Proposed Hugo Wind Energy Facility near De Doorns, Western Cape Province

Botanical Environmental Impact Assessment

PREPARED FOR
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0695823

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ACRONYMS AND ABBREVIATIONS

Acronyms	Description
BAP	Biodiversity Action Plan
BESS	Battery Energy Storage System
BI	Biodiversity Importance
BMP	Biodiversity Management Plan
CC	Closed Canopy
CI	Conservation Importance
D	Duration
DFFE	Department of Forestry, Fisheries and the Environment
E	Extent
EA	Environmental Authorization
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EOO	Extent of Occurrence
ERM	Environmental Resources Management
ESIA	Environmental and Social Impact Assessment
FE	Functional Entity
FFq 3	Matjiesfontein Quartzite Fynbos
FFs 15	North Langeberg Sandstone Fynbos
FFS 16	South Langeberg Sandstone Fynbos
FI	Functional Integrity

Acronyms	Description
FRs 6	Matjiesfontein Shale Renosterveld
ha	Hectares
IPP	Independent Power Producers
km	Kilometres
kV	Kilovolt
M	Magnitude
MW	Megawatt
O&M	Operations and Maintenance
OSS	On-Site Substation
P	Probability
PAOI	Project Area of Interest
QGIS	Quantum Geographic Information System
R	Reversibility
RR	Receptor Resilience
SANBI	South African National Biodiversity Institute
SANLC	South African National Land Cover
SCC	Species of Conservation Concern
SD	Secure Digital
SEI	Site Ecological Importance
WEF	Wind Energy Facility
WTG	Wind Turbine Generator

EXECUTIVE SUMMARY

ERM Southern Africa (Pty) ltd. ("ERM") was contracted by Functional Entity (FE) Hugo & Khoe (Pty) Ltd ("The Client") to compile a Botanical Specialist Impact Assessment for the proposed Hugo Wind Energy Facility (WEF).

The proposed Hugo WEF will be located near De Doorns in the Western Cape Province and include up to 48 turbines and have a maximum output of 360 MW. The development will also include access roads and internal roads, a Battery Energy Storage System (BESS), Operations and Maintenance (O&M) building, On-Site Substation (OSS) and temporary site office.

The site is predominantly classified as Medium Sensitivity by the Department of Forestry, Fisheries and the Environments (DFFE) Online Screening Tool (ST), while remaining areas are classified as Low Sensitivity. Up to 1 777 plant species are potentially present on site, of which 37 are listed as Species of Conservation Concern (SCC) by the DFFE Online ST. Given the high number of species potentially present it is likely the number of SCC is greater than that provided by the DFFE Online ST. The proposed development area includes four vegetation types that are listed as Least Concern (LC) by the Red List of Ecosystems (RLE) and intersects in some areas with Protected Areas (PA), Critical Biodiversity Areas (CBA), Ecological Support Areas (ESA) and Other Natural Areas (ONA).

The anticipated impacts include vegetation clearing, loss of individual SCC, alien invasive species, soil erosion, chemical contamination, and fire. Cumulative impacts include those that affect broad-scale ecological processes and conservation objectives. With adherence to the prescribed mitigation measures opportunities exist to promote conservation efforts, community engagement and education, and local environmental monitoring and research.

It is the Specialists opinion that the DFFE Online ST Assessment of Medium Sensitivity in the Plant Species Theme for some areas is accurate. High sensitivity areas are predominantly those listed as CBAs. All other areas are either Medium Sensitivity or Low Sensitivity.

It is the Specialists opinion that the proposed Hugo WEF may be considered for development, provided all mitigation measures are adhered to.

1. INTRODUCTION

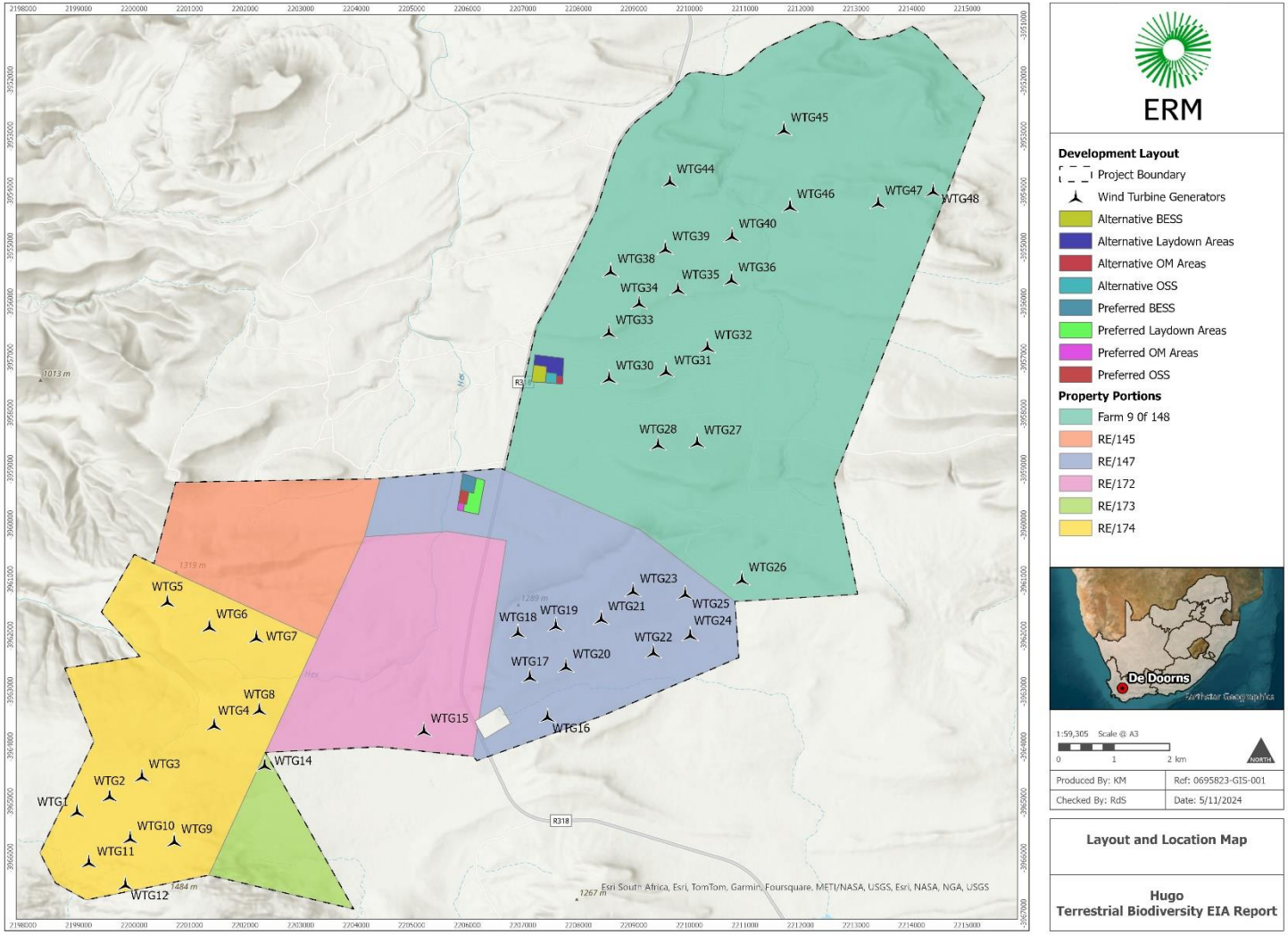
1.1 BACKGROUND

ERM Southern Africa (Pty) Ltd. ("ERM") was contracted by Functional Entity (FE) Hugo & Khoe (Pty) Ltd ("The Client") to compile a Botanical Specialist Impact Assessment for the proposed Hugo Wind Energy Facility (WEF), located near De Doorns in the Western Cape Province of South Africa. The primary purpose of this report is to identify and describe the plant species and habitats that are likely present within the proposed Project Area of Influence (PAOI), the anticipated impacts for the proposed development, and to evaluate the suitability of the proposed development in relation to the Plant Species Theme.

1.2 PROJECT DESCRIPTION

The proposed Hugo WEF, located approximately 10 km southeast of De Doorns on property portions Farm 9 of 148, RE/145, RE/147, RE/172, RE/173 and RE/174, will comprise up to 48 turbines (Figure 1) with a maximum output of up to 360 MW. This operation will also comprise access roads and internal roads, a Battery Energy Storage System (BESS), an Operations and Maintenance (O&M) building, an On-Site Substation (OSS), and a temporary site office. A 33kV underground/overhead cabling network along the proposed roads and 132 kV overhead transmission lines connecting the Independent Power Producers (IPP) substation will be installed to connect the WEF to the national electrical grid network. The grid connection will form part of a separate application process.

FIGURE 1: LAYOUT AND LOCATION OF THE PROPOSED HUGO WIND ENERGY FACILITY NEAR DE DOORNS, WESTERN CAPE PROVINCE.



1.3 TERMS OF REFERENCE

This report describes the proposed PAOI in terms of the plant species present, with a specific focus on SCC, along with the anticipated impacts and sensitivities.

This report follows the Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts of Terrestrial Plant Species, Government Gazette No. 43855, Government Notice No. 1150, 30 October 2020[1] and the associated Amendment published in Government Gazette No. 47448, Government Notice No. 2717, 4 November 2022[2]; and the combined DFFE, South African National Biodiversity Institute (SANBI) and BirdLife South Africa's Species Environmental Assessment Guidelines for the implementation of the Terrestrial Fauna and Terrestrial Flora Species Protocols for environmental impact assessment in South Africa (2022)[3].

1.3.1 APPLICABLE STANDARDS

This impact assessment identifies policies and legislations at different geographic scales that must be considered during the EA process. These policies and legislations are described in Table 1 below.

TABLE 1: APPLICABLE POLICIES AND LEGISLATIONS AT DIFFERENT GEOGRAPHIC SCALES.

PROVINCIAL STANDARDS	
1. Cape Nature and Environmental Conservation Ordinance 19 of 1974.	Applicable in the former Cape Province, this Act forms the legal basis for nature conservation and environmental management. Key aspects addressed include Protected Areas, Species Protection, Environmental Management, and Public Participation.
2. Western Cape Biosphere Reserves Act 6 of 2011.	Focuses on the establishment, management and protection of biosphere reserves in the Western Cape Province. Key points include Biosphere Reserve Designation, Management and Conservation, Stakeholder Involvement, and Research and Education.
3. Western Cape Land Use Planning Act, 2015.	Provides a framework for land use management and spatial planning within the Western Cape Province. Main elements include Spatial Planning, Land Use

[1] https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
[2] https://eolstoragewe.blob.core.windows.net/wm-698609-cmsimages/474484-11NationalGovernment(4)AmendmentofProtocolsforspecialistassessments.pdf
[3] http://opus.sanbi.org/jspui/handle/20.500.12143/6922

	Management, Public Participation and Development Principles.
4. Western Cape Biodiversity Act 6 of 2021.	The Act seeks to balance conservation efforts with sustainable use, involving various stakeholders to protect the unique biodiversity of the Western Cape Province. Key provisions include Biodiversity Stewardship, Regulation and Enforcement, Sustainable Use, and Research and Education.
NATIONAL STANDARDS	
1. National Environmental Management: Protected Areas Act, 2003 (NEMA).	Provides a legal framework to safeguard South Africa's biodiversity and natural heritage with specific focus on Protected Area Categories, Protected Area Management, Stakeholder Involvement, and Conservation Objectives.
2. National Environmental Management: Biodiversity Act, 2004 (NEMBA).	Provides a legal framework to promote conservation and sustainable use of South Africa's diverse biological resources while considering social, economic, and environmental factors, fostering a balance between conservation efforts and development needs. Key aspects of the Act include Biodiversity Conservation, Protected Areas and Species, Invasive Species Management, Bioprospecting and Access to Genetic Resources, and Research and Information.
3. Conservation of Agricultural Resources Act, 1983 (CARA).	Provides a framework to ensure the conservation and sustainable utilization of agricultural resources, protecting the environment and promoting the long-term viability of agriculture in South Africa. Key points of the Act include Soil Conservation, Water Conservation, Control of Invasive Species, Land-Use Planning, and Research and Education.

2. METHODOLOGY

2.1 DESKTOP STUDY

The desktop study was initiated by obtaining the proposed development area's expected sensitivity in the Plant Theme using the DFFE Online Screening Tool (ST)[4]. The recorded land-use of the proposed PAOI was determined using the latest available South African National Land Cover (SANLC, 2020)[5] spatial datasets and Quantum Geographic Information System (QGIS). These data were compared with previously identified important biodiversity areas in proximity to the project by consulting the following resources:

- The Red List of Ecosystems (RLE, 2022) spatial dataset[6] to determine the Red List Status and Category of ecosystem(s) within the proposed PAOI.
- The Breedevalley Key Biodiversity Areas (KBA) spatial dataset[7] was used to determine the presence of Critical Biodiversity Areas (CBA1/2), Ecological Support Areas (ESA1/2), Protected Areas (PA) and Other Natural Areas (ONA) within the proposed PAOI.
- The SANBI 2018 Beta Vegetation Map of South Africa, Lesotho and Swaziland Spatial Dataset[8] to determine the Vegetation Units present within the proposed PAOI.

In addition, the resources below were consulted to compile a list of plant SCC that are potentially present within the proposed development area footprint:

- The SANBI Plants of Southern Africa (POSA) Brahms database9 to identify plant species that have been recorded in the proposed PAOI.
- The Biodiversity and Development Institute's Virtual Museum database10 to determine the presence of plant species that have been recorded in the proposed PAOI.
- The Global Biodiversity Information Facility (GBIF) database11 to determine the presence of plant species that have been recorded in the proposed PAOI.
- The SANBI Red List of South African Species12 to confirm the national Red List Status and Category of plant species that have been recorded in the proposed PAOI.
- The Red List of South African Plant Species[13] to confirm the national Red List Status and Category of plant species that have been recorded in the proposed PAOI.
- The International Union for the Conservation of Nature's (IUCN) Red List[14] to confirm the international Red List Status and Category of plant species that have been recorded in the proposed PAOI.

2.2 SITE VERIFICATION

The specialist spent two days on site (28 - 29 June 2022) in conjunction with the terrestrial animal specialist retrieving camera trap data and replacing Secure Digital (SD) memory cards to

[4] https://screening.environment.gov.za/screeningtool/#/pages/welcome
[5] https://egis.environment.gov.za/sa_national_land_cover_datasets
[6] http://bgis.sanbi.org/SpatialDataset/Detail/6715
[7] http://bgis.sanbi.org/SpatialDataset/Detail/641
[8] http://bgis.sanbi.org/SpatialDataset/Detail/670
[9] https://posa.sanbi.org/sanbi/Explore
[10] https://vmus.adu.org.za/
[11] https://www.gbif.org/
[12] http://speciesstatus.sanbi.org/
[13] http://redlist.sanbi.org/index.php
[14] https://www.iucnredlist.org/

verify the sensitivity of the proposed study area as described by the DFFE Online ST, and land-use as described by the SANLC (2020).

An additional site visit was conducted (10 – 16 March 2024) to conduct terrestrial biodiversity surveys to determine species presence and distribution on site in correlation with the Scoping Phase project layout.

2.3 SITE ECOLOGICAL IMPORTANCE

Habitat sensitivity is determined as a function of several factors including the presence and distribution of SCC, intactness of habitat, extent of impacts, and the capacity of the habitat to withstand and/or recover from disturbance. These factors are assessed on a scale from 'Low' to 'Very High' according to pre-determined conditions and incorporated into a formula to determine the Site Ecological Importance (SEI) for each habitat. Full methodology can be found in Appendix A. How the different SEI outcomes relate to any proposed development is described in Table 2 below.

TABLE 2: INTERPRETING SITE ECOLOGICAL IMPORTANCE OUTPUTS.

Site Ecological Importance	Interpretation in relation to proposed development activities
Very High	Avoidance mitigation - no destructive development activities should be considered. Offset mitigation not acceptable/not possible (i.e., last remaining populations of species, last remaining good condition patches of ecosystems/unique species assemblages). Destructive impacts for species/ecosystems where persistence targets remain.
High	Avoidance mitigation wherever possible. Minimization mitigation – changes to project infrastructure design to limit the amount of habitat impacted, limited development activities of low impact acceptable. Offset mitigation may be required for high impact activities.
Medium	Minimization and restoration mitigation – development activities of medium impact acceptable followed by appropriate restoration activities.
Low	Minimization and restoration mitigation – development activities of medium to high

Site Ecological Importance	Interpretation in relation to proposed development activities
	impact acceptable followed by appropriate restoration activities.
Very Low	Minimization mitigation – development activities of medium to high impact acceptable and restoration activities may not be required.

