtis	LC
GERANIACEAE		Pelargonium denticulatum Jacq.	Rare
GERANIACEAE		Pelargonium dipetalum L'Hér.	LC
GERANIACEAE		Pelargonium fruticosum (Cav.) Willd.	LC
GERANIACEAE		Pelargonium grossularioides (L.) L'Hér.	LC
GERANIACEAE		Pelargonium lobatum (Burm.f.) L'Hér.	LC
GERANIACEAE		Pelargonium longifolium (Burm.f.) Jacq.	LC
GERANIACEAE		Pelargonium myrrhifolium (L.) L'Hér. var. coriandrifolium (L.) Harv.	LC
GERANIACEAE		Pelargonium myrrhifolium (L.) L'Hér. var. myrrhifolium	LC
GERANIACEAE		Pelargonium odoratissimum (L.) L'Hér.	LC
GERANIACEAE		Pelargonium papilionaceum (L.) L'Hér.	LC
GERANIACEAE		Pelargonium parvirostre R.A.Dyer	LC
GERANIACEAE		Pelargonium peltatum (L.) L'Hér.	LC
GERANIACEAE		Pelargonium pinnatum (L.) L'Hér.	LC
GERANIACEAE		Pelargonium plurisectum Salter	VU
GERANIACEAE		Pelargonium radens H.E.Moore	LC
GERANIACEAE		Pelargonium rapaceum (L.) L'Hér.	LC
GERANIACEAE		Pelargonium scabrum (Burm.f.) L'Hér.	LC
GERANIACEAE		Pelargonium ternatum (L.f.) Jacq.	LC
GERANIACEAE		Pelargonium tricolor Curtis	LC
GERANIACEAE		Pelargonium trifidum Jacq.	LC
GERANIACEAE		Pelargonium triste (L.) L'Hér.	LC
GERANIACEAE		Pelargonium vitifolium (L.) L'Hér.	LC
GERANIACEAE		Pelargonium zonale (L.) L'Hér.	LC
GLEICHENIACEAE		Gleichenia polypodioides (L.) Sm.	LC
GOODENIACEAE		Scaevola plumieri (L.) Vahl	LC
GRUBBIACEAE		Grubbia rosmarinifolia P.J.Bergius subsp. rosmarinifolia var. rosmarinifolia	LC
HAEMODORACEAE		Dilatris ixioides Lam.	LC
HAEMODORACEAE		Dilatris ixioides Lam.	LC
HAEMODORACEAE		Wachendorfia paniculata Burm.	LC
HAEMODORACEAE		Wachendorfia thyrsiflora Burm.	LC
HEMEROCALLIDACEAE		Caesia contorta (L.f.) T.Durand & Schinz	LC
HYACINTHACEAE		Albuca acuminata Baker	LC

HYACINTHACEAE		Albuca namaquensis Baker	LC
HYACINTHACEAE		Dipcadi brevifolium (Thunb.) Fourc.	LC
HYACINTHACEAE		Drimia capensis (Burm.f.) Wijnands	LC
HYACINTHACEAE		Lachenalia bulbifera (Cirillo) Engl.	LC
HYACINTHACEAE		Lachenalia haarlemensis Fourc.	VU
HYACINTHACEAE		Lachenalia mediana Jacq. var. rogersii (Baker) W.F.Barker	EN
HYACINTHACEAE		Lachenalia nervosa Ker Gawl.	EN
HYACINTHACEAE		Lachenalia orchioides (L.) Aiton var. orchioides	LC
HYACINTHACEAE		Lachenalia rosea Andrews	LC
HYACINTHACEAE		Lachenalia youngii Baker	LC
HYACINTHACEAE		Ledebouria cooperi (Hook.f.) Jessop	LC
HYACINTHACEAE		Ledebouria revoluta (L.f.) Jessop	LC
HYACINTHACEAE		Massonia echinata L.f.	LC
HYACINTHACEAE		Ornithogalum dubium Houtt.	LC
HYACINTHACEAE		Ornithogalum graminifolium Thunb.	LC
HYACINTHACEAE		Ornithogalum juncifolium Jacq. var. juncifolium	LC
HYPERICACEAE		Hypericum lalandii Choisy	LC
HYPOXIDACEAE		Hypoxis setosa Baker	LC
HYPOXIDACEAE		Hypoxis sobolifera Jacq. var. sobolifera (Jacq.) Nel	LC
HYPOXIDACEAE		Spiloxene capensis (L.) Garside	LC
HYPOXIDACEAE		Spiloxene dielsiana (Nel) Garside	LC
HYPOXIDACEAE		Spiloxene flaccida (Nel) Garside	LC
IRIDACEAE		Aristea africana (L.) Hoffmanns.	LC
IRIDACEAE		Aristea juncifolia Baker	LC
IRIDACEAE		Aristea oligocephala Baker	LC
IRIDACEAE		Aristea pusilla (Thunb.) Ker Gawl.	LC
IRIDACEAE		Aristea simplex Weim.	NT
IRIDACEAE		Babiana fourcadei G.J.Lewis	LC
IRIDACEAE		Babiana nana (Andrews) Spreng. subsp. maculata (Klatt) Goldblatt & J.C.Manning	NT
IRIDACEAE		Babiana patersoniae L.Bolus	LC
IRIDACEAE		Babiana patula N.E.Br.	Declining
IRIDACEAE		Babiana sambucina (Jacq.) Ker Gawl. subsp. sambucina	LC
IRIDACEAE		Bobartia aphylla (L.f.) Ker Gawl.	LC
IRIDACEAE		Bobartia filiformis (L.f.) Ker Gawl.	LC
IRIDACEAE		Bobartia macrospatha Baker subsp. anceps (Baker) Strid	Rare
IRIDACEAE		Bobartia orientalis J.B.Gillett subsp. orientalis	LC
IRIDACEAE		Bobartia robusta Baker	LC
IRIDACEAE		Chasmanthe aethiopica (L.) N.E.Br.	LC
IRIDACEAE		Freesia fergusoniae L.Bolus	EN
IRIDACEAE		Freesia refracta (Jacq.) Klatt	LC
IRIDACEAE		Geissorhiza bracteata Klatt	LC
IRIDACEAE		Geissorhiza foliosa Klatt	NT
IRIDACEAE		Geissorhiza inconspicua Baker	LC
IRIDACEAE		Geissorhiza ornithogaloides Klatt subsp. ornithogaloides	LC