2.4 IMPACT ASSESSMENT AND MITIGATION

This Impact Assessment (IA) has been undertaken following a systematic process that predicts and evaluates the impacts of the project activities on selected aspects of the environmental receptors. Furthermore, the IA identifies measures that the project will need to take to avoid, reduce and remedy (mitigation), as far as is reasonably practicable. A comprehensive Impact Assessment Methodology is provided in Appendix B.

2.5 ASSUMPTIONS AND LIMITATIONS

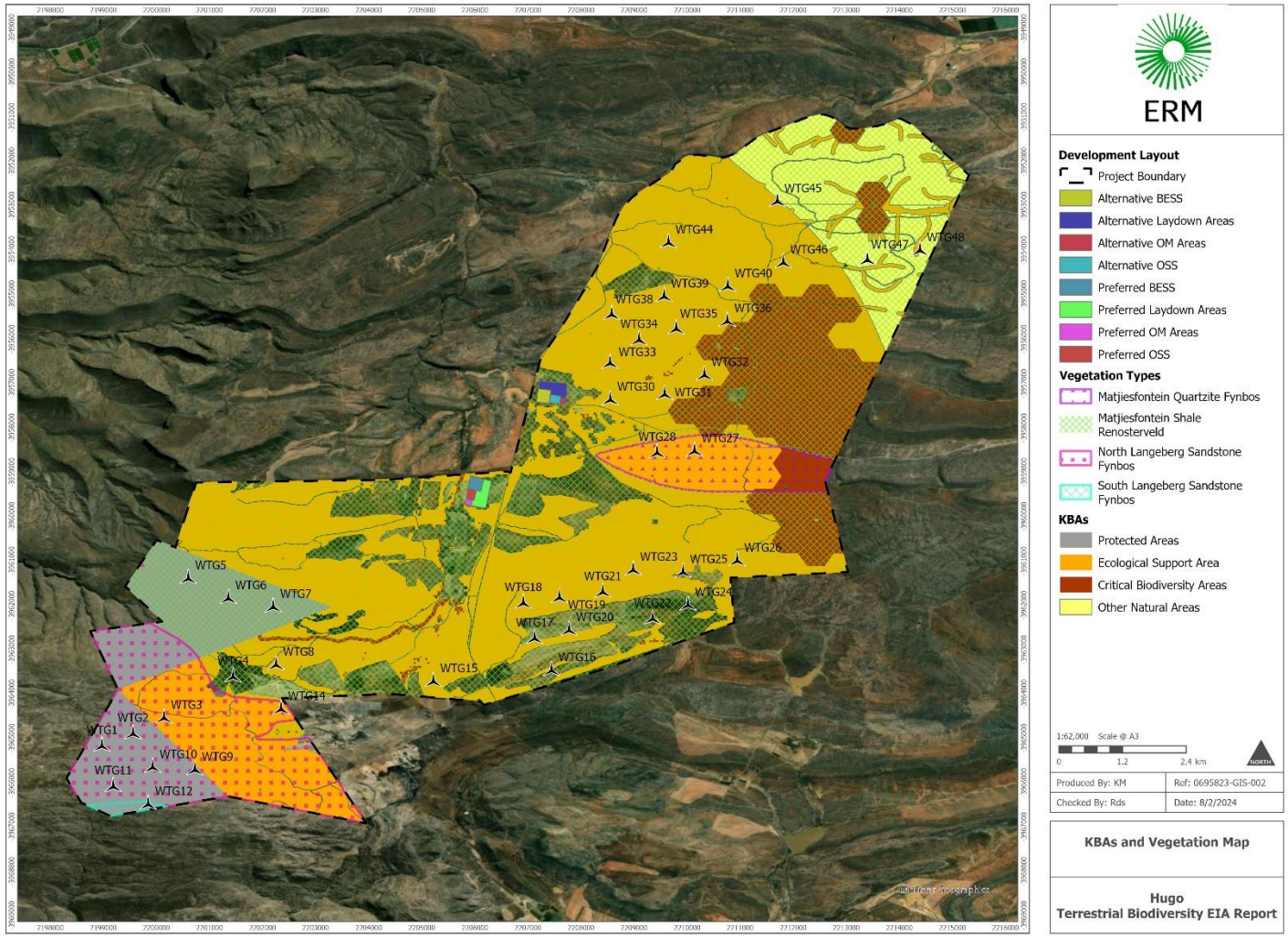
- The contents of this report relate to the proposed Hugo WEF and associated infrastructure as presented in Figure 1.
- SCC are classified as Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Data Deficient (DD) and Rare.
- The identity of several plant- SCC are withheld from this- and subsequent reports due to the sensitivity of these species to illegal harvesting. These species are known by numerical identifiers (Sensitive Species 142, 207, 521, 654, 692, 871 and 1209) assigned by the SANBI. The identity of these species has been made available to the Specialist for consideration during the compilation of reports relevant to the study area.
- Previous studies used to compile online species distribution datasets used to augment the species list for the proposed Hugo WEF and associated infrastructure PAOI are extremely limited and cannot be seen as fully representative of the diversity of plant species potentially on site.
- Where online databases provided records of species that have several sub-species but provided no reference to which sub-species was recorded, it was assumed the sub-species was that with the greatest conservation importance.

3. RESULTS

3.1 LAND USE AND IMPORTANT PLANT AREAS

The proposed Hugo WEF PAOI is dominated by Matjiesfontein Shale Renosterveld (FRs 6), followed by a section of North Langeberg Sandstone Fynbos (FFs 15) and a small section of South Langeberg Sandstone Fynbos (FFs 16) in the western sections, and Matjiesfontein Quartzite Fynbos (FFq 3) in the south-eastern section of the proposed PAOI (Figure 2). All three of the vegetation types identified are listed as Least Concern by the RLE (2021).

FIGURE 2: IMPORTANT VEGETATION AND KEY BIODIVERSITY AREAS WITHIN THE PROPOSED HUGO WIND ENERGY FACILITY STUDY AREA.



Western sections of the proposed PAOI fall within the Matroosberg Mountain Catchment Area, which is a Protected Area (PA) and currently includes Wind Turbine Generators (WTG) 1, 2, 9, 10, 11 and 12 (Figure 2). Most of the site falls within an ESA which is classified as such due to the presence of aquatic features that maintain broader ecological balance and processes that are essential in supporting biodiversity conservation. This area currently includes most WTGs. Eastern sections of the proposed PAOI fall within a CBA, classified as such due to the presence of various aquatic features that contribute to high levels of biodiversity in this specific area, and currently includes no WTGs. The north-eastern section of the proposed PAOI falls within ONAs which are not currently identified as priority but retain most of their natural character and perform a range of biodiversity and ecological infrastructure functions. This area currently includes WTGs 45, 47 and 48. According to the SANLC (2020) spatial dataset the proposed Hugo WEF PAOI (Figure 3) is dominated by low fynbos shrublands, followed by bare fallow lands, bare old fields, and commercial annual crops (rain-fed, dryland or non-irrigated).

3.1.1 SURVEY LOCATIONS

Ten surveys were conducted in the dominant Matjiesfontein Shale Renosterveld (FRs 6). These surveys include three Drainage Area habitats, three Low Shrubland habitats, three Riparian habitats and a single Rocky Outcrop. One of the Low Shrubland habitats survey is found on the periphery between the PA associated with the Matroosberg Mountain Catchment Area and the North Langeberg Sandstone Fynbos toward the southwest of the PAOI and can be considered transitional between Low Shrubland and a northeast-facing Rocky Outcrop. One survey was also conducted within the eastern CBA of the proposed PAOI. A single survey was conducted in the low shrublands associated with north-facing slopes of the Matjiesfontein Quartzite Fynbos (FFq 3). No surveys were conducted directly within the PA and associated North- (FFs 15) and South Langeberg Sandstone Fynbos (FFs 16) habitats due to inaccessibility to these vegetation types. The identified habitats are described in the following sub-sections.

3.1.1.1 MATJIESFONTEIN QUARTZITE FYNBOS LOW SHRUBLAND

The surveys for the Matjiesfontein Quartzite Fynbos Low Shrubland were conducted on a gradual north-facing slope, with sections featuring slight rocky outcrops. Dominant flora species observed include *Dicerothamnus rhinocerotis* (Renosterbos), *Tenaxia stricta*, and *Aizoon africanum*. Common plant species found in the area included *Oedera squarrosa, Ruschia multiflora*, and *Struthiola eckloniana*. Despite the habitat's varied topography and flora composition, findings from three surveys indicated a relatively low diversity of plant species, with only 24 species documented in total. Consequently, the calculated Site Ecological Importance is rated as medium (refer to Table 10), highlighting the habitat's ecological significance within the Matjiesfontein region.

3.1.1.2 MATJIESFONTEIN SHALE RENOSTERVELD LOW SHRUBLAND

The Matjiesfontein Shale Renosterveld Low Shrubland habitat encompasses undulating hills intersected by drainage lines, characterized by clay-like soils and minimal rockiness. The landscape is predominantly populated by shrubs, with *Dicerothamnus rhinocerotis* (Renosterbos) and *Aizoon africanum* being the most prevalent species. Additionally, *Euryops lateriflorus* was observed on the site, albeit less abundantly. Despite the habitat's dominance by shrubs, species diversity was relatively low, with only 21 documented species. Notably, powerlines were

prevalent throughout the survey area, potentially influencing the habitat's ecological dynamics and biodiversity.

3.1.1.3 MATJIESFONTEIN SHALE RENOSTERVELD DRAINAGE AREA

The Matjiesfontein Shale Renosterveld drainage area habitat was characterized by a primary drainage line, featuring minimal exposed soil and rockiness. Shrubs were prevalent, covering up to 80% of the landscape. A total of 34 flora species were identified on-site, with dominant species including *Aizoon africanum*, *Chamarea* sp., *Pteronia incana*, and renosterbos. Additionally, within the flood zone, *Nidorella ivifolia* emerged as a dominant species.

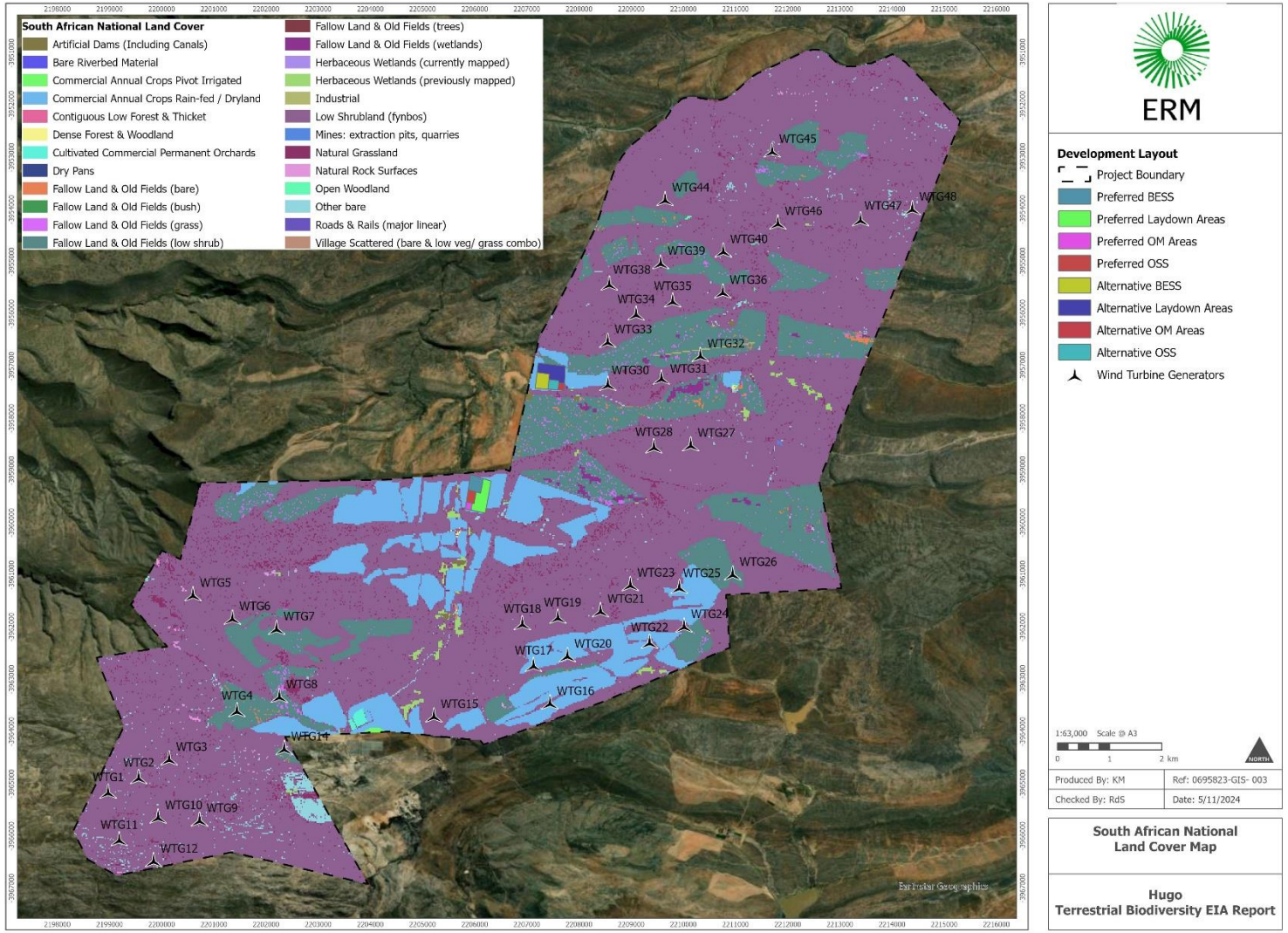
3.1.1.4 MATJIESFONTEIN SHALE RENOSTERVELD RIPARIAN HABITAT

The Matjiesfontein Shale Renosterveld Riparian habitat presents a distinctive landscape characterized by water body depressions, rockiness ranging from minimal to high in some areas, and up to 80% exposed soil. Shrubs, mainly *Aizoon africanum* and *Dicerothamnus rhinocerotis* (renosterbos), are abundant and dominant in this habitat. Findings from three field surveys revealed a relatively medium diversity of plant species, with roughly 50 species recorded in total. Despite this, the habitat maintains some ecological significance, with the calculated Site Ecological Importance rated as medium (Table 7). Additionally, the habitat is disturbed, with a high level of rockiness estimated to cover 70-80% of the area in varying sections. Pioneer species such as *Gomphocarpus fruticosus* are prevalent in disturbed areas, alongside natural renosterbos, contributing to the ecosystem's complexity. Despite these challenges, the total record of flora and type of species recorded on site indicates the habitat's resilience.

3.1.1.5 MATJIESFONTEIN SHALE RENOSTERVELD ROCKY OUTCROPS

The rocky ridge surveyed for this habitat was characterized by a deep depression and east-facing slope. As expected, the area’s percentage of rockiness was 90% in some areas and 100% in others. *Pteronia paniculata* was a dominant flora species documented on site, while renosterbos was occasionally reported within this specific habitat. *Pteronia paniculata* is known to occur in rocky and dry habitats, acting as a canopy for low-growing succulents on rocky substrate. This specific species is a pioneer species and is found to establish itself in over-grazed, disturbed areas.

FIGURE 3: THE LATEST AVAILABLE SOUTH AFRICAN NATIONAL LAND COVER DATASET OF THE PROPOSED HUGO WIND ENERGY FACILITY.

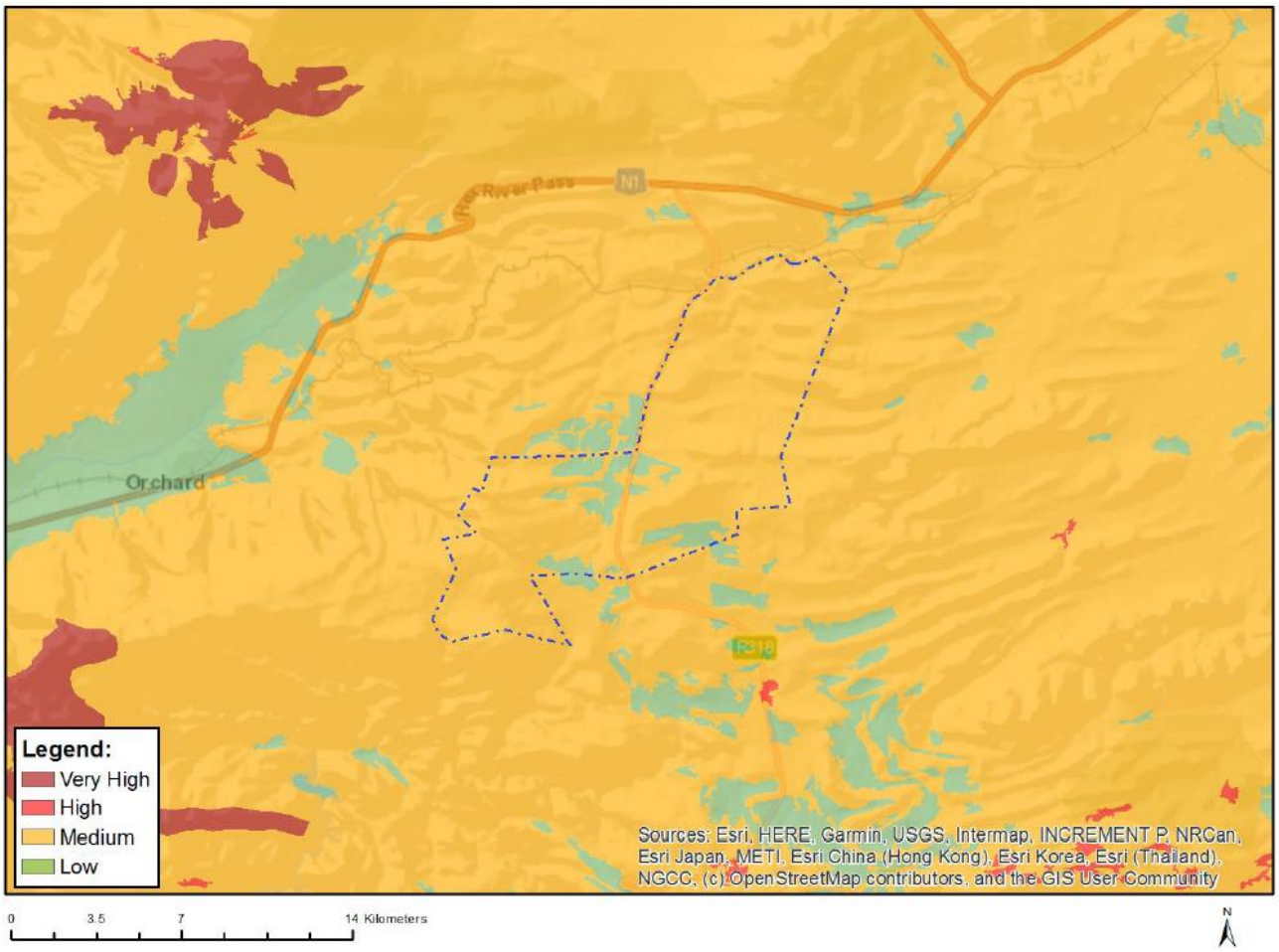


Additional land use types present include dense forest and woodland (35 - 75% closed canopy/CC), open woodland (10 - 35% CC), natural grassland, bare, artificial dams including canals, herbaceous wetlands (previous mapped extent), cultivated commercial permanent orchards, commercial annuals (pivot irrigated), major linear roads and rail and fallow lands and old fields (grasslands, low vegetation and wetlands).

3.2 PLANT SPECIES

The DFFE Online ST identifies the study area as having a predominantly Medium Sensitivity in the Plant Species Theme, with some areas of Low Sensitivity (Figure 4).

FIGURE 4: DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT'S ONLINE SCREENING TOOL ASSESSMENT OF THE PROPOSED HUGO WIND ENERGY FACILITTY STUDY AREA IN THE PLANT SPECIES THEME.



A total of 1 777 plant species potentially occur in and/or within close proximity of the proposed Hugo WEF and are presented in Appendix C. The DFFE Online ST identified seven EN, 15 VU, and 15 Rare plant species according to Regional Red Lists potentially present within the proposed study area (Table 3). The sources include the SANBI POSA Brahms (B) database, the Global Biodiversity Information Facility (GBIF) database, the DFFE Online ST and the Biodiversity and Development Institute's Virtual Museum (VM) database.

TABLE 3: PLANT SPECIES OF CONSERVATION CONCERN TRIGGERED BY THE DFFE ONLINE SCREENING TOOL.

Family	Species	Red List Status (Regional:Global)	Source
Aizoaceae	*Drosanthemum giffenii*	VU:NE	GBIF, ST
Aizoaceae	*Drosanthemum tuberculiferum*	EN:NE	GBIF, ST
Aizoaceae	*Drosanthemum worcesterense*	EN:NE	ST
Aizoaceae	*Esterhuysenia inclaudens*	Rare:NE	ST
Aizoaceae	*Octopoma nanum*	VU:NE	ST
Aizoaceae	*Phiambolia littlewoodii*	VU:NE	ST
Asparagaceae	*Asparagus mollis*	VU:NE	ST
Asteraceae	*Anderbergia elsiae*	Rare:NE	ST
Asteraceae	*Athanasia hirsuta*	Rare:NE	B, GBIF, ST
Asteraceae	*Eriocephalus microphyllus* var. *carnosus*	EN:NE	ST
Asteraceae	*Metalasia helmei*	Rare:NE	B, GBIF, ST
Brassicaceae	*Heliophila elata*	VU:NE	ST
Ericaceae	*Erica constantia*	Rare:NE	ST
Fabaceae	*Amphithalea dahlgrenii*	VU:NE	ST
Fabaceae	*Amphithalea pageae*	VU:VU	GBIF, ST
Fabaceae	*Amphithalea spinosa*	VU:NE	B, GBIF, ST
Fabaceae	*Aspalathus intricata* subsp. *oxyclada*	Rare:NE	ST
Fabaceae	*Aspalathus rostrata*	Rare:NE	B, GBIF, ST
Fabaceae	*Aspalathus shawii* subsp. *longispica*	Rare:NE	GBIF, ST
Fabaceae	*Lotononis argentea*	VU:NE	GBIF, ST
Fabaceae	*Lotononis gracilifolia*	EN:NE	GBIF, ST
Fabaceae	*Otholobium* sp. nov (Storton & Zanotvska 11281 NBG)	VU:NE	ST
Iridaceae	*Ixia fucata*	Rare:NE	GBIF, ST
Iridaceae	*Ixia oxalidiflora*	VU:NE	B, GBIF, ST
Orchidaceae	*Pachites bodkinii*	Rare:NE	ST
Proteaceae	*Leucadendron cordatum*	Rare:LC	B, GBIF, ST

Family	Species	Red List Status (Regional:Global)	Source
Proteaceae	*Protea holosericea*	EN:CR	ST
Proteaceae	*Protea rupicola*	EN:EN	ST
Rhamnaceae	*Phylica comptonii*	Rare:NE	ST
Rutaceae	*Acmadenia matroosbergensis*	Rare:NE	B, GBIF, ST
Withheld	Sensitive Species 1209	Rare:NE	ST
Withheld	Sensitive Species 142	VU:NE	ST
Withheld	Sensitive Species 207	Rare:NE	B, ST
Withheld	Sensitive Species 654	VU:NE	ST
Withheld	Sensitive Species 692	VU:NE	ST
Withheld	Sensitive Species 871	VU :NE	B, ST
Withheld	Sensitive Species 521	EN:NE	GBIF, ST

These include a single CR-, one EN- and one VU plant species according to International Red Lists potentially present within the proposed study area. Given the number of additional plant species associated with the PAOI the number of Regional and Global SCC will likely be higher following detailed survey and review. Indeed, *Erica navigatoris* (Vulnerable) was recorded on site during field work[15].

3.3 SITE ECOLOGICAL IMPORTANCE

Site Ecological Importance (SEI) values for habitats 1) Matroosberg Mountain Catchment Area and CBAs, 2) Terrestrial-Aquatic Ecotones, 3) Matjiesfontein Shale Renosterveld, 4) North Langeberg Sandstone Fynbos, 5) South Langeberg Sandstone Fynbos, and 6) Matjiesfontein Quartzite Fynbos are provided in Tables 3-8 below.

TABLE 3: SITE ECOLOGICAL IMPORTANCE OF THE MATROOSBERG MOUNTAIN CATCHMENT AREA AND CRITICAL BIODIVERSITY AREAS.

Conservation Importance (CI): High
Highly likely occurrence of CR, EN and/or VU species that have a global EOO >10 km^2 (Table 3).
Functional Integrity (FI): High
Very large (>100 ha) of a designated PA.
Biodiversity Importance (BI): High

[15] Birds & Bats Unlimited, pers. comm.

Receptor Resilience (RR): High
Slow anticipated recovery (± >10 years) to restore >75 % of the original species composition.
Site Ecological Importance (SEI): Medium
Implications for Wind Energy mitigation:
1. Minimisation and restoration mitigation required.
2. No destructive development activities.

TABLE 4: SITE ECOLOGICAL IMPORTANCE OF TERRESTRIAL-AQUATIC ECOTONES.

Conservation Importance (CI): Medium
Low occurrence of CR, EN and/or VU species that have a global EOO >10 km^2 (Table 3).
Functional Integrity (FI): High
Ecosystem type of LC with relatively good habitat connectivity and minor negative ecological impacts.
Biodiversity Importance (BI): High
Receptor Resilience (RR): Medium
Slow anticipated recovery (± >10 years) to restore >75 % of the original species composition.
Site Ecological Importance (SEI): Low
Implications for Wind Energy mitigation:
1. Minimisation mitigation where avoidance is not possible.
2. No destructive development activities.

TABLE 5: SITE ECOLOGICAL IMPORTANCE OF MATJIESFONTEIN SHALE RENOSTERVELD.

Conservation Importance (CI): High
Highly likely occurrence of CR, EN and/or VU species that have a global EOO >10 km^2 (Table 3).
Functional Integrity (FI): High

Large (20 – 100 ha) intact natural area with good habitat connectivity with good rehabilitation potential.
Biodiversity Importance (BI): High
Receptor Resilience (RR): High
Habitat can recover relatively quickly (5-10 years) to restore >75 % of the original species due to good habitat connectivity.
Site Ecological Importance (SEI): Medium
Implications for Solar Energy mitigation:
1. Minimisation and restoration mitigation.
2. Development activities of medium impact acceptable followed by appropriate restoration activities.
3. Monitor regularly for erosion and mitigate immediately when identified.
4. Monitor regularly for alien invasive species and remove immediately when detected.

TABLE 6: SITE ECOLOGICAL IMPORTANCE OF NORTH LANGEBERG SANDSTONE FYNBOS.

Conservation Importance (CI): High
Highly likely occurrence of CR, EN and/or VU species that have a global EOO >10 km^2 (Table 3).
Functional Integrity (FI): High
Large (20 – 100 ha) intact natural area with good habitat connectivity with good rehabilitation potential.
Biodiversity Importance (BI): High
Receptor Resilience (RR): High
Habitat can recover relatively quickly (5-10 years) to restore >75 % of the original species due to good habitat connectivity.
Site Ecological Importance (SEI): Medium
Implications for Solar Energy mitigation:
1. Minimisation and restoration mitigation.
2. Development activities of medium impact acceptable followed by appropriate restoration activities.

3. Monitor regularly for erosion and mitigate immediately when identified.
4. Monitor regularly for alien invasive species and remove immediately when detected.

TABLE 7: SITE ECOLOGICAL IMPORTANCE OF SOUTH LANGEBERG SANDSTONE FYNBOS.

Conservation Importance (CI): High
Highly likely occurrence of CR, EN and/or VU species that have a global EOO >10 km^2 (Table 3).
Functional Integrity (FI): Medium
Medium (5-20 ha) area of good natural connectivity.
Biodiversity Importance (BI): Medium
Receptor Resilience (RR): High
Habitat can recover relatively quickly (5-10 years) to restore >75 % of the original species due to good habitat connectivity.
Site Ecological Importance (SEI): Low
Implications for Solar Energy mitigation:
1. Minimisation and restoration mitigation.
2. Development activities of medium to high impact acceptable followed by appropriate restoration activities.
3. Monitor regularly for erosion and mitigate immediately when identified.
4. Monitor regularly for alien invasive species and remove immediately when detected.

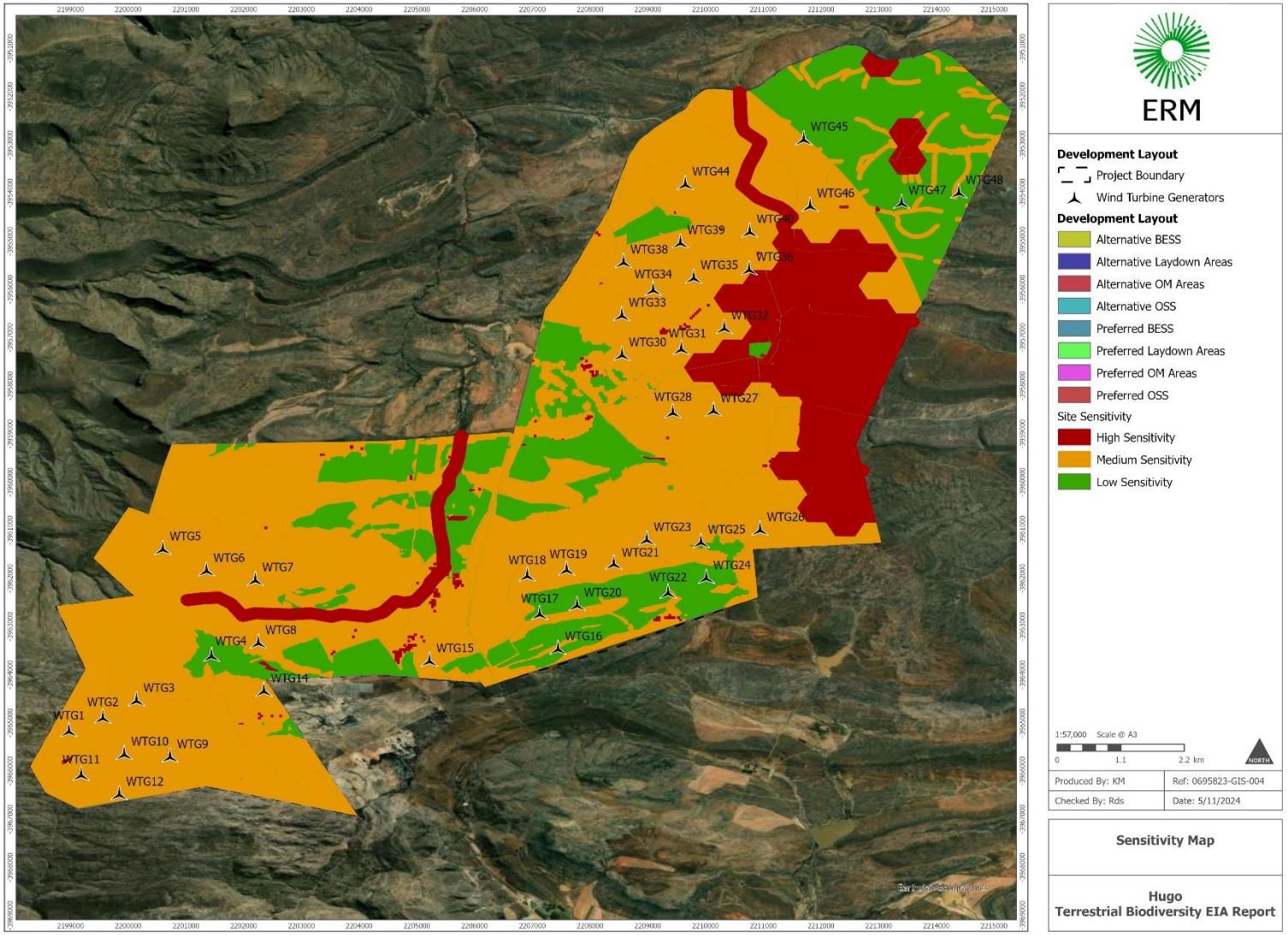
TABLE 8: SITE ECOLOGICAL IMPORTANCE OF MATJIESFONTEIN QUARTZITE FYNBOS.