IRIDACEAE		Geissorhiza outeniquensis Goldblatt	NT
IRIDACEAE		Geissorhiza ovata (Burm.f.) Asch. & Graebn.	LC
IRIDACEAE		Geissorhiza roseoalba (G.J.Lewis) Goldblatt	LC
IRIDACEAE		Gladiolus carneus D.Delaroche	LC
IRIDACEAE		Gladiolus cunonius (L.) Gaertn.	LC
IRIDACEAE		Gladiolus engysiphon G.J.Lewis	VU
IRIDACEAE		Gladiolus exilis G.J.Lewis	NT
IRIDACEAE		Gladiolus floribundus Jacq.	LC
IRIDACEAE		Gladiolus gracilis Jacq.	LC
IRIDACEAE		Gladiolus grandiflorus Andrews	LC
IRIDACEAE		Gladiolus gueinzii Kunze	LC
IRIDACEAE		Gladiolus involutus D.Delaroche	LC
IRIDACEAE		Gladiolus leptosiphon F.Bolus	VU
IRIDACEAE		Gladiolus liliaceus Houtt.	LC
IRIDACEAE		Gladiolus maculatus Sweet	LC
IRIDACEAE		Gladiolus mutabilis G.J.Lewis	LC
IRIDACEAE		Gladiolus patersoniae F.Bolus	LC
IRIDACEAE		Gladiolus permeabilis D.Delaroche subsp. permeabilis	LC
IRIDACEAE		Gladiolus rogersii Baker	LC
IRIDACEAE		Gladiolus stellatus G.J.Lewis	LC
IRIDACEAE		Gladiolus teretifolius Goldblatt & M.P.de Vos	NT
IRIDACEAE		Gladiolus tristis L.	LC
IRIDACEAE		Hesperantha acuta (Licht. ex Roem. & Schult.) Ker Gawl. subsp. acuta	LC
IRIDACEAE		Hesperantha falcata (L.f.) Ker Gawl.	LC
IRIDACEAE		Ixia latifolia D.Delaroche	LC
IRIDACEAE		Ixia micrandra Baker var. confusa G.J.Lewis	LC
IRIDACEAE		Ixia orientalis L.Bolus	LC
IRIDACEAE		Lapeirousia anceps (L.f.) Ker Gawl.	LC
IRIDACEAE		Lapeirousia pyramidalis (Lam.) Goldblatt subsp. pyramidalis	LC
IRIDACEAE		Melasphaerula ramosa (L.) N.E.Br.	LC
IRIDACEAE		Micranthus alopecuroides (L.) Rothm.	LC
IRIDACEAE		Moraea angusta (Thunb.) Ker Gawl.	LC
IRIDACEAE		Moraea bipartita L.Bolus	LC
IRIDACEAE		Moraea bulbillifera (G.J.Lewis) Goldblatt subsp. anomala (Goldblatt) Goldblatt	LC
IRIDACEAE		Moraea bulbillifera (G.J.Lewis) Goldblatt subsp. bulbillifera	LC
IRIDACEAE		Moraea falcifolia Klatt	LC
IRIDACEAE		Moraea fergusoniae L.Bolus	LC
IRIDACEAE		Moraea inconspicua Goldblatt	LC
IRIDACEAE		Moraea lilacina Goldblatt & J.C.Manning	EN
IRIDACEAE		Moraea polyanthos L.f.	LC
IRIDACEAE		Moraea polystachya (Thunb.) Ker Gawl.	LC
IRIDACEAE		Moraea reticulata Goldblatt	LC
IRIDACEAE		Moraea spathulata (L.f.) Klatt	LC
IRIDACEAE		Moraea tripetala (L.f.) Ker Gawl.	LC

IRIDACEAE		Moraea unguiculata Ker Gawl.	LC
IRIDACEAE		Moraea virgata Jacq. subsp. virgata	LC
IRIDACEAE		Romulea fibrosa M.P.de Vos	LC
IRIDACEAE		Romulea jugicola M.P.de Vos	VU
IRIDACEAE		Romulea rosea (L.) Eckl. var. australis (Ewart) M.P.de Vos	LC
IRIDACEAE		Romulea rosea (L.) Eckl. var. rosea	LC
IRIDACEAE		Syringodea longituba (Klatt) Kuntze var. longituba	Not Evaluated
IRIDACEAE		Syringodea longituba (Klatt) Kuntze var. violacea M.P.de Vos	Not Evaluated
IRIDACEAE		Tritonia crocata (L.) Ker Gawl.	LC
IRIDACEAE		Tritonia deusta (Aiton) Ker Gawl. subsp. miniata (Jacq.) M.P.de Vos	LC
IRIDACEAE		Tritonia pallida Ker Gawl. subsp. taylorae (L.Bolus) M.P.de Vos	VU
IRIDACEAE		Tritonia securigera (Aiton) Ker Gawl. subsp. securigera	LC
IRIDACEAE		Tritoniopsis antholyza (Poir.) Goldblatt	LC
IRIDACEAE		Tritoniopsis caffra (Ker Gawl. ex Baker) Goldblatt	LC
IRIDACEAE		Tritoniopsis ramosa (Eckl. ex Klatt) G.J.Lewis var. unguiculata (Baker) G.J.Lewis	LC
IRIDACEAE		Tritoniopsis triticea (Burm.f.) Goldblatt	LC
IRIDACEAE		Watsonia aletroides (Burm.f.) Ker Gawl.	NT
IRIDACEAE		Watsonia angusta Ker Gawl.	LC
IRIDACEAE		Watsonia fourcadei J.W.Mathews & L.Bolus	LC
IRIDACEAE		Watsonia knysnana L.Bolus	LC
IRIDACEAE		Watsonia laccata (Jacq.) Ker Gawl.	LC
IRIDACEAE		Watsonia pillansii L.Bolus	LC
IRIDACEAE		Watsonia schlechteri L.Bolus	LC
JUNCACEAE		Juncus acutus L. subsp. leopoldii (Parl.) Snogerup	LC
JUNCACEAE		Juncus capensis Thunb.	LC
JUNCACEAE		Juncus dregeanus Kunth subsp. dregeanus	LC
LAMIACEAE		Ballota africana (L.) Benth.	LC
LAMIACEAE		Lamium amplexicaule L.	Not Evaluated
LAMIACEAE		Leonotis ocymifolia (Burm.f.) Iwarsson	LC
LAMIACEAE		Plectranthus fruticosus L'Hér.	LC
LAMIACEAE		Salvia africana-lutea L.	LC
LAMIACEAE		Salvia muirii L.Bolus	LC
LAMIACEAE		Stachys aethiopica L.	LC
LAMIACEAE		Stachys graciliflora C.Presl	LC
LAMIACEAE		Stachys sublobata Skan	LC
LAMIACEAE	*	Teucrium africanum Thunb.	LC
LANARIACEAE		Lanaria lanata (L.) T.Durand & Schinz	LC
LAURACEAE	*	Cassytha filiformis L.	Not Evaluated
LINACEAE		Linum gracile Planch.	LC
LINACEAE		Linum villosum C.M.Rogers	LC
LOBELIACEAE		Cyphia dentariifolia C.Presl var. dentariifolia	DDT
LOBELIACEAE		Cyphia volubilis (Burm.f.) Willd. var. volubilis	LC
LOBELIACEAE		Lobelia ardisiandroides Schltr.	Rare

LOBELIACEAE		Lobelia chamaepitys Lam. var. chamaepitys	LC
LOBELIACEAE		Lobelia coronopifolia L.	LC
LOBELIACEAE		Lobelia cuneifolia Link & Otto var. cuneifolia	LC
LOBELIACEAE		Lobelia erinus L.	LC
LOBELIACEAE		Lobelia neglecta Roem. & Schult.	LC
LOBELIACEAE		Lobelia patula L.f.	LC
LOBELIACEAE		Lobelia pubescens Dryand. ex Aiton var. rotundifolia E.Wimm.	LC
LOBELIACEAE		Lobelia tomentosa L.f.	LC
LOBELIACEAE		Monopsis alba Phillipson	LC
LOBELIACEAE		Monopsis lutea (L.) Urb.	LC
LOBELIACEAE		Monopsis simplex (L.) E.Wimm.	LC
LOBELIACEAE		Monopsis unidentata (Dryand.) E.Wimm. subsp. unidentata	LC
LOBELIACEAE		Wimmerella pygmaea (Thunb.) L.Serra, M.B.Crespo & Lammers	LC
LORANTHACEAE		Moquiniella rubra (A.Spreng.) Balle	LC
LYCOPODIACEAE		Lycopodiella caroliniana (L.) Pic.Serm.	LC
LYCOPODIACEAE		Lycopodium zanclophyllum J.H.Wilce	LC
MALVACEAE		Abutilon sonneratianum (Cav.) Sweet	LC
MALVACEAE		Anisodontea scabrosa (L.) Bates	LC
MALVACEAE		Grewia occidentalis L. var. occidentalis	LC
MALVACEAE		Hermannia alnifolia L.	LC
MALVACEAE		Hermannia althaeifolia L.	LC
MALVACEAE		Hermannia angularis Jacq.	LC
MALVACEAE		Hermannia comosa Burch. ex DC.	LC
MALVACEAE		Hermannia cuneifolia Jacq. var. cuneifolia	LC
MALVACEAE		Hermannia decipiens E.Mey. ex Harv.	LC
MALVACEAE		Hermannia decumbens Willd. ex Spreng.	LC
MALVACEAE		Hermannia diversistipula C.Presl ex Harv. var. graciliflora I.Verd.	LC
MALVACEAE		Hermannia filifolia L.f. var. grandicalyx I.Verd.	LC
MALVACEAE		Hermannia flammea Jacq.	LC
MALVACEAE		Hermannia flammula Harv.	LC
MALVACEAE		Hermannia holosericea Jacq.	LC
MALVACEAE		Hermannia hyssopifolia L.	LC
MALVACEAE		Hermannia joubertiana Harv.	LC
MALVACEAE		Hermannia lavandulifolia L.	LC
MALVACEAE		Hermannia odorata Aiton	LC
MALVACEAE		Hermannia saccifera (Turcz.) K.Schum.	LC
MALVACEAE		Hermannia salviifolia L.f. var. salviifolia	LC
MALVACEAE		Hermannia spinosa E.Mey. ex Harv.	LC
MALVACEAE		Hermannia stipulacea Lehm. ex Eckl. & Zeyh.	LC
MALVACEAE		Hermannia velutina DC.	LC
MALVACEAE		Hermannia veronicifolia (Eckl. & Zeyh.) Hochr.	LC
MALVACEAE		Hibiscus aethiopicus L. var. ovatus Harv.	LC
MALVACEAE		Hibiscus trionum L.	
MALVACEAE		Lavatera arborea L.	Not Evaluated

MALVACEAE	*	Pavonia columella Cav.	LC
MELIACEAE		Nymania capensis (Thunb.) Lindb.	LC
MELIANTHACEAE		Melianthus comosus Vahl	LC
MENISPERMACEAE		Cissampelos capensis L.f.	LC
MESEMBRYANTHEMACEAE		Lampranthus verecundus (L.Bolus) N.E.Br.	DDD
MESEMBRYANTHEMACEAE		Lampranthus conspicuus (Haw.) N.E.Br.	DDT
MESEMBRYANTHEMACEAE		Lampranthus dependens (L.Bolus) L.Bolus	DDT
MESEMBRYANTHEMACEAE		Lampranthus prominulus (L.Bolus) L.Bolus	DDT
MESEMBRYANTHEMACEAE		Acrodon subulatus (Mill.) N.E.Br.	EN
MESEMBRYANTHEMACEAE		Drosanthemum lavisii L.Bolus	EN
MESEMBRYANTHEMACEAE		Lampranthus scaber (L.) N.E.Br.	EN
MESEMBRYANTHEMACEAE		Ruschia leptocalyx L.Bolus	EN
MESEMBRYANTHEMACEAE		Aptenia lancifolia L.Bolus	LC
MESEMBRYANTHEMACEAE		Carpobrotus deliciosus (L.Bolus) L.Bolus	LC
MESEMBRYANTHEMACEAE		Carpobrotus edulis (L.) L.Bolus subsp. edulis	LC
MESEMBRYANTHEMACEAE		Delosperma guthriei Lavis	VU
MESEMBRYANTHEMACEAE		Delosperma multiflorum L.Bolus	LC
MESEMBRYANTHEMACEAE		Drosanthemum brevifolium (Aiton) Schwantes	LC
MESEMBRYANTHEMACEAE		Lampranthus stayneri (L.Bolus) N.E.Br.	LC
MESEMBRYANTHEMACEAE		Lampranthus stipulaceus (L.) N.E.Br.	LC
MESEMBRYANTHEMACEAE		Mesembryanthemum aitonis Jacq.	LC
MESEMBRYANTHEMACEAE		Malephora luteola (Haw.) Schwantes	LC
MESEMBRYANTHEMACEAE		Oscularia deltoides (L.) Schwantes	LC
MESEMBRYANTHEMACEAE		Smicrostigma viride (Haw.) N.E.Br.	LC
MESEMBRYANTHEMACEAE		Acrodon bellidiflorus (L.) N.E.Br.	LC
MESEMBRYANTHEMACEAE		Carpobrotus acinaciformis (L.) L.Bolus	LC
MESEMBRYANTHEMACEAE		Carpobrotus edulis (L.) L.Bolus subsp. edulis	LC
MESEMBRYANTHEMACEAE		Dorotheanthus bellidiformis (Burm.f.) N.E.Br. subsp. bellidiformis	LC
MESEMBRYANTHEMACEAE		Drosanthemum brevifolium (Aiton) Schwantes	LC
MESEMBRYANTHEMACEAE		Drosanthemum candens (Haw.) Schwantes	LC
MESEMBRYANTHEMACEAE		Drosanthemum parvifolium (Haw.) Schwantes	LC
MESEMBRYANTHEMACEAE		Jordaaniella dubia (Haw.) H.E.K.Hartmann	LC
MESEMBRYANTHEMACEAE		Mesembryanthemum aitonis Jacq.	LC
MESEMBRYANTHEMACEAE		Phyllobolus canaliculatus (Haw.) Bittrich	LC
MESEMBRYANTHEMACEAE		Psilocaulon parviflorum (Jacq.) Schwantes	LC
MESEMBRYANTHEMACEAE		Ruschia calcicola (L.Bolus) L.Bolus	LC
MESEMBRYANTHEMACEAE		Acrodon bellidiflorus (L.) N.E.Br.	LC
MESEMBRYANTHEMACEAE		Drosanthemum parvifolium (Haw.) Schwantes	LC
MESEMBRYANTHEMACEAE		Lampranthus elegans (Jacq.) Schwantes	LC
MESEMBRYANTHEMACEAE		Cephalophyllum diversiphyllum (Haw.) H.E.K.Hartmann	NT
MESEMBRYANTHEMACEAE		Erepsia pentagona (L.Bolus) L.Bolus	NT
MESEMBRYANTHEMACEAE		Lampranthus sociorum (L.Bolus) N.E.Br.	VU
MOLLUGINACEAE		Limeum africanum L. subsp. africanum	LC
MOLLUGINACEAE		Limeum telephioides E.Mey. ex Fenzl var. telephioides	LC