Conservation Importance (CI): High
Highly likely occurrence of CR, EN and/or VU species that have a global EOO >10 km^2 (Table 3).
Functional Integrity (FI): High
Large (20 – 100 ha) intact natural area with good habitat connectivity with good rehabilitation potential.
Biodiversity Importance (BI): High

Receptor Resilience (RR): High
Habitat can recover relatively quickly (5-10 years) to restore >75 % of the original species due to good habitat connectivity.
Site Ecological Importance (SEI): Medium
Implications for Solar Energy mitigation:
1. Minimisation and restoration mitigation.
2. Development activities of medium impact acceptable followed by appropriate restoration activities.
3. Monitor regularly for erosion and mitigate immediately when identified.
4. Monitor regularly for alien invasive species and remove immediately when detected.

The site sensitivity in relation to the developer's final EIA layout is mapped using the SEIs above in conjunction with satellite imagery and specialist opinion. The site ecological importance map (Figure 5) in the Plant Species Theme has informed the site's sensitivity. High Sensitivity areas have been classified as 'No Go' due to the presence of a CBA. The Protected Area has been classified as Medium Sensitivity as this area has shown promise to support CBAs present on site. Medium sensitivity areas can undergo a certain limit of habitat loss, provided the underlying ecological processes are not impacted and stringent mitigations are adhered to. No turbines are recommended to be placed within highly sensitive areas on the site.

FIGURE 5: SITE ECOLOGICAL IMPORTANCE MAP FOR THE PROPOSED HUGO WIND ENERGY FACILITY IN THE PLANT SPECIES THEME.



4. IMPACT ASSESSMENT

WEFs have the potential to impact floral communities directly through vegetation clearing, enhancement of poaching opportunities, and environmental pollution (noise and light) and indirectly through habitat fragmentation resulting in landscape modifications[16]. Direct and indirect impacts are anticipated and even expected for all phases of the development, namely construction, operational and decommissioning. An impact assessment was needed to thoroughly assess the anticipated impacts associated with each phase of the development.

4.1 CONSTRUCTION PHASE AND DECOMMISSIONING PHASE

The impacts that will be most prevalent during the Construction Phase of the proposed Hugo WEF are:

- Vegetation Clearing
- Chemical Contamination
- Altered Flow Regimes
- Mortality

The anticipated impacts during the Decommissioning Phase of the proposed Hugo WEF mirror those expected during the construction phase. Decommissioning activities are foreseen to take a similar amount of time as construction activities. However, they primarily involve dismantling the structures that were previously erected for the development. The impacts that will be most prevalent during the Decommission Phase of the proposed Hugo WEF are:

- Vegetation Clearing
- Mortality

4.1.1 IMPACT: VEGETATION CLEARING

Plants are vital in maintaining ecosystem function and integrity and play a key role in the determination of species abundance and distribution. The baseline environment will undergo vegetation clearing as a result of the development and associated infrastructure. WEFs are less invasive in terms of land-use modification as compared to solar farms and would require minimal vegetation clearing, leaving behind a good matrix of natural flora intact[17]. However, up to 100ha of natural land will be modified for the construction and decommissioning phase and this may have adverse impacts if not managed effectively. The impacts associated with vegetation clearing for the development is moderate before mitigation measures are applied (Table 9).

[16] Urziceanu, M., Anastasiu, P., Rozylowicz, L. and Sesan, T.E., 2021. Local-scale impact of wind energy farms on rare, endemic, and threatened plant species. PeerJ, 9, p.e11390.
[17] Keehn, J.E. and Feldman, C.R., 2018. Disturbance affects biotic community composition at desert wind farms. Wildlife Research, 45(5), pp.383-396.

TABLE 9: ASSESSMENT OF POTENTIAL VEGETATION CLEARING IMPACTS ASSOCIATED WITH THE CONSTRUCTION AND DECOMMISSION PHASE OF THE PROPOSED DEVELOPMENT.

Impact Phase: Construction/ Decommissioning					
Nature of the impact: Potential vegetation clearing impacts associated with the construction and decommissioning phase of the proposed development					
Description of Impact: Certain areas will need to be cleared of vegetation to facilitate construction of associated infrastructure and transport of personnel on site. This impact can negatively affect endemic, threatened or important flora species.					
Impact Status: Negative					
	E	**D**	**R**	**M**	**P**
Without Mitigation	Local	Medium Term	Recoverable	Moderate	Highly Probable
Score	2	3	3	3	4
With Mitigation	Site	Short Term	Recoverable	Low	Probable
Score	1	2	3	2	3
Significance Calculation	**Without Mitigation**		**With Mitigation**		
S=(E+D+R+M)*P	Moderate Negative Impact (44)		Low Negative Impact (24)		
Was public comment received?	NO				
Has public comment been included in mitigation measures?	NO				

Mitigation measures to reduce residual risk or enhance opportunities:

- The development footprint must avoid No-Go/ High Sensitivity areas as much as possible.
- Limit the area of impact as much as possible.
- A pre-construction walkthrough during the optimal flowering period (spring) of the finalized development layout must be conducted to ensure that No-Go and High Sensitivity areas are avoided where possible.
- Ensure that lay-down and other temporary infrastructure are within Low Sensitivity areas.
- Rehabilitate disturbed areas that are not required by the operational phase of the development.
- All construction staff on site must attend an environmental induction to ensure that basic environmental principles are adhered to. This includes topics such as avoiding fire hazards, no littering, appropriate handling of pollution and chemical spills, remaining within demarcated construction areas, avoidance of No-Go areas and sensitive habitats etc.
- Demarcate sensitive areas near the development footprint as no-go areas with construction tape or similar and clearly marked as No-Go areas.
- An environmental management programme (EMPr) must be implemented and must provide a detailed description of how construction activities must be conducted to reduce unnecessary clearing and/or destruction of habitat.

Residual impact	*Residual impacts are expected to occur for the area and may be relevant in soil erosion and alien invasive species establishing themselves before natural flora can. All mitigation measures would need to be adhered to and continuous monitoring and maintenance is required after construction.*

4.1.2 IMPACT: CHEMICAL CONTAMINATION

Chemical contamination can significantly impact the receiving environment due to construction activities. Studies at an upland wind farm highlighted the presence of contaminants like heavy metals (copper, chromium, zinc, aluminium, manganese) and bacteria in sediments and water[18]. Similar contaminants can lead to pollution and affect sediment quality. Other characteristics of water that can be impacted include pH and alkalinity. Chemical contamination can result from construction activities, waste disposal, and runoff, potentially degrading water quality and harming aquatic ecosystems and the terrestrial flora that depend on these aquatic sources on site. Monitoring and managing chemical contamination is crucial to mitigate adverse effects on the receiving environment. The assessment of chemical contamination impacts is assessed in Table 10.

TABLE 10: ASSESSMENT OF THE POTENTIAL CHEMICAL CONTAMINATION IMPACTS ASSOCIATED WITH THE CONSTRUCTION PHASE OF THE PROPOSED DEVELOPMENT.

Impact Phase: Construction					
Nature of the impact: Potential chemical contamination impacts associated with the construction phase of the proposed development.					
Description of Impact: Chemical contamination during the Construction phase. Spillage of construction materials or chemicals can adversely impact waterbodies and the flora on which they depend.					
Impact Status: Negative					
	E	**D**	**R**	**M**	**P**
Without Mitigation	Local	Medium term	Recoverable	High	Highly Probable
Score	2	3	3	4	4
With Mitigation	Site	Short Term	Recoverable	Moderate	Probable
Score	1	2	3	3	3
Significance Calculation	**Without Mitigation**		**With Mitigation**		
S=(E+D+R+M)*P	Moderate Negative Impact (48)		Low Negative Impact (27)		
Was public comment received?	NO				
Has public comment been included in mitigation measures?	NO				
Mitigation measures to reduce residual risk or enhance opportunities: • The development footprint must avoid High Sensitivity areas as much as possible. • Ensure proper storage and handling of chemicals (fuel, lubricants, cleaning agents) used on-site. Store all chemicals in designated areas equipped with spill containment measures to prevent leaks and spills.					

[18] Millidine, K.J., Malcolm, I.A., McCartney, A., Laughton, R., Gibbins, C.N. and Fryer, R.J., 2015. The influence of wind farm development on the hydrochemistry and ecology of an upland stream. Environmental monitoring and assessment, 187, pp.1-17.

- A chemical spill response plan must be developed before construction activities are undertaken. This spill response plan must be implemented by an ECO on site.
- Provide appropriate training to construction staff on the safe handling of chemical and hazardous materials.
- Implement measures to prevent runoff to nearby waterbodies by installing sediment traps and/or containment pods. This should be addressed in the Stormwater Assessment.

Residual impact	*Residual impacts are expected to occur for the area and may be relevant in aquatic systems on site as well as soil cover. The use of chemicals on site should be limited as far as possible and environmentally friendly alternatives should be utilized, resulting in no major residual impacts associated with the phase.*

4.1.3 IMPACT: ALTERED FLOW REGIME

Construction activities can potentially lead to altered water flow due to increased surface runoff caused by vegetation clearing. Altered water regimes can create more favourable conditions for alien invasive species, thus negatively impacting native flora who are not able to compete in a new environment fast enough. Adequate flow and erosion management mitigations would need to be addressed in the EMPr.

TABLE 11: ASSESSMENT OF THE POTENTIAL ALTERED FLOW REGIME IMPACTS ASSOCIATED WITH THE CONSTRUCTION PHASE OF THE PROPOSED DEVELOPMENT.

Impact Phase: Construction

Nature of the impact: Potential altered flow regime impacts associated with the construction phase of the proposed development.

Description of Impact: Construction of infrastructure may alter water flow characteristics such as runoff, sedimentation and infiltration. These could change vegetation community composition, soil depth, and habitat suitability over time.

Impact Status: Negative

	E	**D**	**R**	**M**	**P**
Without Mitigation	Local	Medium term	Recoverable	High	Highly Probable
Score	2	3	3	4	4
With Mitigation	Site	Short Term	Recoverable	Moderate	Probable
Score	1	2	3	3	3

Significance Calculation	**Without Mitigation**	**With Mitigation**
S=(E+D+R+M)*P	Moderate Negative Impact (48)	Low Negative Impact (27)
Was public comment received?	NO	
Has public comment been included in mitigation measures?	NO	

Mitigation measures to reduce residual risk or enhance opportunities:

- Adequate flow and erosion control measures should be included in the EMPr.

- Ongoing monitoring and rehabilitation of disturbed areas must be implemented.
- All recommendations in the Stormwater Assessment must be strictly adhered to.

Residual impact	*Vegetation clearing may impact runoff and infiltration rates. As a result, residual impacts may occur after mitigation measures have been applied, but these impacts are manageable.*

4.1.4 IMPACT: MORTALITY OF FLORA

Construction activities can have significant implications for local plant populations. Increased traffic and human presence, coupled with illegal collection pose direct threats to various flora species. The following impact table outlines the potential risks associated with these factors and suggests mitigation measures to minimize adverse effects on biodiversity during the construction and decommissioning processes.

TABLE 12: ASSESSMENT OF THE POTENTIAL MORTALITY OF FLORA SPECIES DUE TO DIRECT AND INDIRECT IMPACTS ASSOCIATED WITH THE CONSTRUCTION/DECOMMISSION PHASE OF THE PROPOSED DEVELOPMENT.

Impact Phase: Construction/ Decommissioning

Nature of the impact: Potential mortality of flora species due to direct and indirect impacts associated with the construction and decommissioning phase of the proposed development.

Description of Impact: Direct mortality due to increased traffic and illegal collection and indirect mortality due to potential increased herbivore presence and decreased detection can occur during the Construction and Decommissioning Phase.

Impact Status: Negative

	E	**D**	**R**	**M**	**P**
Without Mitigation	Local	Long term	Irreversible	Very High	Highly Probably
Score	2	4	5	5	4
With Mitigation	Site	Medium term	Recoverable	Moderate	Probable
Score	1	3	3	3	3
Significance Calculation	**Without Mitigation**			**With Mitigation**	
S=(E+D+R+M)*P	**High Negative Impact (64)**			Low Negative Impact (30)	
Was public comment received?	NO				
Has public comment been included in mitigation measures?	NO				

Mitigation measures to reduce residual risk or enhance opportunities:

- No movement of construction vehicles between dusk and dawn.
- Induction toolbox talk to construction personnel to increase awareness about flora SCCs present.
- No unauthorized movement of personnel.
- No unauthorized access to the construction site.

- A Plant Rescue and Rehabilitation Plan must be designed before construction takes place and implemented during all phases of the project lifecycle.

Residual impact	*Residual impacts include direct mortality of species of conservation concern as a result of activities associated with the WEF.*

4.2 OPERATIONAL PHASE

The anticipated impacts for the operational phase of the proposed development are:

- Potential Encroachment of Alien Invasive Species
- Flora Mortality and Loss of SCC
- Soil erosion
- Unwanted Fires

Their significance with and without the recommended mitigation measures are assessed in the tables below.

4.2.1 IMPACT: ENCROACHMENT OF ALIEN INVASIVE SPECIES

The clearing and disturbance of areas during the construction phase of the project can result in an increased and ongoing risk of invasion of alien plant species, particularly pioneer species.

Four invasive plant species have been identified within the Hugo WEF area during the specialist site visit. It must be noted that more invasive species may be present on site but was not detected. *Acacia mearnsii* (Black Wattle) was detected in the descending catchment area adjacent to the Protected Area on the Hugo PAOI. This species is known to invade roadsides and watercourses and has the potential to invade and degrade riparian habitat. This invasive is listed as a Category 2 invasive species according to NEMBA, and requires ongoing monitoring and management, as it is not a widely distributed invasive[19]. *Bromus diandrus* was an occasional species found in the Hugo low shrubland and associated drainage areas. The Bromus sp. has the potential to transform invaded habitats and prefers roadsides and natural veld in fynbos. *Rumex acetosella* was detected in riparian vegetation at Hugo WEF. This species is listed as an invasive as per NEMBA but is not a regionally categorized (except for on Prince Edward and Marion islands). Nonetheless, it invades disturbed areas and would need operational monitoring to ensure the species does not spread further. *Tamarix ramosissima* invades riverbeds and riverbanks and was identified at a disturbed riparian habitat on Hugo in small quantities. It is listed as a Category 1b invasive species and must be controlled and/or eradicated as far as possible in alignment with NEMBA.

Regular alien clearing activities would be required, particularly during the initial stages of the operational phase to limit the spread of alien species. Once the natural vegetation has re-established in previously disturbed areas then the level of alien control required would likely be reduced.

[19] Henderson, L., Plant Protection Research Institute Handbook No. 21. Agricultural Research Council.

TABLE 13: ASSESSMENT OF POTENTIAL ENCROACHMENT OF ALIEN INVASIVE SPECIES RESULTING IN LOSS OF FLORA SCC ASSOCIATED WITH THE OPERATIONAL PHASE OF THE PROPOSED DEVELOPMENT.

Impact Phase: Operation					
Nature of the impact: Potential encroachment of alien invasive species resulting in loss of flora SCC associated with the operational phase of the proposed development.					
Description of Impact: Movement of personnel, and increased disturbance puts the proposed development area at greater risk of alien invasive species moving into and spreading within the area. Alien invasive species will encroach into disturbed areas left behind by construction activities and may go undetected during the operational phase. This impact results in the potential loss of flora SCC or endemic species.					
Impact Status: Negative					
	E	**D**	**R**	**M**	**P**
Without Mitigation	Local	Long term	Irreversible	High	Definite
Score	2	4	5	5	5
With Mitigation	Site	Medium term	Recoverable	Moderate	Low Probability
Score	1	3	3	3	2
Significance Calculation	**Without Mitigation**		**With Mitigation**		
S=(E+D+R+M)*P	**High Negative Impact (80)**		Low Negative Impact (20)		
Was public comment received?	NO				
Has public comment been included in mitigation measures?	NO				
Mitigation measures to reduce residual risk or enhance opportunities: • Disturbed areas such as road verges, lay-down areas and areas utilised by temporary construction facilities must be regularly monitored to detect the establishment of alien species and those species should be eradicated before they spread. • Regular alien clearing should be conducted, as needed, using the best-practice methods for the species concerned, the use of herbicides should be avoided as far as possible. • The use of herbicides (if absolutely required) for the control and eradication of alien grasses should be done in accordance with the alien eradication programme in the EMPr to reduce unintended ecological impacts.					
Residual impact	*Residual impacts include loss of natural flora and suitable habitat due to encroachment of alien invasive species.*				

4.2.2 IMPACT: UNWANTED FIRES

Although the Fynbos biome relies on fire and is susceptible to fires, unwanted or frequent and intense fires can cause vegetation loss. These fires can surpass the ecosystem's natural ability to recover, leading to habitat loss and fragmentation. This affects fauna species and has negative effects on all levels of the local ecosystem. Essential ecological processes such as nutrient cycling

and soil structure can also be affected. Additionally, fires can create conditions that are favorable for invasive alien species to invade. Furthermore, fires can negatively impact infrastructure and personnel. The impact significance is rated as Moderate before mitigation measures are implemented.