MOLLUGINACEAE		Pharnaceum aurantium (DC.) Druce	LC
MOLLUGINACEAE		Pharnaceum elongatum (DC.) Adamson	LC
MYRICACEAE		Morella humilis (Cham. & Schltdl.) Killick	LC
MYRICACEAE		Morella kraussiana (Buchinger ex Meisn.) Killick	LC
MYRICACEAE		Morella cordifolia (L.) Killick	LC
MYRICACEAE		Morella quercifolia (L.) Killick	LC
MYRTACEAE	*	Leptospermum laevigatum (Gaertn.) F.Muell.	Not Evaluated
NEPHROLEPIDACEAE	*	Nephrolepis exaltata (L.) Schott	Not Evaluated
OLEACEAE		Chionanthus foveolatus (E.Mey.) Stearn subsp. tomentellus (I.Verd.) Stearn	LC
OLEACEAE		Olea capensis L. subsp. capensis	LC
OLEACEAE		Olea europaea L. subsp. africana (Mill.) P.S.Green	LC
OLEACEAE		Olea exasperata Jacq.	LC
ONAGRACEAE	*	Oenothera drummondii Hook. subsp. drummondii	Not Evaluated
ORCHIDACEAE		Acrolophia capensis (P.J.Bergius) Fourc.	LC
ORCHIDACEAE		Acrolophia cochlearis (Lindl.) Schltr. & Bolus	LC
ORCHIDACEAE		Ceratandra atrata (L.) T.Durand & Schinz	LC
ORCHIDACEAE		Ceratandra atrata (L.) T.Durand & Schinz	LC
ORCHIDACEAE		Ceratandra globosa Lindl.	LC
ORCHIDACEAE		Ceratandra grandiflora Lindl.	LC
ORCHIDACEAE		Corycium carnosum (Lindl.) Rolfe	LC
ORCHIDACEAE		Disa arida Vlok	EN
ORCHIDACEAE		Disa bivalvata (L.f.) T.Durand & Schinz	LC
ORCHIDACEAE		Disa bracteata Sw.	LC
ORCHIDACEAE		Disa cornuta (L.) Sw.	LC
ORCHIDACEAE		Disa cylindrica (Thunb.) Sw.	LC
ORCHIDACEAE		Disa filicornis (L.f.) Thunb.	LC
ORCHIDACEAE		Disa gladioliflora Burch. ex Lindl. subsp. gladioliflora	LC
ORCHIDACEAE		Disa graminifolia Ker Gawl. ex Spreng.	LC
ORCHIDACEAE		Disa hallackii Rolfe	EN
ORCHIDACEAE		Disa hians (L.f.) Spreng.	LC
ORCHIDACEAE		Disa inflexa (Lindl.) Bolus	LC
ORCHIDACEAE		Disa sagittalis (L.f.) Sw.	LC
ORCHIDACEAE		Disa salteri G.J.Lewis	LC
ORCHIDACEAE		Disa tripetaloides (L.f.) N.E.Br.	LC
ORCHIDACEAE		Disa vaginata Harv. ex Lindl.	LC
ORCHIDACEAE		Disperis capensis (L.f.) Sw. var. capensis	LC
ORCHIDACEAE		Disperis macowanii Bolus	LC
ORCHIDACEAE		Eulophia aculeata (L.f.) Spreng. subsp. aculeata	LC
ORCHIDACEAE		Eulophia tabularis (L.f.) Bolus	LC
ORCHIDACEAE		Holothrix burchellii (Lindl.) Rchb.f.	LC
ORCHIDACEAE		Holothrix parviflora (Lindl.) Rchb.f.	LC
ORCHIDACEAE		Holothrix pilosa (Burch. ex Lindl.) Rchb.f.	NT
ORCHIDACEAE		Holothrix villosa Lindl. var. villosa	LC

ORCHIDACEAE		Pterygodium acutifolium Lindl.	LC
ORCHIDACEAE		Pterygodium caffrum (L.) Sw.	LC
ORCHIDACEAE		Pterygodium volucris (L.f.) Sw.	LC
ORCHIDACEAE		Satyrium bicorne (L.) Thunb.	LC
ORCHIDACEAE		Satyrium coriifolium Sw.	LC
ORCHIDACEAE		Satyrium erectum Sw.	LC
ORCHIDACEAE		Satyrium ligulatum Lindl.	LC
ORCHIDACEAE		Satyrium longicolle Lindl.	LC
ORCHIDACEAE		Satyrium membranaceum Sw.	LC
ORCHIDACEAE		Satyrium muticum Lindl.	CR
ORCHIDACEAE		Satyrium odorum Sond.	LC
ORCHIDACEAE		Satyrium outeniquense Schltr.	LC
ORCHIDACEAE		Satyrium parviflorum Sw.	LC
ORCHIDACEAE		Satyrium retusum Lindl.	LC
ORCHIDACEAE		Satyrium rupestre Schltr. ex Bolus	LC
ORCHIDACEAE		Satyrium stenopetalum Lindl. subsp. stenopetalum	LC
OROBANCHACEAE		Cycnium tubulosum (L.f.) Engl. subsp. tubulosum	LC
OROBANCHACEAE		Graderia scabra (L.f.) Benth.	LC
OROBANCHACEAE		Harveya stenosiphon Hiern	LC
OROBANCHACEAE		Hyobanche sanguinea L.	LC
OROBANCHACEAE		Melasma scabrum P.J.Bergius var. scabrum	LC
OXALIDACEAE		Oxalis exserta T.M.Salter	LC
OXALIDACEAE		Oxalis heterophylla DC.	LC
OXALIDACEAE		Oxalis ioeides T.M.Salter & Exell	DDD
OXALIDACEAE		Oxalis obtusa Jacq.	LC
OXALIDACEAE		Oxalis orthopoda T.M.Salter	LC
OXALIDACEAE		Oxalis pardalis Sond.	DDT
OXALIDACEAE		Oxalis pocockiae L.Bolus	LC
OXALIDACEAE		Oxalis polyphylla Jacq. var. polyphylla	LC
OXALIDACEAE		Oxalis robinsonii T.M.Salter & Exell	DDT
PENAEACEAE		Penaea acutifolia A.Juss.	Rare
PENAEACEAE		Penaea cneorum Meerb. subsp. gigantea R.Dahlgren	LC
PENAEACEAE		Penaea cneorum Meerb. subsp. lanceolata R.Dahlgren	LC
PENAEACEAE		Penaea cneorum Meerb. subsp. ovata (Eckl. & Zeyh. ex A.DC.) R.Dahlgren	LC
PENAEACEAE		Penaea mucronata L.	LC
PHYLLANTHACEAE		Lachnostylis hirta (L.f.) Müll.Arg.	LC
PHYLLANTHACEAE		Phyllanthus incurvus Thunb.	LC
PHYLLANTHACEAE		Phyllanthus heterophyllus E.Mey. ex Müll.Arg.	LC
PLANTAGINACEAE		Plantago crassifolia Forssk. var. crassifolia	LC
PLANTAGINACEAE		Plantago lanceolata L.	LC
PLUMBAGINACEAE		Limonium decumbens (Boiss.) Kuntze	DDD
PLUMBAGINACEAE		Limonium scabrum (Thunb.) Kuntze var. scabrum	LC
POACEAE		Agrostis avenacea C.C.Gmel.	Not Evaluated
POACEAE		Agrostis bergiana Trin. var. bergiana	LC

POACEAE		Agrostis lachnantha Nees var. lachnantha	LC
POACEAE		Aira cupaniana Guss.	Not Evaluated
POACEAE		Ammophila arenaria (L.) Link	Not Evaluated
POACEAE		Andropogon appendiculatus Nees	LC
POACEAE		Aristida vestita Thunb.	LC
POACEAE		Brachiaria serrata (Thunb.) Stapf	LC
POACEAE		Briza minor L.	Not Evaluated
POACEAE		Bromus pectinatus Thunb.	LC
POACEAE		Cymbopogon marginatus (Steud.) Stapf ex Burtt Davy	LC
POACEAE		Cymbopogon pospischilii (K.Schum.) C.E.Hubb.	Not Evaluated
POACEAE		Cynodon dactylon (L.) Pers.	LC
POACEAE		Digitaria eriantha Steud.	LC
POACEAE		Ehrharta bulbosa Sm.	LC
POACEAE		Ehrharta calycina Sm.	LC
POACEAE		Ehrharta capensis Thunb.	LC
POACEAE		Ehrharta delicatula Stapf	LC
POACEAE		Ehrharta dura Nees ex Trin.	LC
POACEAE		Ehrharta erecta Lam. var. erecta	LC
POACEAE		Ehrharta ramosa (Thunb.) Thunb. subsp. ramosa	LC
POACEAE		Ehrharta rehmannii Stapf subsp. rehmannii	LC
POACEAE		Ehrharta rupestris Nees ex Trin. subsp. dodii (Stapf) Gibbs Russ.	LC
POACEAE		Ehrharta rupestris Nees ex Trin. subsp. tricostata (Stapf) Gibbs Russ.	LC
POACEAE		Ehrharta villosa J.H.Schult. var. villosa	LC
POACEAE		Eragrostis capensis (Thunb.) Trin.	LC
POACEAE		Eragrostis curvula (Schrad.) Nees	LC
POACEAE		Eragrostis gummiflua Nees	LC
POACEAE		Eragrostis plana Nees	LC
POACEAE		Eragrostis sarmentosa (Thunb.) Trin.	LC
POACEAE		Eustachys paspaloides (Vahl) Lanza & Mattei	LC
POACEAE		Festuca scabra Vahl	LC
POACEAE		Harpochloa falx (L.f.) Kuntze	LC
POACEAE		Helictotrichon hirtulum (Steud.) Schweick.	LC
POACEAE		Heteropogon contortus (L.) Roem. & Schult.	LC
POACEAE		Hyparrhenia anamesa Clayton	LC
POACEAE		Hyparrhenia hirta (L.) Stapf	LC
POACEAE		Koeleria capensis (Steud.) Nees	LC
POACEAE		Lolium perenne L.	Not Evaluated
POACEAE		Lolium rigidum Gaudin	Not Evaluated
POACEAE		Melica racemosa Thunb.	LC
POACEAE		Paspalum dilatatum Poir.	Not Evaluated
POACEAE		Paspalum distichum L.	LC
POACEAE		Paspalum scrobiculatum L.	LC

POACEAE		Pennisetum thunbergii Kunth	LC
POACEAE		Pentameris macrocalycina (Steud.) Schweick.	LC
POACEAE		Pentameris thuarii P.Beauv.	LC
POACEAE		Pentameris uniflora N.P.Barker	Rare
POACEAE		Pentaschistis pallida (Thunb.) H.P.Linder	Not Evaluated
POACEAE		Phalaris arundinacea L.	Not Evaluated
POACEAE		Polypogon monspeliensis (L.) Desf.	Not Evaluated
POACEAE		Polypogon viridis (Gouan) Breistr.	Not Evaluated
POACEAE		Schismus inermis (Stapf) C.E.Hubb.	LC
POACEAE		Setaria pumila (Poir.) Roem. & Schult.	LC
POACEAE		Setaria sphacelata (Schumach.) Stapf & C.E.Hubb. ex M.B.Moss var. sphacelata	LC
POACEAE	*	Sporobolus africanus (Poir.) Robyns & Tournay	LC
POACEAE	*	Sporobolus fimbriatus (Trin.) Nees	LC
POACEAE		Stipa dregeana Steud. var. dregeana	LC
POACEAE	*	Stipagrostis zeyheri (Nees) De Winter subsp. zeyheri	LC
POACEAE	*	Themeda triandra Forssk.	LC
POACEAE	*	Tribolium echinatum (Thunb.) Renvoize	LC
POACEAE	*	Tribolium hispidum (Thunb.) Desv.	LC
POACEAE	*	Tribolium uniolae (L.f.) Renvoize	LC
POACEAE	*	Triraphis andropogonoides (Steud.) E.Phillips	LC
POACEAE		Vulpia myuros (L.) C.C.Gmel.	Not Evaluated
POLYGALACEAE		Muraltia alopecuroides (L.) DC.	LC
POLYGALACEAE		Muraltia ciliaris DC.	LC
POLYGALACEAE		Muraltia depressa DC.	LC
POLYGALACEAE		Muraltia dispersa Levyns	LC
POLYGALACEAE		Muraltia dispersa Levyns	LC
POLYGALACEAE		Muraltia empleuridioides Schltr. var. empleuridioides	LC
POLYGALACEAE		Muraltia ericaefolia DC.	LC
POLYGALACEAE		Muraltia ericoides (Burm.f.) Steud.	LC
POLYGALACEAE		Muraltia knysnaensis Levyns	EN
POLYGALACEAE		Muraltia leptorhiza Turcz.	LC
POLYGALACEAE		Muraltia muirii F.Bolus	LC
POLYGALACEAE		Muraltia satureioides DC. var. satureioides	LC
POLYGALACEAE		Muraltia squarrosa (L.f.) DC.	LC
POLYGALACEAE		Muraltia thymifolia (Thunb.) DC.	LC
POLYGALACEAE		Polygala bracteolata L.	LC
POLYGALACEAE		Polygala ericaefolia DC.	LC
POLYGALACEAE		Polygala fruticosa P.J.Bergius	LC
POLYGALACEAE		Polygala garcinii DC.	LC
POLYGALACEAE		Polygala levynsiana Paiva	LC
POLYGALACEAE		Polygala myrtifolia L. var. myrtifolia	LC
POLYGALACEAE		Polygala myrtifolia L. var. pinifolia (Lam. ex Poir.) Paiva	LC
POLYGALACEAE		Polygala peduncularis Burch. ex DC.	LC