TABLE 14: ASSESSMENT OF POTENTIAL FIRE IMPACTS ASSOCIATED WITH THE OPERATIONAL PHASE OF THE PROPOSED DEVELOPMENT.

Impact Phase: Operation					
Nature of the impact: Potential fire impacts associated with the operational phase of the proposed development.					
Description of Impact: Increased personnel on site increases the fire risk due to smoking and/or use of electrical equipment on site.					
Impact Status: Negative					
	E	**D**	**R**	**M**	**P**
Without Mitigation	Local	Long term	Irreversible	High	Highly Probably
Score	2	4	5	4	4
With Mitigation	Site	Medium term	Recoverable	Moderate	Probable
Score	1	3	3	3	3
Significance Calculation	**Without Mitigation**		**With Mitigation**		
S=(E+D+R+M)*P	Moderate Negative Impact (60)		Low Negative Impact (30)		
Was public comment received?	NO				
Has public comment been included in mitigation measures?	NO				
Mitigation measures to reduce residual risk or enhance opportunities: • No open fires should be permitted outside of designated areas. • Smoking areas must be defined, and no smoking should be permitted outside of designated areas. • An emergency response plan for uncontrolled fires must be in place prior to operation and implemented for the duration of the WEF's lifespan. • All staff members must have a Fire and Safety induction to increase awareness.					
Residual impact	*Residual impacts include loss of flora SCC. This is why it is critical to manage unplanned fires as soon as possible to avoid mortality.*				

4.2.3 IMPACT: MORTALITY OF FLORA

Floral communities face direct mortality due to increased traffic and human presence, coupled with illegal collection. The wind farm should implement operational vegetation monitoring to understand and compare post-construction impacts with baseline (pre-construction) conditions. This will help create an adaptive management approach to effectively manage direct mortality to terrestrial floral communities. The following impact table outlines the potential risks

associated with these factors and recommended mitigation measures to minimize adverse effects on vegetation during the operational phase. The impacts of direct mortality is Moderate before mitigation measures are implemented. Extreme loss of species impacts biodiversity and the ecological processes that helps keep localized communities intact and ecosystems functioning.

TABLE 15: ASSESSMENT OF POTENTIAL FLORAL MORTALITY AND LOSS OF SCC IMPACTS ASSOCIATED WITH THE OPERATIONAL PHASE OF THE PROPOSED DEVELOPMENT.

Impact Phase: Operation					
Nature of the impact: Potential floral mortality and loss of SCC impacts associated with the operational phase of the proposed development.					
Description of Impact: Direct mortality/loss of flora species is anticipated due to increased traffic on site and illegal collection. Targeted illegal harvesting may pose a risk as the WEF may offer greater ease of access to the public.					
Impact Status: Negative					
	E	**D**	**R**	**M**	**P**
Without Mitigation	Local	Long term	Irreversible	High	Highly Probable
Score	2	4	5	4	4
With Mitigation	Site	Medium term	Recoverable	Moderate	Low Probability
Score	1	3	3	3	2
Significance Calculation	**Without Mitigation**			**With Mitigation**	
S=(E+D+R+M)*P	**Moderate Negative Impact (60)**			Low Negative Impact (20)	
Was public comment received?	NO				
Has public comment been included in mitigation measures?	NO				

Mitigation measures to reduce residual risk or enhance opportunities:

- An environmental induction for all staff on site to identify SCC.
- Demarcate sensitive areas, where SCC have been confirmed present near the development footprint as No-Go areas.
- Site access should be controlled, and no unauthorised persons should be allowed onto the site to limit illegal harvesting.
- The collection or harvesting of any plants at the site should be strictly forbidden.
- Establish a monitoring program to assess the effectiveness of mitigation measures and track changes in floral communities over time. Use the results of monitoring to inform adaptive management strategies and make adjustments as needed to minimize direct floral mortality and optimize conservation outcomes.

Residual impact	*Residual impacts include loss flora SCC from the natural environment.*

4.2.4 IMPACT: SOIL EROSION

Disturbance created during construction would leave the disturbed areas vulnerable to soil erosion in the operational phase. Consequently, specific measures such as erosion berms and water dispersion features will be required along the power line, access roads and servitudes. Although this impact has a moderate significance before mitigation, it can be effectively mitigated against through the maximum use of existing access roads and servitudes and the implementation of erosion control measures. The significance of this impact after the implementation of mitigation measures is therefore considered to be low.

TABLE 16: ASSESSMENT OF POTENTIAL SOIL EROSION IMPACTS ASSOCIATED WITH THE OPERATIONAL PHASE OF THE PROPOSED DEVELOPMENT.

Impact Phase: Operation					
Nature of the impact: Potential soil erosion impacts associated with the operational phase of the proposed development.					
Description of Impact: Soil erosion facilitated by clearing vegetation and increased road use promotes soil displacement and loss during the Operational Phase.					
Impact Status: Negative					
	E	**D**	**R**	**M**	**P**
Without Mitigation	Local	Long term	Irreversible	High	Highly Probably
Score	2	4	5	4	4
With Mitigation	Site	Medium term	Recoverable	Moderate	Low Probability
Score	1	3	3	3	2
Significance Calculation	**Without Mitigation**		**With Mitigation**		
S=(E+D+R+M)*P	Moderate Negative Impact (60)		Low Negative Impact (20)		
Was public comment received?	NO				
Has public comment been included in mitigation measures?	NO				

Mitigation measures to reduce residual risk or enhance opportunities:

- Utilize existing servitudes and access roads wherever possible, any new roads or the upgrading of roads should be minimized as far as possible and not be larger than required.
- All construction vehicles should adhere to clearly defined and demarcated roads, no off-road driving should be allowed.
- Ensure that sufficient erosion control measures are constructed on all servitudes and access roads in the project area, including where such crosses waterbodies.
- Rehabilitate existing servitude and access roads in the project area with sufficient erosion control measures to prevent the loss of soil and the degradation of vegetation.
- Construction activities in or near drainage lines, washes or temporary inundated depressions must only take place during the dry season.
- An environmental management programme (EMPr) must be implemented and must provide a detailed description of how construction activities must be conducted to avoid increased erosion.

- Erosion management at the site should take place according to the Erosion Management Plan and Rehabilitation Plan included in the EMPr.
- All roads and other hardened surfaces should have runoff control features which redirect water flow and dissipate energy in the water stream which may pose an erosion risk.
- Regular monitoring for erosion after construction to ensure that no erosion problems have developed as result of the disturbance during the operation of the project.

Residual impact	*Residual impacts include changes to infiltration rates and loss of soil fertility.*

4.3 CUMULATIVE IMPACTS

The primary cumulative impact anticipated for the proposed Hugo WEF is changes to broad-scale ecological processes. According to the South African Renewable Energy EIA Application Database (2023, Q4), there are five solar Photovoltaic developments within a 30km radius of the proposed Hugo WEF, with no Wind Energy Farms considered within the same radius (Figure 6). Solar facilities typically involve more extensive vegetation clearing compared to WEFs. Consequently, this can lead to the loss of individual SCC and increased habitat fragmentation. Habitat fragmentation can reduce habitat connectivity and lead to changes in the dispersal of species, population isolation and reduced genetic diversity within landscapes. While the broad-scale impacts on habitats are concerning, it's noteworthy that the Fynbos biome is not listed as critically endangered. However, broad scale clearing of vegetation could lead to cascading effects in flow regimes, nutrient cycling, and energy flow which ultimately results in decreased biodiversity.

TABLE 17: ASSESSMENT OF POTENTIAL BROAD-SCALE ECOLOGICAL CUMULATIVE IMPACTS ASSOCIATED WITH THE PROPOSED DEVELOPMENT.

Impact Phase: Operation					
Description of the Cumulative Impact: The consideration of five Solar Photovoltaic facilities within 30km of the proposed WEF brings about the potential of changes in broad-scale ecological processes brought on by vegetation clearing.					
Impact Status: Negative					
	E	**D**	**R**	**M**	**P**
Without Enhancement	Regional	Long term	Recoverable	High	Highly Probable
Score	3	4	3	4	4
With Enhancement	Regional	Long term	Recoverable	Moderate	Low Probability
Score	3	4	3	3	2
Significance Calculation	**Without Enhancement**			**With Enhancement**	
S=(E+D+R+M)*P	**Moderate Negative Impact (56)**			Low Negative Impact (26)	
Was public comment received?	NO				

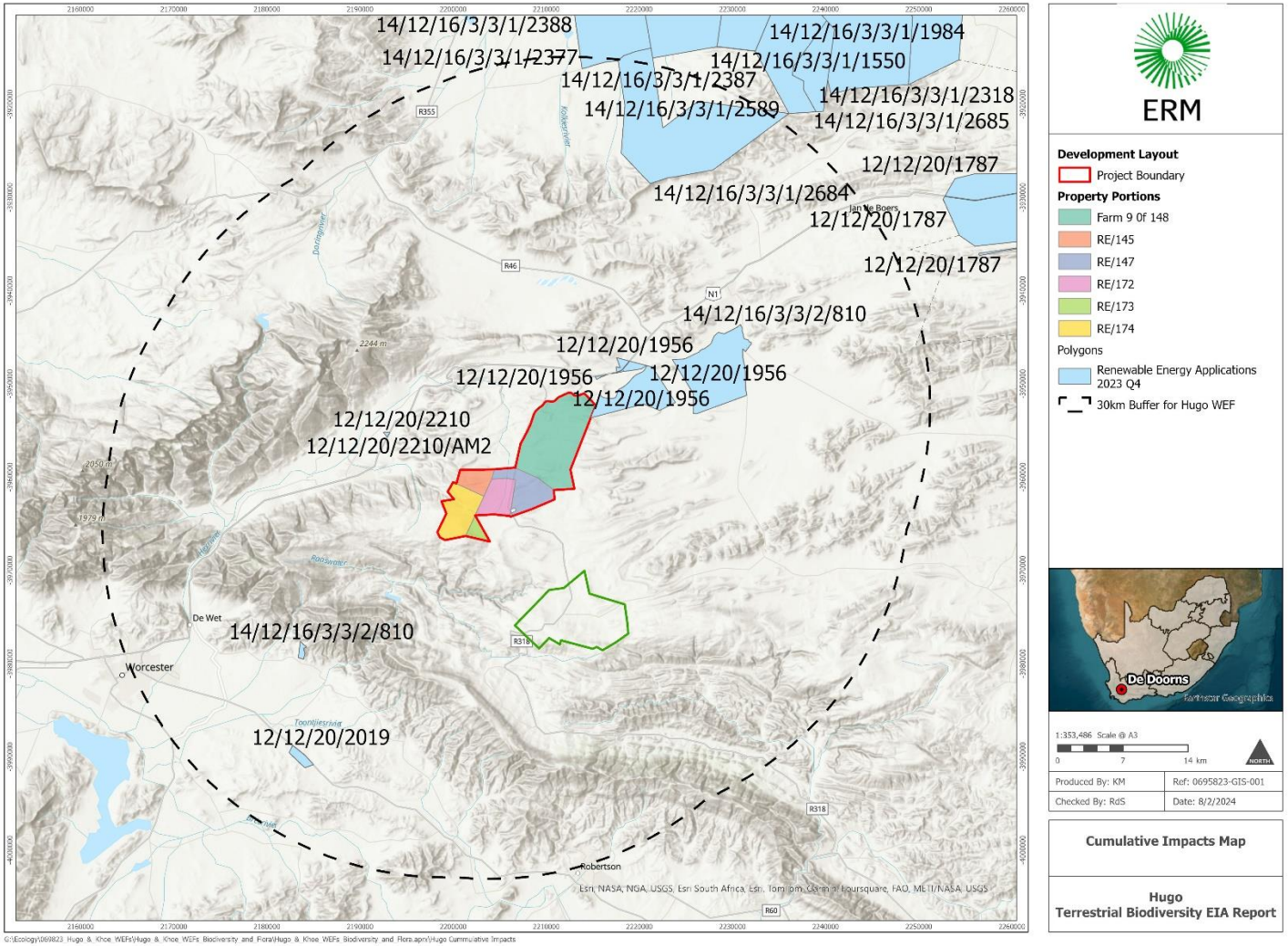
Has public comment been included in mitigation measures?	NO

Mitigation measures to reduce residual risk or enhance opportunities:

- Developers within the area should share baseline data and operational monitoring data to Interested and Affected Parties on a quarterly basis.
- All mitigations for the proposed development should be strictly adhered to avoid cumulative contributions.

Residual impact	*Proposed development unlikely to significantly contribute to broad-scale ecological impacts to flora in the area*

FIGURE 6: THE PROPOSED HUGO WEF IN RELATION TO OTHER RENEWABLE ENERGY DEVELOPMENTS WITHIN A 30KM RADIUS



4.4 NO-GO ALTERNATIVE

The No-Go Alternative assumes that the proposed development described in Section 1.2 of this report does not proceed. In this case the proposed Hugo WEF PAOI will remain unchanged from its baseline condition and be subject to all extant impacts and those that may arise from changes in potential future land-use. Under the No-Go Alternative the potential contribution of the proposed Hugo WEF to meet growing renewable power demands will be directed into an alternative energy development (renewable/non-renewable) with its own distinct impacts on the local environment. Development of a non-renewable alternative will potentially have far-reaching implications on climate change. Therefore, the benefits of developing a WEF within the landscape outweigh the No-Go alternative or the alternative to develop a non-renewable energy source. In these instances, none of the opportunities listed below will be realized which includes impacted land being rehabilitated through the management of invasive species and enhancing local floral communities and habitats and engaging the local community through environmental awareness.

4.5 OPPORTUNITIES

Development of the proposed Hugo WEF in adherence with the prescribed mitigation measures presents several ecological opportunities. By avoiding No-Go and High Sensitivity areas the development will indirectly contribute to conservation efforts. Additionally, rehabilitating impacted Low Sensitivity areas following disturbance, and implementing pro-active alien invasive species management will potentially enhance biodiversity by improving local conditions and reducing undue competition for resources. Requiring on-site staff to attend an environmental induction the development indirectly contributes to local community engagement and education on environmental issues. By publishing environmental management progress reports (as should be prescribed in the anticipated EMPr) the development will contribute to local environmental monitoring and could potentially initiate research interests to better understand the impacts and mitigations for renewable energy developments in similar habitats.

5. CONCLUSION

The sensitivities presented in this assessment have been refined following the prescribed detailed site survey. The Sensitivities provided by the DFFE Online ST are a useful guideline, and the site's sensitivity has been verified against the EIA layout. The data collected to date suggests that the negative impacts to flora communities posed by the proposed development range from Moderate to Low with adherence to the recommended mitigation measures. Some mitigation measures involve avoiding highly sensitive areas, implementing ongoing monitoring plans for and to continuously adapt the EMPr throughout the development's operational lifecycle.

SCC are likely present on site, although none have been confirmed or sighted during the prescribed site survey. Mitigation recommendations are standard for wind energy developments, and provided these and subsequent considerations presented in this Botanical Specialist Impact Assessment are met, the development of the Hugo WEF will be compatible with conservation efforts in the area.

It is the Specialist's opinion that the proposed Hugo WEF be considered for environmental authorization, provided all mitigation measures are adhered to.

APPENDIX A COMPREHENSIVE SITE ECOLOGICAL IMPORTANCE METHODOLOGY

Site Ecological Importance (SEI) is considered to be a function of the Biodiversity Importance (BI) of the receiving environment (e.g., species of conservation concern and the habitat type present on the site) and its resilience to impacts, or Receptor Resilience (RR). The BI of the receiving environment is in turn a function of the Conservation Importance (CI) and the Functional Integrity (FI) of the receiving environment. Conservation Importance is defined by the South African National Biodiversity Institute's Species Environmental Assessment Guidelines as:

"The importance of a site for supporting biodiversity features of conservation concern present, e.g., populations of IUCN threatened and Near Threatened species (CR, EN, VU and NT), rare species, range restricted species, globally significant populations of congregatory species, and areas of threatened ecosystem types, through predominantly natural processes."