POLYGALACEAE		Polygala pubiflora Burch.	LC
POLYGALACEAE		Polygala pungens Burch.	LC
POLYGALACEAE		Polygala refracta DC.	LC
POLYGALACEAE		Polygala scabra L.	LC
POLYGALACEAE		Polygala umbellata L.	LC
POLYGALACEAE		Polygala wittebergensis Compton	LC
POLYGONACEAE		Emex australis Steinh.	
POLYGONACEAE		Persicaria attenuata (R.Br.) Soják subsp. africana K.L.Wilson	LC
POLYGONACEAE		Polytrichum juniperinum Hedw.	
POLYGONACEAE	*	Rumex acetosella L. subsp. angiocarpus (Murb.) Murb.	
POLYGONACEAE	*	Rumex cordatus Poir.	LC
POLYTRICHACEAE		Rumex sagittatus Thunb.	LC
PONTEDERIACEAE	*	Eichhornia crassipes (Mart.) Solms	Not Evaluated
PRIMULACEAE	*	Anagallis arvensis L. subsp. arvensis	Not Evaluated
PROTEACEAE		Aulax cancellata (L.) Druce	LC
PROTEACEAE		Hakea sericea Schrad. & J.C.Wendl.	Not Evaluated
PROTEACEAE		Leucadendron comosum (Thunb.) R.Br. subsp. comosum	LC
PROTEACEAE		Leucadendron conicum (Lam.) I.Williams	NT
PROTEACEAE		Leucadendron ericifolium R.Br.	LC
PROTEACEAE		Leucadendron eucalyptifolium H.Buek ex Meisn.	LC
PROTEACEAE		Leucadendron galpinii E.Phillips & Hutch.	VU
PROTEACEAE		Leucadendron olens I.Williams	NT
PROTEACEAE		Leucadendron pubibracteolatum I.Williams	NT
PROTEACEAE		Leucadendron rubrum Burm.f.	LC
PROTEACEAE		Leucadendron salignum P.J.Bergius	LC
PROTEACEAE		Leucadendron spissifolium (Salisb. ex Knight) I.Williams subsp. fragrans I.Williams	LC
PROTEACEAE		Leucadendron teretifolium (Andrews) I.Williams	NT
PROTEACEAE		Leucadendron tinctum I.Williams	NT
PROTEACEAE		Leucadendron uliginosum R.Br. subsp. glabratum I.Williams	Rare
PROTEACEAE		Leucadendron uliginosum R.Br. subsp. uliginosum	LC
PROTEACEAE		Leucospermum calligerum (Salisb. ex Knight) Rourke	LC
PROTEACEAE		Leucospermum catherinae Compton	EN
PROTEACEAE		Leucospermum cuneiforme (Burm.f.) Rourke	LC
PROTEACEAE		Leucospermum formosum (Andrews) Sweet	EN
PROTEACEAE		Leucospermum hamatum Rourke	EN
PROTEACEAE		Leucospermum pluridens Rourke	NT
PROTEACEAE		Leucospermum praecox Rourke	VU
PROTEACEAE		Leucospermum secundifolium Rourke	Rare
PROTEACEAE		Mimetes cucullatus (L.) R.Br.	LC
PROTEACEAE		Mimetes pauciflorus R.Br.	VU
PROTEACEAE		Paranomus dispersus Levyns	LC
PROTEACEAE		Paranomus dregei (H.Buek ex Meisn.) Kuntze	LC
PROTEACEAE		Paranomus longicaulis Salisb. ex Knight	VU

PROTEACEAE		Protea aspera E.Phillips	VU
PROTEACEAE		Protea aurea (Burm.f.) Rourke subsp. aurea	LC
PROTEACEAE		Protea coronata Lam.	NT
PROTEACEAE		Protea cynaroides (L.) L.	LC
PROTEACEAE		Protea decurrens E.Phillips	EN
PROTEACEAE	*	Protea eximia (Salisb. ex Knight) Fourc.	LC
PROTEACEAE		Protea lanceolata E.Mey. ex Meisn.	LC
PROTEACEAE		Protea laurifolia Thunb.	LC
PROTEACEAE		Protea lorifolia (Salisb. ex Knight) Fourc.	LC
PROTEACEAE		Protea mundii Klotzsch	LC
PROTEACEAE		Protea neriifolia R.Br.	LC
PROTEACEAE		Protea nitida Mill.	LC
PROTEACEAE		Protea repens (L.) L.	LC
PROTEACEAE		Protea speciosa (L.) L.	LC
PROTEACEAE		Protea welwitschii Engl.	LC
PROTEACEAE		Serruria fasciflora Salisb. ex Knight	NT
PROTEACEAE		Spatalla barbigera Salisb. ex Knight	NT
PTERIDACEAE		Adiantum capillus-veneris L.	LC
PTERIDACEAE	*	Pteris tremula R.Br.	Not Evaluated
RESEDACEAE		Reseda lutea L. subsp. lutea var. nutans Boiss.	LC
RESTIONACEAE		Cannomois grandis H.P.Linder	LC
RESTIONACEAE		Cannomois virgata (Rottb.) Steud.	LC
RESTIONACEAE		Ceratocaryum argenteum Kunth	LC
RESTIONACEAE		Elegia capensis (Burm.f.) Schelpe	LC
RESTIONACEAE		Elegia equisetacea Mast.	LC
RESTIONACEAE		Elegia filacea Mast.	LC
RESTIONACEAE		Elegia fistulosa Kunth	LC
RESTIONACEAE		Elegia galpinii N.E.Br.	LC
RESTIONACEAE		Elegia juncea L.	LC
RESTIONACEAE		Elegia stipularis Mast.	LC
RESTIONACEAE		Hypodiscus albo-aristatus (Nees) Mast.	LC
RESTIONACEAE		Hypodiscus aristatus (Thunb.) C.Krauss	LC
RESTIONACEAE		Hypodiscus laevigatus (Kunth) H.P.Linder	LC
RESTIONACEAE		Hypodiscus procurrens Esterh.	NT
RESTIONACEAE		Hypodiscus striatus (Kunth) Mast.	LC
RESTIONACEAE		Hypodiscus willdenowia (Nees) Mast.	LC
RESTIONACEAE		Mastersiella spathulata (Pillans) H.P.Linder	LC
RESTIONACEAE		Platycaulos anceps (Mast.) H.P.Linder	LC
RESTIONACEAE		Platycaulos callistachyus (Kunth) H.P.Linder	LC
RESTIONACEAE		Platycaulos compressus (Rottb.) H.P.Linder	LC
RESTIONACEAE		Restio albotuberculatus H.P.Linder & C.R.Hardy	LC
RESTIONACEAE		Restio curviramis Kunth	LC
RESTIONACEAE		Restio distichus Rottb.	LC
RESTIONACEAE		Restio helenae Mast.	LC

RESTIONACEAE		Restio hystrix Mast.	LC
RESTIONACEAE		Restio inconspicuus Esterh.	LC
RESTIONACEAE		Restio scaberulus N.E.Br.	LC
RESTIONACEAE		Restio stokoei Pillans	LC
RESTIONACEAE		Restio strictus N.E.Br.	LC
RESTIONACEAE		Restio triticeus Rottb.	LC
RESTIONACEAE		Rhodocoma arida H.P.Linder & Vlok	LC
RESTIONACEAE		Rhodocoma gigantea (Kunth) H.P.Linder	LC
RESTIONACEAE		Rhodocoma gracilis H.P.Linder & Vlok	LC
RESTIONACEAE		Staberoha cernua (L.f.) T.Durand & Schinz	LC
RESTIONACEAE		Thamnochortus cinereus H.P.Linder	LC
RESTIONACEAE		Thamnochortus erectus (Thunb.) Mast.	LC
RESTIONACEAE		Thamnochortus glaber (Mast.) Pillans	LC
RESTIONACEAE		Thamnochortus insignis Mast.	LC
RESTIONACEAE		Thamnochortus karooica H.P.Linder	VU
RESTIONACEAE		Thamnochortus muirii Pillans	VU
RESTIONACEAE		Willdenowia incurvata (Thunb.) H.P.Linder	LC
RESTIONACEAE		Willdenowia sulcata Mast.	LC
RHAMNACEAE		Noltea africana (L.) Endl.	LC
RHAMNACEAE		Phylica axillaris Lam. var. axillaris	LC
RHAMNACEAE		Phylica axillaris Lam. var. densifolia Pillans	LC
RHAMNACEAE		Phylica axillaris Lam. var. maritima Pillans	LC
RHAMNACEAE		Phylica axillaris Lam. var. pulchra Pillans	LC
RHAMNACEAE		Phylica confusa Pillans	LC
RHAMNACEAE		Phylica debilis Eckl. & Zeyh. var. debilis	LC
RHAMNACEAE		Phylica elimensis Pillans	VU
RHAMNACEAE		Phylica excelsa J.C.Wendl. var. excelsa	LC
RHAMNACEAE		Phylica imberbis P.J.Bergius var. eriophoros (P.J.Bergius) Pillans	LC
RHAMNACEAE		Phylica lanata Pillans	LC
RHAMNACEAE		Phylica mundii Pillans	LC
RHAMNACEAE		Phylica paniculata Willd.	LC
RHAMNACEAE		Phylica parviflora P.J.Bergius	LC
RHAMNACEAE		Phylica pinea Thunb.	LC
RHAMNACEAE		Phylica propinqua Sond.	LC
RHAMNACEAE		Phylica purpurea Sond. var. pearsonii Pillans	LC
RHAMNACEAE		Phylica purpurea Sond. var. purpurea	LC
RHAMNACEAE		Phylica rubra Willd. ex Roem. & Schult.	LC
RHAMNACEAE		Phylica selaginoides Sond.	LC
RHAMNACEAE		Phylica velutina Sond.	NT
RHAMNACEAE		Phylica villosa Thunb. var. villosa	LC
RHAMNACEAE		Phylica willdenowiana Eckl. & Zeyh.	LC
RHAMNACEAE		Scutia myrtina (Burm.f.) Kurz	LC
RHAMNACEAE		Trichocephalus stipularis (L.) Brongn.	LC
ROSACEAE		Cliffortia burchellii Stapf	LC