The CI assessment criteria are explained in Table 18 below.

TABLE 18: ASSESSMENT CRITERIA FOR CONSERVATION IMPORTANCE.

Conservation Importance	Criteria
Very High	▪ Confirmed or highly likely occurrence of CR, EN, VU or Extremely Rare of Critically Rare species that have a global extent of occurrence (EOO) < 10 km^2; ▪ Any area of natural habitat of a CR ecosystem type or large (>0.1% of the total ecosystem type extent) of natural habitat of EN ecosystem type; and ▪ Globally significant populations of congregatory species (>10% of the global population).
High	▪ Confirmed or highly likely occurrence of CR, EN, VU species that have a global EOO of >10 km2. IUCN threatened species (CR, EN, VU) must be listed under any Criterion other than A. If listed as threatened only under Criterion A, include if there are less than 10 locations or < 10 000 mature individuals remaining; ▪ Small area (>0.01% but <0.1%) of the total ecosystem type extent of natural habitat of EN ecosystem type, or large area (>0.1%) of natural habitat of VU ecosystem type; ▪ Presence of Rare species; and

	▪ Globally significant populations of congregatory species (>1% but <10% of global population).
Medium	▪ Confirmed or highly likely occurrence of populations of NT species, threatened species (CR, EN, VU) listed under Criterion A only and which have more than 10 locations or more than 10 000 mature individuals; ▪ Any area of natural habitat of threatened ecosystems type with status VU; ▪ Presence of range restricted species; and ▪ >50% of receiving environment contains natural habitat with potential to support SCC.
Low	▪ No confirmed or highly likely occurrence of SCC; ▪ No confirmed or highly likely occurrence of range-restricted species; and ▪ <50% of the receiving environment contains natural habitat with potential to support SCC.
Very Low	▪ No confirmed and highly unlikely occurrence of SCC; ▪ No confirmed and highly unlikely populations of range-restricted species; and ▪ No natural habitat remaining.

Functional Integrity (FI) of the receiving environment/habitats is defined as its current ability to maintain the structure and functions that define it, compared to its known or predicted state under ideal conditions i.e. a measure of the ecological condition of the receiving environment as determined by its remaining intact and functional area, its connectivity to other natural areas and the degree of current persistent ecological impacts. The degree of connectivity between habitat patches varies greatly with the dispersal ability of the taxon or taxon group in question, similarly existing impacts will have differential effects on each species. The FI assessment criteria are described in Table 19 below.

TABLE 19: ASSESSMENT CRITERIA FOR FUNCTIONAL INTEGRITY.

Functional Integrity	Criteria
Very High	▪ Very large (>100 ha) intact area for any conservation status of ecosystem, or >5 ha CR ecosystem types; ▪ High habitat connectivity serving as functional ecological corridors, limited road network between intact habitat patches; and

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

As BI is a function of CI and FI, it can be determined as in Table 20 below.

TABLE 20: DETERMINING BIODIVERSITY IMPORTANCE AS A FUNCTION OF CONSERVATION IMPORTANCE AND FUNCTIONAL INTEGRITY.

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

Receptor Resilience (RR) is the intrinsic capacity of the receiving environment to resist major damage from an impact and/or to recover to its original state with limited or no human intervention. Resilience can be linked to a particular disturbance/impact or time of year, e.g., large birds of prey have different levels of resilience to noise disturbance depending on whether they are breeding or not. The RR assessment criteria are described in Table 21 below.

TABLE 21: ASSESSMENT CRITERIA FOR RECEPTOR RESILIENCE.

Receptor Resilience	**Criteria**
Very High	Habitat that can recover rapidly (± less than 5 years) to restore >75 % of the original species composition and functionality of the receptor functionality, or species that have a very high likelihood of remaining at a site even when disturbance or impact is occurring, or species that have a very high likelihood of returning to a site once the disturbance or impact has been removed.
High	Habitat that can recover relatively quickly (± 5-10 years) to restore >75 % of the original

	species composition and functionality of the receptor functionality, or species that have a high likelihood of remaining at a site even when disturbance or impact is occurring, or species that have a high likelihood of returning to a site once the disturbance or impact has been removed.
Medium	Will recover slowly (± more than 10 years) to restore >75 % of the original species composition and functionality of the receptor functionality, or species that have a moderate likelihood of remaining at a site even when disturbance or impact is occurring, or species that have a moderate likelihood of returning to a site once the disturbance or impact has been removed.
Low	Habitat that is unlikely to be able to recover fully after a relatively long period: >15 years required to restore ± 50% of the original species composition and functionality of the receptor functionality, or species that have a low likelihood of remaining at a site even when a disturbance or impact is occurring, or species that have a low likelihood of returning to a site once the disturbance or impact has been removed.
Very Low	Habitat that is unable to recover from major impacts, or species that are unlikely to remain at a site even when disturbance or impact is occurring, or species that are unlikely to return to a site once the disturbance or impact has been removed.

Guidelines to interpret Site Ecological Importance (SEI) in the context of the proposed development guidelines are presented in Table 2, Section 2.3 of this report.

APPENDIX B COMPREHENSIVE IMPACT ASSESSMEMT AND MITIGATION METHODOLOGY

SPECIALIST REPORTING REQUIREMENTS

The Specialist EIA Report must comply with the requirement of GN 43110 of NEMA: Environmental Themes Reporting Criteria and the Relevant Protocols Gazetted, unless no protocol is prescribed, then the Appendix 6 of the EIA Regulations, 2014 (as amended), must be followed, as well as other relevant protocols, guidelines, policies and/or plans.

The specialist report will include the specialist impact assessment of the proposed developments. The terms of reference for specialist studies includes (but is not limited to):

- Site Visit
- Desktop Screening
- Mapping
- Sensitivity Analysis and/or modelling
- Submission of Shapefiles
- Defining the legal, planning and policy context,
- Description of the Baseline Environment
- Determination of potential impacts (direct, indirect, cumulative)
- Determination of residual risks
- Reporting
- Recommendation and input into project design
- Management Plan and/or Monitoring Programme for inclusion in the EMPr
- Sensitivity Verification Reporting in terms of GN 320 of 20 March 2020 and/or a Compliance Statement in terms of GN 320 / GN 1150 of 20 March 2020

IMPACT ASSESSMENT METHODOLOGY

The purpose of the assessment of impacts in an EIA is to evaluate the likely extent and overall significance that a potential impact may have on an identified receptor or resource. Another important aspect of the assessment of impacts is to quantify those impacts that are not scientific-based or evidence-based and include the opinions of others (i.e., the involvement and comment from I&APs).

A successful assessment of the potential significance of impacts will include the description and development of measures that will be taken to avoid, minimise or compensate for any adverse environmental impacts, to enhance positive impacts, and to report the significance of residual impacts that occur following mitigation.

A 7-step approach for the determination of significance of potential impacts was developed by ERM to align with the requirements of Appendix 3 of the EIA Regulations, 2014 (as amended). The approach is both objective and scientific based to allow appointed specialists and EAPs to retain independence throughout the assessment process.

ERM has adapted this 7-step approach from standard ranking metrics such as the Hacking Method, Crawford Method etc. The ERM 7-step approach complies with the method provided in the EIA guideline document (GN 654 of 2010) and

considers international EIA Regulatory reporting standards such as the newly amended European Environmental Impact Assessment (EIA) Directive (2014/52/EU).

The 7-Step approach for determining the significance of impacts pre, and post mitigation, is described below:

- **Step 1:** Predict potential impacts by means of an appraisal of:
  - Site Surveys,
  - Project-related components and infrastructure,
  - Activities related with the project life-cycle,
  - The nature and profile of the receiving environment and potential sensitive environmental features and attributes,
  - Input received during public participation from all stakeholders, and
  - The relevant legal framework applicable to the proposed development
- **Step 2**: Determination of whether the potential impacts identified in **Step 1** will be *direct* (caused by construction, operation, decommissioning or maintenance activities on the proposed development site or immediate surroundings of the site), *indirect* (not immediately observable or do not occur on the proposed development site or immediate surroundings of the site), *residual* (those impacts which remain after post mitigation) and *cumulative* (the combined impact of the project when considered in conjunction with similar projects in proximity).
- **Step 3:** Description and determination of the significance of the predicted impacts in terms of the criteria below to ensure a consistent and systematic basis for the decision-making process. Significance is numerically quantified on the basis score of the following impact parameters:
  1. ***Extent* (E)** of the impact: The geographical extent of the impact on a given environmental receptor.
  2. ***Duration* (D)** of the impact: The length of permanence of the impact on the environmental receptor.
  3. ***Reversibility* (R) of the impact**: The ability of the environmental receptor to rehabilitate or restore after the activity has caused environmental change
  4. ***Magnitude* (M)** of the impact: The degree of alteration of the affected environmental receptor.
  5. ***Probability* (P)** of the impact: The likelihood of the impact actually occurring.

A widely accepted numerical quantification of significance is the formula:

$$\underline{S=(E+D+R+M)*P}$$

Where: *Significance=(Extent+Duration+Reversibility+Magnitude) * Probability*

The following has also been considered when determining the significance of a potential impact.

6. **Nature (N)** of the impact: A description of what causes the effect, what will be affected, and how it will be affected.
7. **Status (S)** of the impact: described as either positive, negative or neutral
8. **Cumulative impacts**.

9. Inclusion of **Public comment.**

The significance of environmental impacts is determined and ranked by considering the criteria presented in the Table below. All criteria are rank according to 'Very Low', 'Low', 'Moderate', 'High' and 'Very High' and are assigned scores of 1 to 5 respectively.

Defining the significant in terms of the impact criteria.

Impact Criteria	Definition	Score	Criteria Description
Extent (E)	Site	1	Impact is on the site only
	Local	2	Impact is localized inside the activity area
	Regional	3	Impact is localized outside the activity area
	National	4	Widespread impact beyond site boundary. May be defined in various ways, e.g. cadastral, catchment, topographic
	International	5	Impact widespread far beyond site boundary. Nationally or beyond
Duration (D)	Immediate	1	On impact only
	Short term	2	Quickly reversible, less than project life. Usually up to 5 years.
	Medium term	3	Reversible over time. Usually between 5 and 15 years.
	Long term	4	Longer than 10 years. Usually for the project life.
	Permanent	5	Indefinite
Magnitude (M)	Very Low	1	No impact on processes
	Low	2	Qualitative: Minor deterioration, nuisance or irritation, minor change in species/habitat/diversity or resource, no or very little quality deterioration. Quantitative: No measurable change; Recommended level will never be exceeded.
	Moderate	3	Qualitative: Moderate deterioration, discomfort, Partial loss of habitat /biodiversity /resource or slight or alteration. Quantitative: Measurable deterioration; Recommended level will occasionally be exceeded.
	High	4	Qualitative: Substantial deterioration death, illness or injury, loss of habitat /diversity or resource, severe alteration or disturbance of important processes. Quantitative: Measurable deterioration; Recommended level will often be exceeded (e.g. pollution)
	Very High	5	Permanent cessation of processes

Impact Criteria	Definition	Score	Criteria Description
Reversibility (R)	Reversible	1	Recovery which does not require rehabilitation and/or mitigation.
	Recoverable	3	Recovery which does require rehabilitation and/or mitigation.
	Irreversible	5	Not possible, despite action. The impact will still persist, and no mitigation will remedy or reverse the impact.
Probability (P)	Improbable	1	Not likely at all. No known risk or vulnerability to natural or induced hazards
	Low Probability	2	Unlikely; low likelihood; Seldom; low risk or vulnerability to natural or induced hazards
	Probable	3	Possible, distinct possibility, frequent; medium risk or vulnerability to natural or induced hazards.
	Highly Probable	4	Highly likely that there will be a continuous impact. High risk or vulnerability to natural or induced hazards
	Definite	5	Definite, regardless of prevention measures.

The *significance* (s) of potential impacts identified according to the criteria above has been colour coded for the purpose of comparison. This colour coding will be used in impact tables.

Significance is deemed Negative (-)			Significance is deemed Positive (+)		
0 - 30	**31 - 60**	**61 - 100**	**0 - 30**	**31 - 60**	**61 - 100**
Low	**Moderate**	**High**	**Low**	**Moderate**	**High**

- **Step 4:** Determination of practical and reasonable mitigation measures based on specialists' inputs and field observations following the mitigation hierarchy (avoid, minimise, manage, mitigate, or rehabilitate).
- **Step 5:** Evaluation of predicted residual impacts after implementation of mitigation measures.
- **Step 6:** Determination of the significance of the impact taking into consideration the predicted residual impacts after implementation of mitigation measures.
- **Step 7:** Based on an acceptable significance of the impact, determination of the need and desirability of the proposed development and an opinion as to whether the development should proceed or not.

The Assessment of the significance of potential impacts is then populated in an Impact Summary Table.

IMPACT SUMMARY TABLE

Please copy the below table into your reports for any impact assessments required.

Impact Phase: Detail if the impact will take place during Construction/ Operation/Decommissioning					
Nature of the impact: Name of impact					
Description of Impact: Detailed description of impact xxxx …					
Impact Status: Detail of the impact is Positive, Neutral or Negative					
	E	**D**	**R**	**M**	**P**
Without Mitigation	Local	Medium Term	x	x	x
Score	2	3	x	x	x
With Mitigation	Site	Short Term	x	x	x
Score	1	2	x	x	x
Significance Calculation	**Without Mitigation**		**With Mitigation**		
S=(E+D+R+M)*P	Moderate Negative Impact (42)		Low Negative Impact (25)		
Was public comment received?	YES/NO. If yes, provide a bullet summary of main concerns.				
Has public comment been included in mitigation measures?	YES/NO, if NO then WHY? If YES then HOW/WHERE				
Mitigation measures to reduce residual risk or enhance opportunities: *List and describe* *Aaa* *Aaa* *Aaa* *Aaa* *Aaaa* …					
Residual impact	*Describe the impact.*				

ASSESSMENT OF CUMULATIVE IMPACTS

In relation to an activity, cumulative impact means *"the past, current and reasonably foreseeable future impact of an activity, considered together with the impact of activities associated with that activity, that in itself may not be significant, but may be significant when added to the existing and reasonably foreseeable impacts eventuating from similar or diverse activities"* (NEMA EIA Reg GN R982 of 2014).

Specialists are required to assess cumulative impacts associated with similar developments within a 35 km radius of the proposed developments. The purpose of the cumulative assessment is to test if such impacts are relevant to the proposed developments in the proposed locations (i.e. whether the addition

of the proposed project in the area will increase the impact). In this regard, specialist studies considered whether the construction of the proposed development will result in:

- Unacceptable risk
- Unacceptable loss
- Complete or whole-scale changes to the environment or sense of place
- Unacceptable increase in impact

Cumulative Impacts will be assessed and populate in a cumulative impact summary table.

Please copy the below table into your reports for any impact assessments required.

Cumulative Impact: Name of impact					
Description of Cumulative Impact: Detailed description of cumulative impact xxxx …					
Impact Status: Detail of the impact is Positive, Neutral or Negative					
	E	**D**	**R**	**M**	**P**
Without Enhancement	Local	Medium Term	x	x	x
Score	2	3	x	x	x
With Enhancement	Site	Short Term	x	x	x
Score	1	2	x	x	x
Significance Calculation	**Without Enhancement**		**With Enhancement**		
S=(E+D+R+M)*P	Moderate Negative Impact (42)		Low Negative Impact (25)		
Can Impacts be Enhanced?	YES/NO and HOW/WHY				
Enhancement: *List and describe* *Aaa* *Aaa* *Aaa* *Aaa* *Aaaa* …					
Residual impact	*Describe the impact.*				

APPENDIX C COMPREHENSIVE LIST OF PLANT SPECIES POTENTIALLY PRESENT ON SITE

A comprehensive list of all plant species that are potentially present in the proposed Hugo WEF PAOI and their associated data sources are presented in Table 22 below. The sources include the SANBI POSA Brahms (B) database, the Global Biodiversity Information Facility (GBIF) database, The DFFE Online Screening Tool (ST) and the Biodiversity and Development Institute's Virtual Museum (VM) database.