ROSACEAE		Cliffortia dispar Weim.	LC
ROSACEAE		Cliffortia falcata L.f.	LC
ROSACEAE		Cliffortia linearifolia Eckl. & Zeyh.	LC
ROSACEAE		Cliffortia paucistaminea Weim. var. paucistaminea	LC
ROSACEAE		Cliffortia polita Weim.	LC
ROSACEAE		Cliffortia pulchella L.f. var. pulchella	LC
ROSACEAE		Cliffortia ramosissima Schltr.	LC
ROSACEAE		Cliffortia serpyllifolia Cham. & Schltdl.	LC
ROSACEAE		Cliffortia stricta Weim.	LC
ROSACEAE		Cliffortia strobilifera L.	LC
ROSACEAE		Rubus affinis Wight & Arn.	Not Evaluated
ROSACEAE	*	Rubus pinnatus Willd.	LC
RUBIACEAE		Anthospermum aethiopicum L.	LC
RUBIACEAE		Anthospermum prostratum Sond.	LC
RUBIACEAE		Carpacoce scabra (Thunb.) Sond. subsp. scabra	LC
RUBIACEAE		Carpacoce vaginellata T.M.Salter	LC
RUTACEAE		Acmadenia gracilis Dummer	VU
RUTACEAE		Acmadenia heterophylla P.E.Glover	LC
RUTACEAE		Acmadenia macropetala (P.E.Glover) Compton	VU
RUTACEAE		Acmadenia rupicola I.Williams	VU
RUTACEAE		Acmadenia sheilae I.Williams	LC
RUTACEAE		Acmadenia tetragona (L.f.) Bartl. & H.L.Wendl.	NT
RUTACEAE		Acmadenia trigona (Eckl. & Zeyh.) Druce	LC
RUTACEAE		Agathosma apiculata G.Mey.	LC
RUTACEAE		Agathosma bifida (Jacq.) Bartl. & H.L.Wendl.	LC
RUTACEAE		Agathosma blaerioides Cham.	LC
RUTACEAE		Agathosma capensis (L.) Dummer	LC
RUTACEAE		Agathosma cerefolium (Vent.) Bartl. & H.L.Wendl.	LC
RUTACEAE		Agathosma dielsiana Schltr. ex Dümmer	LC
RUTACEAE		Agathosma elegans Cham.	LC
RUTACEAE		Agathosma foetidissima (Bartl. & H.L.Wendl.) Steud.	NT
RUTACEAE		Agathosma glandulosa (Thunb.) Sond.	EN
RUTACEAE		Agathosma microcarpa (Sond.) Pillans	VU
RUTACEAE		Agathosma muirii E.Phillips	VU
RUTACEAE		Agathosma mundtii Cham. & Schltdl.	LC
RUTACEAE		Agathosma ovata (Thunb.) Pillans	LC
RUTACEAE		Agathosma pungens (E.Mey. ex Sond.) Pillans	LC
RUTACEAE		Agathosma purpurea Pillans	LC
RUTACEAE		Agathosma recurvifolia Sond.	LC
RUTACEAE		Agathosma riversdalensis Dummer	VU
RUTACEAE		Agathosma roodebergensis Compton	LC
RUTACEAE		Agathosma scaberula Dummer	NT
RUTACEAE		Agathosma serpyllacea Licht. ex Roem. & Schult.	LC
RUTACEAE		Agathosma venusta (Eckl. & Zeyh.) Pillans	LC

RUTACEAE		Agathosma virgata (Lam.) Bartl. & H.L.Wendl.	LC
RUTACEAE		Clausena anisata (Willd.) Hook.f. ex Benth. var. anisata	LC
RUTACEAE		Coleonema pulchrum Hook.	Rare
RUTACEAE		Diosma aristata I.Williams	CR
RUTACEAE		Diosma hirsuta L.	LC
RUTACEAE		Diosma passerinoides Steud.	VU
RUTACEAE		Diosma sabulosa I.Williams	LC
RUTACEAE		Euchaetis albertiniana I.Williams	EN
RUTACEAE		Euchaetis burchellii Dummer	LC
SALICACEAE		Populus x canescens (Aiton) Sm.	Not Evaluated
SALICACEAE		Salix mucronata Thunb. subsp. mucronata	LC
SALICACEAE	*	Scolopia zeyheri (Nees) Harv.	LC
SALVADORACEAE		Azima tetracantha Lam.	LC
SANTALACEAE		Osyris compressa (P.J.Bergius) A.DC.	LC
SANTALACEAE		Osyris lanceolata Hochst. & Steud.	LC
SANTALACEAE		Thesium brachygyne Schltr.	DDT
SANTALACEAE		Thesium capituliflorum Sond.	LC
SANTALACEAE		Thesium euphorbioides L.	LC
SANTALACEAE		Thesium foliosum A.DC.	LC
SANTALACEAE		Thesium funale L.	LC
SANTALACEAE		Thesium galioides A.DC.	LC
SANTALACEAE		Thesium glomeruliflorum Sond.	LC
SANTALACEAE		Thesium leptocaule Sond.	DDT
SANTALACEAE		Thesium lisae-mariae Stauffer	DDT
SANTALACEAE		Thesium nigromontanum Sond.	LC
SANTALACEAE		Thesium paniculatum L.	LC
SANTALACEAE		Thesium penicillatum A.W.Hill	LC
SANTALACEAE		Thesium quinqueflorum Sond.	DDT
SANTALACEAE		Thesium sertulariastrum A.W.Hill	DDT
SANTALACEAE		Thesium strictum P.J.Bergius	LC
SANTALACEAE		Thesium subnudum Sond. var. subnudum	LC
SANTALACEAE		Thesium susannae A.W.Hill	Rare
SANTALACEAE		Thesium virgatum Lam.	LC
SANTALACEAE		Thesium zeyheri A.DC.	LC
SAPINDACEAE		Allophylus decipiens (Sond.) Radlk.	LC
SAPOTACEAE		Sideroxylon inerme L. subsp. inerme	LC
SCHIZAEACEAE		Schizaea pectinata (L.) Sw.	LC
SCROPHULARIACEAE		Chaenostoma aethiopicum (L.) Benth.	LC
SCROPHULARIACEAE		Chaenostoma caeruleum (L.f.) Kornhall	LC
SCROPHULARIACEAE		Chaenostoma integrifolium (L.f.) Benth.	LC
SCROPHULARIACEAE		Chaenostoma subnudum N.E.Br.	LC
SCROPHULARIACEAE		Freylinia undulata (L.f.) Benth.	LC
SCROPHULARIACEAE		Halleria lucida L.	LC
SCROPHULARIACEAE		Hebenstretia dregei Rolfe	DDD