TABLE 22: COMPREHENSIVE LIST OF PLANT SPECIES POTENTIALLY PRESENT WITHIN THE PROPOSED HUGO WEF PAOI.

Family	Species	Source	Family	Species	Source
Acanthaceae	*Blepharis capensis*	GBIF	Fabaceae	*Aspalathus shawii* subsp. *shawii*	B, GBIF
Achariaceae	*Kiggelaria africana*	GBIF	Fabaceae	*Aspalathus simii*	B
Agavaceae	*Agave sisalana*	B	Fabaceae	*Aspalathus smithii*	B
Aizoaceae	*Acrodon bellidiflorus*	GBIF	Fabaceae	*Aspalathus spiculata*	GBIF
Aizoaceae	*Acrosanthes anceps*	B	Fabaceae	*Aspalathus spinosa*	GBIF
Aizoaceae	*Acrosanthes humifusa*	GBIF	Fabaceae	*Aspalathus spinosa subsp. flavispina*	GBIF
Aizoaceae	*Acrosanthes parviflora*	GBIF	Fabaceae	*Aspalathus spinosa subsp. spinosa*	GBIF
Aizoaceae	*Aizoon africanum*	GBIF	Fabaceae	*Aspalathus stenophylla*	B
Aizoaceae	*Amphibolia laevis*	B	Fabaceae	*Aspalathus steudeliana*	B
Aizoaceae	*Antimima aristulata*	GBIF	Fabaceae	*Aspalathus tridentata* subsp. *tridentata*	B
Aizoaceae	*Antimima condensa*	B, ST	Fabaceae	*Aspalathus triquetra*	B

Family	Species	Source	Family	Species	Source
Aizoaceae	*Antimima leipoldtii*	GBIF	Fabaceae	*Aspalathus wittebergensis*	B
Aizoaceae	*Antimima mutica*	B, GBIF	Fabaceae	*Bauhinia galpinii*	GBIF
Aizoaceae	*Antimima peersii*	GBIF	Fabaceae	*Calobota cytisoides*	GBIF
Aizoaceae	*Braunsia apiculata*	GBIF	Fabaceae	*Calobota elongata*	B
Aizoaceae	*Carpobrotus edulis*	B, GBIF	Fabaceae	*Crotalaria excisa subsp. excisa*	GBIF
Aizoaceae	*Carpobrotus edulis subsp. edulis*	GBIF	Fabaceae	*Cyclopia genistoides*	GBIF
Aizoaceae	*Carpobrotus mellei*	GBIF	Fabaceae	*Cyclopia glabra*	B
Aizoaceae	*Cephalophyllum alstonii*	B	Fabaceae	*Dipogon lignosus*	B, GBIF
Aizoaceae	*Cephalophyllum ceresianum*	B	Fabaceae	*Gleditsia triacanthos*	GBIF
Aizoaceae	*Cephalophyllum diversiphyllum*	GBIF	Fabaceae	*Hypocalyptus coluteoides*	GBIF
Aizoaceae	*Cephalophyllum loreum*	GBIF	Fabaceae	*Hypocalyptus oxalidifolius*	GBIF
Aizoaceae	*Cephalophyllum purpureoalbum*	GBIF	Fabaceae	*Hypocalyptus sophoroides*	B, GBIF
Aizoaceae	*Cephalophyllum subulatoides*	B, GBIF	Fabaceae	*Indigofera burchellii*	GBIF
Aizoaceae	*Cheiridopsis namaquensis*	GBIF	Fabaceae	*Indigofera capillaris*	B, GBIF
Aizoaceae	*Cleretum papulosum*	GBIF	Fabaceae	*Indigofera complicata*	GBIF
Aizoaceae	*Cleretum papulosum subsp. papulosum*	GBIF	Fabaceae	*Indigofera frutescens*	B
Aizoaceae	*Conophytum bicarinatum*	B	Fabaceae	*Indigofera heterophylla*	B, GBIF
Aizoaceae	*Conophytum minusculum*	B	Fabaceae	*Indigofera humifusa*	B, GBIF
Aizoaceae	*Conophytum obcordellum* subsp. *obcordellum*	B	Fabaceae	*Indigofera meyeriana*	GBIF

Family	Species	Source	Family	Species	Source
Aizoaceae	*Conophytum truncatum subsp. viridicatum*	GBIF	Fabaceae	*Indigofera pilgeriana*	GBIF
Aizoaceae	*Drosanthemum acuminatum*	GBIF	Fabaceae	*Indigofera priorii*	GBIF
Aizoaceae	*Drosanthemum brevifolium*	B	Fabaceae	*Indigofera* sp.	GBIF
Aizoaceae	*Drosanthemum calycinum*	GBIF	Fabaceae	*Lebeckia pauciflora*	B, GBIF
Aizoaceae	*Drosanthemum collinum*	B	Fabaceae	*Lessertia frutescens*	GBIF
Aizoaceae	*Drosanthemum comptonii*	B	Fabaceae	*Lessertia frutescens* subsp. *frutescens*	B, GBIF
Aizoaceae	*Drosanthemum delicatulum*	B	Fabaceae	*Lessertia frutescens subsp. microphylla*	GBIF
Aizoaceae	*Drosanthemum expersum*	B	Fabaceae	*Lessertia stenoloba*	B
Aizoaceae	*Drosanthemum giffenii*	GBIF, ST	Fabaceae	*Liparia latifolia*	GBIF
Aizoaceae	*Drosanthemum globosum*	GBIF	Fabaceae	*Lotononis argentea*	GBIF, ST
Aizoaceae	*Drosanthemum gracillimum*	GBIF	Fabaceae	*Lotononis brevicaulis*	B
Aizoaceae	*Drosanthemum hispidum*	GBIF	Fabaceae	*Lotononis gracilifolia*	GBIF, ST
Aizoaceae	*Drosanthemum karrooense*	GBIF	Fabaceae	*Medicago polymorpha*	GBIF
Aizoaceae	*Drosanthemum parvifolium*	GBIF	Fabaceae	*Medicago sativa*	GBIF
Aizoaceae	*Drosanthemum praecultum*	GBIF	Fabaceae	*Melilotus indicus*	GBIF
Aizoaceae	*Drosanthemum pulchrum*	GBIF	Fabaceae	*Otholobium* sp. nov (Storton & Zanotvska 11281 NBG)	ST
Aizoaceae	*Drosanthemum semiglobosum*	B, GBIF	Fabaceae	*Otholobium striatum*	B
Aizoaceae	*Drosanthemum speciosum*	GBIF	Fabaceae	*Podalyria calyptrata*	GBIF

Family	Species	Source	Family	Species	Source
Aizoaceae	*Drosanthemum striatum*	B	Fabaceae	*Podalyria myrtillifolia*	GBIF
Aizoaceae	*Drosanthemum thudichumii*	B	Fabaceae	*Prosopis glandulosa* var. *torreyana*	B
Aizoaceae	*Drosanthemum tuberculiferum*	GBIF, ST	Fabaceae	*Psoralea candicans*	GBIF
Aizoaceae	*Drosanthemum worcesterense*	ST	Fabaceae	*Psoralea ensifolia*	GBIF
Aizoaceae	*Erepsia aspera*	B	Fabaceae	*Psoralea hirta*	GBIF
Aizoaceae	*Erepsia bracteata*	GBIF	Fabaceae	*Psoralea odoratissima*	GBIF
Aizoaceae	*Erepsia gracilis*	B	Fabaceae	*Psoralea ramulosa*	B
Aizoaceae	*Esterhuysenia alpina*	B	Fabaceae	*Psoralea speciosa*	GBIF
Aizoaceae	*Esterhuysenia inclaudens*	ST	Fabaceae	*Psoralea spicata*	GBIF
Aizoaceae	*Esterhuysenia stokoei*	B	Fabaceae	*Psoralea spissa*	GBIF
Aizoaceae	*Galenia africana*	B	Fabaceae	*Psoralea striata*	GBIF
Aizoaceae	*Galenia fruticosa*	B	Fabaceae	*Psoralea usitata*	B
Aizoaceae	*Galenia procumbens*	B	Fabaceae	*Psoralea verrucosa*	B, GBIF
Aizoaceae	*Gibbaeum gibbosum*	GBIF	Fabaceae	*Rafnia amplexicaulis*	B
Aizoaceae	*Gibbaeum pubescens*	B	Fabaceae	*Rafnia capensis* subsp. *capensis*	B
Aizoaceae	*Glottiphyllum depressum*	GBIF	Fabaceae	*Rafnia capensis* subsp. *dichotoma*	B
Aizoaceae	*Hereroa acuminata*	GBIF	Fabaceae	*Rafnia rostrata* subsp. *rostrata*	B
Aizoaceae	*Lampranthus aduncus*	GBIF	Fabaceae	*Senna multiglandulosa*	GBIF
Aizoaceae	*Lampranthus caudatus*	B	Fabaceae	Sensitive Species 1209	B
Aizoaceae	*Lampranthus dissimilis*	B	Fabaceae	Sensitive Species 142	GBIF
Aizoaceae	*Lampranthus elegans*	GBIF	Fabaceae	Sensitive Species 207	B

Family	Species	Source	Family	Species	Source
Aizoaceae	*Lampranthus falcatus*	B, GBIF	Fabaceae	Sensitive Species 654	B
Aizoaceae	*Lampranthus francesiae*	B	Fabaceae	Sensitive Species 692	B
Aizoaceae	*Lampranthus laetus*	B	Fabaceae	Sensitive Species 871	GBIF
Aizoaceae	*Lampranthus mucronatus*	B	Fabaceae	*Sesbania punicea*	GBIF
Aizoaceae	*Lampranthus pocockiae*	B	Fabaceae	*Stirtonanthus insignis*	B, GBIF
Aizoaceae	*Lampranthus spiniformis*	GBIF	Fabaceae	*Tephrosia capensis*	GBIF
Aizoaceae	*Leipoldtia schultzei*	GBIF	Fabaceae	*Trifolium repens*	GBIF
Aizoaceae	*Lithops comptonii*	B	Fabaceae	*Vachellia karroo*	B, GBIF
Aizoaceae	*Malephora lutea*	GBIF	Fabaceae	*Vachellia sieberiana*	GBIF
Aizoaceae	*Mesembryanthemum crystallinum*	B, GBIF	Fabaceae	*Vicia benghalensis*	GBIF
Aizoaceae	*Mesembryanthemum grossum*	B	Fabaceae	*Vicia sativa*	GBIF
Aizoaceae	*Mesembryanthemum guerichianum*	GBIF	Fabaceae	*Wiborgia mucronata*	B
Aizoaceae	*Mesembryanthemum junceum*	GBIF	Fabaceae	*Wiborgia tenuifolia*	GBIF
Aizoaceae	*Mesembryanthemum longistylum*	B, GBIF	Fabaceae	*Xiphotheca fruticosa*	B, GBIF
Aizoaceae	*Mesembryanthemum noctiflorum subsp. defoliatum*	GBIF	Fabroniaceae	*Ischyrodon lepturus*	GBIF
Aizoaceae	*Mesembryanthemum nodiflorum*	GBIF	Fumariaceae	*Cysticapnos vesicaria* subsp. *vesicaria*	B, GBIF
Aizoaceae	*Mesembryanthemum tortuosum*	GBIF	Funariaceae	*Funaria spathulata*	B
Aizoaceae	*Octopoma nanum*	ST	Gentianaceae	*Chironia baccifera*	B, GBIF
Aizoaceae	*Oscularia deltoides*	B, GBIF	Gentianaceae	*Sebaea aurea*	GBIF

Family	Species	Source	Family	Species	Source
Aizoaceae	*Phiambolia francisci*	GBIF	Gentianaceae	*Sebaea exacoides*	GBIF
Aizoaceae	*Phiambolia gydouwensis*	GBIF	Gentianaceae	*Sebaea membranacea*	B
Aizoaceae	*Phiambolia littlewoodii*	ST	Geraniaceae	*Erodium cicutarium*	GBIF
Aizoaceae	*Psilocaulon bicorne*	B	Geraniaceae	*Erodium moschatum*	B
Aizoaceae	*Ruschia amicorum*	B	Geraniaceae	*Geranium molle*	GBIF
Aizoaceae	*Ruschia approximata*	GBIF	Geraniaceae	*Pelargonium abrotanifolium*	B, GBIF
Aizoaceae	*Ruschia caroli*	GBIF	Geraniaceae	*Pelargonium alchemilloides*	GBIF
Aizoaceae	*Ruschia concava*	B	Geraniaceae	*Pelargonium alternans*	GBIF
Aizoaceae	*Ruschia divaricata*	B	Geraniaceae	*Pelargonium alternans subsp. alternans*	GBIF
Aizoaceae	*Ruschia frederici*	GBIF	Geraniaceae	*Pelargonium articulatum*	GBIF
Aizoaceae	*Ruschia lineolata*	B, GBIF	Geraniaceae	*Pelargonium burgerianum*	GBIF
Aizoaceae	*Ruschia multiflora*	B, GBIF	Geraniaceae	*Pelargonium buysii*	B
Aizoaceae	*Ruschia pungens*	B, GBIF	Geraniaceae	*Pelargonium candicans*	B, GBIF
Aizoaceae	*Ruschia rigida*	B	Geraniaceae	*Pelargonium carnosum*	B, GBIF
Aizoaceae	*Ruschia tenella*	GBIF	Geraniaceae	*Pelargonium carnosum subsp. ferulaceum*	GBIF
Aizoaceae	*Ruschia tumidula*	B	Geraniaceae	*Pelargonium caucalifolium* subsp. *caucalifolium*	B, GBIF
Aizoaceae	*Ruschiella argentea*	B, GBIF	Geraniaceae	*Pelargonium citronellum*	GBIF
Aizoaceae	*Ruschiella henricii*	B	Geraniaceae	*Pelargonium columbinum*	GBIF

Family	Species	Source	Family	Species	Source
Aizoaceae	*Ruschiella lunulata*	B, GBIF	Geraniaceae	*Pelargonium coronopifolium*	GBIF
Aizoaceae	*Smicrostigma viride*	GBIF	Geraniaceae	*Pelargonium crispum*	B, GBIF
Aizoaceae	*Tanquana prismatica*	B	Geraniaceae	*Pelargonium crithmifolium*	B, GBIF
Aizoaceae	*Tetragonia fruticosa*	B	Geraniaceae	*Pelargonium elongatum*	B, GBIF
Aizoaceae	*Tetragonia saligna*	B, GBIF	Geraniaceae	*Pelargonium englerianum*	GBIF
Aizoaceae	*Tetragonia sarcophylla*	B	Geraniaceae	*Pelargonium fissifolium*	GBIF
Aizoaceae	*Trichodiadema marlothii*	B, GBIF	Geraniaceae	*Pelargonium glutinosum*	B, GBIF
Aizoaceae	*Trichodiadema pomeridianum*	GBIF	Geraniaceae	*Pelargonium grossularioides*	GBIF
Aizoaceae	*Vlokia ater*	GBIF	Geraniaceae	*Pelargonium hermaniifolium*	GBIF
Alliaceae	*Tulbaghia capensis*	B, GBIF	Geraniaceae	*Pelargonium hispidum*	B, GBIF
Amaranthaceae	*Atriplex lindleyi subsp. inflata*	GBIF	Geraniaceae	*Pelargonium hypoleucum*	GBIF
Amaranthaceae	*Atriplex nummularia*	GBIF	Geraniaceae	*Pelargonium hystrix*	GBIF
Amaranthaceae	*Atriplex semibaccata*	B, GBIF	Geraniaceae	*Pelargonium laevigatum subsp. diversifolium*	GBIF
Amaranthaceae	*Caroxylon aphyllum*	GBIF	Geraniaceae	*Pelargonium laevigatum subsp. laevigatum*	GBIF
Amaryllidaceae	*Agapanthus praecox subsp. praecox*	GBIF	Geraniaceae	*Pelargonium lanceolatum*	B, GBIF
Amaryllidaceae	*Allium synnotii*	GBIF	Geraniaceae	*Pelargonium lobatum*	GBIF
Amaryllidaceae	*Boophone disticha*	GBIF	Geraniaceae	*Pelargonium longicaule var. longicaule*	GBIF
Amaryllidaceae	*Crossyne guttata*	GBIF	Geraniaceae	*Pelargonium longifolium*	B