SCROPHULARIACEAE		Hebenstretia integrifolia L.	LC
SCROPHULARIACEAE		Jamesbrittenia argentea (L.f.) Hilliard	LC
SCROPHULARIACEAE		Jamesbrittenia aspalathoides (Benth.) Hilliard	LC
SCROPHULARIACEAE		Jamesbrittenia tenuifolia (Bernh.) Hilliard	LC
SCROPHULARIACEAE		Lindernia parviflora (Roxb.) Haines	LC
SCROPHULARIACEAE		Manulea cheiranthus (L.) L.	LC
SCROPHULARIACEAE		Nemesia floribunda Lehm.	LC
SCROPHULARIACEAE		Nemesia versicolor E.Mey. ex Benth. var. versicolor	LC
SCROPHULARIACEAE		Phyllopodium bracteatum Benth.	LC
SCROPHULARIACEAE		Phyllopodium rustii (Rolfe) Hilliard	LC
SCROPHULARIACEAE		Pseudoselago gracilis Hilliard	LC
SCROPHULARIACEAE		Selago albida Choisy	LC
SCROPHULARIACEAE		Selago brevifolia Rolfe	LC
SCROPHULARIACEAE		Selago burchellii Rolfe	VU
SCROPHULARIACEAE		Selago ciliata L.f.	LC
SCROPHULARIACEAE		Selago corymbosa L.	LC
SCROPHULARIACEAE		Selago dolosa Hilliard	LC
SCROPHULARIACEAE		Selago eckloniana Choisy	LC
SCROPHULARIACEAE		Selago geniculata L.f.	LC
SCROPHULARIACEAE		Selago glomerata Thunb.	LC
SCROPHULARIACEAE		Selago linearis Rolfe	LC
SCROPHULARIACEAE		Selago luxurians Choisy	LC
SCROPHULARIACEAE		Selago nigrescens Rolfe	LC
SCROPHULARIACEAE		Selago ramosissima Rolfe	Threatened
SCROPHULARIACEAE		Selago scabrida Thunb.	LC
SCROPHULARIACEAE		Selago setulosa Rolfe	LC
SCROPHULARIACEAE	*	Selago thomii Rolfe	LC
SCROPHULARIACEAE		Teedia lucida (Sol.) Rudolphi	LC
SCROPHULARIACEAE		Verbascum virgatum Stokes	Not Evaluated
SINOPTERIDACEAE		Cheilanthes contracta (Kunze) Mett. ex Kuhn	LC
SINOPTERIDACEAE		Cheilanthes hastata (L.f.) Kunze	LC
SINOPTERIDACEAE		Cheilanthes hirta Sw. var. hirta	LC
SINOPTERIDACEAE		Cheilanthes parviloba (Sw.) Sw.	LC
SINOPTERIDACEAE		Cheilanthes viridis (Forssk.) Sw. var. viridis	LC
SINOPTERIDACEAE		Pellaea calomelanos (Sw.) Link var. calomelanos	LC
SINOPTERIDACEAE		Pellaea leucomelas (Mett. ex Kuhn) Baker	LC
SOLANACEAE		Lycium afrum L.	LC
SOLANACEAE		Lycium ferocissimum Miers	LC
SOLANACEAE		Lycium tenue Willd.	LC
SOLANACEAE		Nicotiana glauca Graham	Not Evaluated
SOLANACEAE		Physalis peruviana L.	Not Evaluated
SOLANACEAE		Solanum africanum Mill.	LC
SOLANACEAE		Solanum linnaeanum Hepper & Jaeger	LC

SOLANACEAE	*	Solanum retroflexum Dunal	LC
SOLANACEAE	*	Solanum rigescens Jacq.	Not Evaluated
SPHAGNACEAE		Sphagnum strictum Sull. subsp. pappeanum (Müll.Hal.) A.Eddy	
STILBACEAE		Kogelbergia phylicoides (A.DC.) Rourke	LC
THYMELAEACEAE		Gnidia burchellii (Meisn.) Gilg	LC
THYMELAEACEAE		Gnidia chrysophylla Meisn.	VU
THYMELAEACEAE		Gnidia coriacea Meisn.	LC
THYMELAEACEAE		Gnidia galpinii C.H.Wright	LC
THYMELAEACEAE		Gnidia gymnostachya (C.A.Mey.) Gilg	LC
THYMELAEACEAE		Gnidia laxa (L.f.) Gilg	LC
THYMELAEACEAE		Gnidia nana (L.f.) Wikstr.	LC
THYMELAEACEAE		Gnidia nitida Bolus	LC
THYMELAEACEAE		Gnidia nodiflora Meisn.	LC
THYMELAEACEAE		Gnidia oppositifolia L.	LC
THYMELAEACEAE		Gnidia racemosa Thunb.	LC
THYMELAEACEAE		Gnidia scabra Thunb.	LC
THYMELAEACEAE		Gnidia squarrosa (L.) Druce	LC
THYMELAEACEAE		Gnidia strigillosa Meisn.	DDT
THYMELAEACEAE		Lachnaea axillaris Meisn.	NT
THYMELAEACEAE		Lachnaea burchellii Meisn.	LC
THYMELAEACEAE		Lachnaea diosmoides Meisn.	LC
THYMELAEACEAE		Lachnaea sociorum Beyers	LC
THYMELAEACEAE		Passerina corymbosa Eckl. ex C.H.Wright	LC
THYMELAEACEAE		Passerina falcifolia (Meisn.) C.H.Wright	LC
THYMELAEACEAE		Passerina galpinii C.H.Wright	LC
THYMELAEACEAE		Passerina montivaga C.L.Bredenkamp & A.E.van Wyk	LC
THYMELAEACEAE		Passerina obtusifolia Thoday	LC
THYMELAEACEAE		Passerina rigida Wikstr.	LC
THYMELAEACEAE		Struthiola argentea Lehm.	LC
THYMELAEACEAE		Struthiola dodecandra (L.) Druce	LC
THYMELAEACEAE		Struthiola eckloniana Meisn.	LC
THYMELAEACEAE		Struthiola garciana C.H.Wright	LC
THYMELAEACEAE		Struthiola hirsuta Wikstr.	LC
THYMELAEACEAE		Struthiola macowanii C.H.Wright	LC
THYMELAEACEAE		Struthiola parviflora Bartl. ex Meisn.	LC
THYMELAEACEAE		Struthiola striata Lam.	LC
THYMELAEACEAE		Struthiola tomentosa Andrews	LC
VERBENACEAE	*	Verbena bonariensis L.	Not Evaluated
VERBENACEAE	*	Lantana camara L.	Not Evaluated
VISCACEAE		Viscum rotundifolium L.f.	LC
VITACEAE		Rhoicissus digitata (L.f.) Gilg & M.Brandt	LC
ZYGOPHYLLACEAE		Zygophyllum flexuosum Eckl. & Zeyh.	LC
ZYGOPHYLLACEAE		Zygophyllum fulvum L.	LC

ZYGOPHYLLACEAE		Zygophyllum morgsana L.	LC
ZYGOPHYLLACEAE		Zygophyllum spinosum L.	LC