Family	Species	Source	Family	Species	Source
Amaryllidaceae	*Cyrtanthus angustifolius*	B, GBIF	Geraniaceae	*Pelargonium luteolum*	GBIF
Amaryllidaceae	*Gethyllis campanulata*	B	Geraniaceae	*Pelargonium luteopetalum*	GBIF
Amaryllidaceae	*Gethyllis transkarooica*	B	Geraniaceae	*Pelargonium multicaule subsp. multicaule*	GBIF
Amaryllidaceae	*Gethyllis verrucosa*	GBIF	Geraniaceae	*Pelargonium myrrhifolium*	GBIF
Amaryllidaceae	*Gethyllis villosa*	B	Geraniaceae	*Pelargonium myrrhifolium var. coriandrifolium*	GBIF
Amaryllidaceae	*Haemanthus coccineus*	B, GBIF	Geraniaceae	*Pelargonium myrrhifolium var. myrrhifolium*	GBIF
Amaryllidaceae	*Haemanthus sanguineus*	GBIF	Geraniaceae	*Pelargonium nanum*	GBIF
Amaryllidaceae	*Hessea stellaris*	B, GBIF	Geraniaceae	*Pelargonium nervifolium*	GBIF
Amaryllidaceae	*Nerine humilis*	B, GBIF	Geraniaceae	*Pelargonium ovale subsp. hyalinum*	GBIF
Amaryllidaceae	*Nerine ridleyi*	B	Geraniaceae	*Pelargonium ovale subsp. ovale*	GBIF
Amaryllidaceae	*Nerine sarniensis*	B, GBIF	Geraniaceae	*Pelargonium papilionaceum*	GBIF
Amaryllidaceae	*Strumaria tenella*	B	Geraniaceae	*Pelargonium patulum*	GBIF
Amaryllidaceae	*Strumaria tenella subsp. tenella*	GBIF	Geraniaceae	*Pelargonium patulum var. patulum*	GBIF
Anacampserotaceae	*Anacampseros arachnoides*	GBIF	Geraniaceae	*Pelargonium patulum var. tenuilobum*	GBIF
Anacampserotaceae	*Anacampseros filamentosa*	B	Geraniaceae	*Pelargonium peltatum*	GBIF
Anacampserotaceae	*Anacampseros lanceolata* subsp. *lanceolata*	B	Geraniaceae	*Pelargonium pillansii*	GBIF
Anacampserotaceae	*Anacampseros retusa*	B, GBIF	Geraniaceae	*Pelargonium pilosellifolium*	GBIF

Family	Species	Source	Family	Species	Source
Anacampserotaceae	*Anacampseros telephiastrum*	GBIF	Geraniaceae	*Pelargonium rapaceum*	B, GBIF
Anacardiaceae	*Ozoroa dispar*	B	Geraniaceae	*Pelargonium ribifolium*	GBIF
Anacardiaceae	*Searsia angustifolia*	GBIF	Geraniaceae	*Pelargonium scabrum*	B, GBIF
Anacardiaceae	*Searsia dissecta*	B	Geraniaceae	*Pelargonium tetragonum*	GBIF
Anacardiaceae	*Searsia lancea*	GBIF	Geraniaceae	*Pelargonium trifidum*	GBIF
Anacardiaceae	*Searsia longispina*	GBIF	Geraniaceae	*Pelargonium triste*	GBIF
Anacardiaceae	*Searsia lucida*	GBIF	Geraniaceae	*Pelargonium zonale*	B, GBIF
Anacardiaceae	*Searsia pallens*	B, GBIF	Gleicheniaceae	*Gleichenia polypodioides*	B, GBIF
Anacardiaceae	*Searsia pyroides var. pyroides*	GBIF	Grimmiaceae	*Grimmia laevigata*	B
Anacardiaceae	*Searsia tomentosa*	GBIF	Grimmiaceae	*Grimmia pulvinata*	B
Anemiaceae	*Anemia caffrorum*	GBIF	Gunneraceae	*Gunnera perpensa*	GBIF
Apiaceae	*Anginon difforme*	GBIF	Haemodoraceae	*Dilatris ixioides*	B, GBIF
Apiaceae	*Anginon fruticosum*	B, GBIF	Haemodoraceae	*Wachendorfia multiflora*	GBIF
Apiaceae	*Anginon swellendamense*	GBIF	Haemodoraceae	*Wachendorfia paniculata*	B, GBIF
Apiaceae	*Apium graveolens*	B	Haemodoraceae	*Wachendorfia thyrsiflora*	GBIF
Apiaceae	*Arctopus echinatus*	GBIF	Hemerocallidaceae	*Caesia contorta*	B, GBIF
Apiaceae	*Dasispermum tenue*	GBIF	Hyacinthaceae	*Albuca canadensis*	GBIF
Apiaceae	*Deverra denudata* subsp. *aphylla*	B	Hyacinthaceae	*Albuca longipes*	GBIF
Apiaceae	*Itasina filifolia*	B	Hyacinthaceae	*Albuca setosa*	GBIF
Apiaceae	*Lichtensteinia latifolia*	GBIF	Hyacinthaceae	*Albuca suaveolens*	GBIF

Family	Species	Source	Family	Species	Source
Apiaceae	*Notobubon capense*	GBIF	Hyacinthaceae	*Albuca viscosa*	B, GBIF
Apiaceae	*Notobubon gummiferum*	GBIF	Hyacinthaceae	*Drimia intricata*	B
Apiaceae	*Notobubon sonderi*	GBIF	Hyacinthaceae	*Drimia multifolia*	B
Apiaceae	*Notobubon tenuifolium*	GBIF	Hyacinthaceae	*Drimia physodes*	B, GBIF
Apiaceae	*Peucedanum ferulaceum*	B	Hyacinthaceae	*Lachenalia ameliae*	B
Apocynaceae	*Carissa bispinosa*	B, GBIF	Hyacinthaceae	*Lachenalia attenuata*	B
Apocynaceae	*Carissa haematocarpa*	GBIF	Hyacinthaceae	*Lachenalia aurioliae*	B, GBIF
Apocynaceae	*Ceropegia occulta*	GBIF	Hyacinthaceae	*Lachenalia comptonii*	B
Apocynaceae	*Cynanchum obtusifolium*	GBIF	Hyacinthaceae	*Lachenalia contaminata*	B
Apocynaceae	*Cynanchum viminale*	GBIF	Hyacinthaceae	*Lachenalia ensifolia*	GBIF
Apocynaceae	*Cynanchum viminale subsp. viminale*	GBIF	Hyacinthaceae	*Lachenalia judithiae*	GBIF
Apocynaceae	*Duvalia caespitosa*	GBIF	Hyacinthaceae	*Lachenalia juncifolia*	B, GBIF
Apocynaceae	*Duvalia elegans*	GBIF	Hyacinthaceae	*Lachenalia mutabilis*	GBIF
Apocynaceae	*Eustegia minuta*	GBIF	Hyacinthaceae	*Lachenalia obscura*	B, GBIF
Apocynaceae	*Gomphocarpus cancellatus*	GBIF	Hyacinthaceae	*Lachenalia orchioides*	GBIF
Apocynaceae	*Gomphocarpus fruticosus*	GBIF	Hyacinthaceae	*Lachenalia perryae*	B, GBIF
Apocynaceae	*Huernia pillansii*	B	Hyacinthaceae	*Lachenalia unifolia*	GBIF
Apocynaceae	*Microloma sagittatum*	B, GBIF	Hyacinthaceae	*Lachenalia zeyheri*	B
Apocynaceae	*Microloma tenuifolium*	GBIF	Hyacinthaceae	*Massonia depressa*	B, GBIF
Apocynaceae	*Orbea variegata*	GBIF	Hyacinthaceae	*Ornithogalum dubium*	B, GBIF

Family	Species	Source	Family	Species	Source
Apocynaceae	*Piaranthus geminatus*	GBIF	Hyacinthaceae	*Ornithogalum hispidum*	B, GBIF
Apocynaceae	*Quaqua arenicola* subsp. *arenicola*	B	Hyacinthaceae	*Ornithogalum maculatum*	B, GBIF
Apocynaceae	*Quaqua arida*	GBIF	Hyacinthaceae	*Veltheimia capensis*	B, GBIF
Apocynaceae	*Quaqua linearis*	GBIF	Hydnoraceae	*Hydnora africana*	GBIF
Apocynaceae	*Quaqua mammillaris*	GBIF	Hymenophyllaceae	*Hymenophyllum tunbrigense*	GBIF
Apocynaceae	*Quaqua pillansii*	GBIF	Hypoxidaceae	*Pauridia aquatica*	B
Apocynaceae	*Quaqua ramosa*	GBIF	Hypoxidaceae	*Pauridia capensis*	B, GBIF
Apocynaceae	*Sarcostemma viminale* subsp. *viminale*	B	Hypoxidaceae	*Pauridia maryae*	GBIF
Apocynaceae	*Schizoglossum aschersonianum*	GBIF	Hypoxidaceae	*Pauridia serrata*	GBIF
Apocynaceae	*Schizoglossum aschersonianum var. aschersonianum*	GBIF	Hypoxidaceae	*Pauridia serrata* subsp. *serrata*	B
Apocynaceae	*Stapelia hirsuta*	GBIF	Hypoxidaceae	*Spiloxene aemulans*	B
Apocynaceae	*Stapelia hirsuta var. hirsuta*	GBIF	Hypoxidaceae	*Spiloxene aquatica*	B
Apocynaceae	*Stapelia paniculata subsp. scitula*	GBIF	Hypoxidaceae	*Spiloxene capensis*	B
Apocynaceae	*Stapelia rufa*	GBIF	Hypoxidaceae	*Spiloxene ovata*	B
Apocynaceae	*Stapeliopsis saxatilis*	GBIF	Hypoxidaceae	*Spiloxene serrata* var. *serrata*	B
Apocynaceae	*Tridentea gemmiflora*	GBIF	Iridaceae	*Afrocrocus unifolius*	B, GBIF
Apocynaceae	*Vinca major*	GBIF	Iridaceae	*Aristea spiralis*	GBIF
Apocynaceae	*Xysmalobium gomphocarpoides*	GBIF	Iridaceae	*Babiana ambigua*	GBIF
Apocynaceae	*Xysmalobium gomphocarpoides var. gomphocarpoides*	GBIF	Iridaceae	*Babiana cuneata*	GBIF
Apocynaceae	*Xysmalobium undulatum*	GBIF	Iridaceae	*Babiana nana*	GBIF

Family	Species	Source	Family	Species	Source
Araceae	*Zantedeschia aethiopica*	B, GBIF	Iridaceae	*Babiana patula*	GBIF
Asparagaceae	*Asparagus aethiopicus*	GBIF	Iridaceae	*Babiana sambucina*	B, GBIF
Asparagaceae	*Asparagus asparagoides*	GBIF	Iridaceae	*Babiana sambucina* subsp. *sambucina*	B, GBIF
Asparagaceae	*Asparagus capensis*	GBIF	Iridaceae	*Babiana scariosa*	B
Asparagaceae	*Asparagus kraussianus*	B	Iridaceae	*Bobartia orientalis subsp. orientalis*	GBIF
Asparagaceae	*Asparagus lignosus*	GBIF	Iridaceae	*Chasmanthe aethiopica*	GBIF
Asparagaceae	*Asparagus mollis*	ST	Iridaceae	*Chasmanthe bicolor*	GBIF
Asparagaceae	*Asparagus mucronatus*	B	Iridaceae	*Ferraria crispa*	B
Asparagaceae	*Asparagus retrofractus*	B, GBIF	Iridaceae	*Ferraria divaricata* subsp. *divaricata*	B
Asparagaceae	*Asparagus rubicundus*	B, GBIF	Iridaceae	*Ferraria variabilis*	GBIF
Asparagaceae	*Asparagus scandens*	GBIF	Iridaceae	*Freesia caryophyllacea*	GBIF
Asparagaceae	*Asparagus suaveolens*	B	Iridaceae	*Freesia refracta*	GBIF
Asparagaceae	*Chlorophytum crispum*	GBIF	Iridaceae	*Geissorhiza heterostyla*	B, GBIF
Asparagaceae	*Chlorophytum graminifolium*	GBIF	Iridaceae	*Geissorhiza heterostyla* subsp. *rosea*	B
Asparagaceae	*Dipcadi brevifolium*	GBIF	Iridaceae	*Geissorhiza juncea*	B
Asparagaceae	*Drimia capensis*	GBIF	Iridaceae	*Geissorhiza ornithogaloides*	GBIF
Asparagaceae	*Drimia elata*	GBIF	Iridaceae	*Geissorhiza ornithogaloides* subsp. *marlothii*	B, GBIF
Asparagaceae	*Drimia exuviata*	GBIF	Iridaceae	*Geissorhiza ornithogaloides*	GBIF

Family	Species	Source	Family	Species	Source
				subsp. ornithogaloides	
Asparagaceae	*Drimia fragrans*	GBIF	Iridaceae	*Geissorhiza ovalifolia*	B
Asparagaceae	*Drimia platyphylla*	GBIF	Iridaceae	*Geissorhiza ovata*	GBIF
Asparagaceae	*Drimia sigmoidea*	GBIF	Iridaceae	*Gladiolus alatus*	B, GBIF
Asparagaceae	*Eriospermum alcicorne*	GBIF	Iridaceae	*Gladiolus cardinalis*	B, GBIF
Asparagaceae	*Eriospermum dregei*	GBIF	Iridaceae	*Gladiolus carinatus*	B, GBIF
Asparagaceae	*Eriospermum paradoxum*	GBIF	Iridaceae	*Gladiolus carneus*	GBIF
Asparagaceae	*Eriospermum proliferum*	GBIF	Iridaceae	*Gladiolus ceresianus*	GBIF
Asparagaceae	*Eucomis regia*	GBIF	Iridaceae	*Gladiolus debilis*	GBIF
Asparagaceae	*Furcraea foetida*	GBIF	Iridaceae	*Gladiolus floribundus*	B, GBIF
Asparagaceae	*Ledebouria ovalifolia*	GBIF	Iridaceae	*Gladiolus gracilis*	GBIF
Asparagaceae	*Massonia setulosa*	GBIF	Iridaceae	*Gladiolus grandiflorus*	B, GBIF
Asparagaceae	*Massonia triflora*	GBIF	Iridaceae	*Gladiolus guthriei*	B, GBIF
Asparagaceae	*Ornithogalum graminifolium*	GBIF	Iridaceae	*Gladiolus inflatus*	GBIF
Asparagaceae	*Ornithogalum rupestre*	GBIF	Iridaceae	*Gladiolus liliaceus*	GBIF
Asphodelaceae	*Aloe chabaudii* var. *chabaudii*	B	Iridaceae	*Gladiolus maculatus*	B, GBIF
Asphodelaceae	*Aloe comosa*	B	Iridaceae	*Gladiolus patersoniae*	B
Asphodelaceae	*Aloe microstigma*	GBIF	Iridaceae	*Gladiolus permeabilis*	GBIF
Asphodelaceae	*Aloe perfoliata*	B, GBIF	Iridaceae	*Gladiolus permeabilis* subsp. *edulis*	B
Asphodelaceae	*Aloe striata*	B, GBIF	Iridaceae	*Gladiolus permeabilis* subsp. *permeabilis*	B, GBIF

Family	Species	Source	Family	Species	Source
Asphodelaceae	*Astroloba corrugata*	GBIF	Iridaceae	*Gladiolus quadrangularis*	B, GBIF
Asphodelaceae	*Bulbine abyssinica*	B, GBIF	Iridaceae	*Gladiolus rogersii*	B, GBIF
Asphodelaceae	*Bulbine frutescens*	GBIF	Iridaceae	*Gladiolus rudis*	B
Asphodelaceae	*Bulbine lagopus*	B, GBIF	Iridaceae	*Gladiolus scullyi*	B
Asphodelaceae	*Bulbine mesembryanthoides*	GBIF	Iridaceae	*Gladiolus stefaniae*	GBIF
Asphodelaceae	*Bulbine mesembryanthoides* subsp. *mesembryanthoides*	B	Iridaceae	*Gladiolus tristis*	GBIF
Asphodelaceae	*Bulbine praemorsa*	GBIF	Iridaceae	*Gladiolus venustus*	B, GBIF
Asphodelaceae	*Bulbine succulenta*	B, GBIF	Iridaceae	*Gladiolus virescens*	B, GBIF
Asphodelaceae	*Bulbinella cauda-felis*	B	Iridaceae	*Hesperantha acuta* subsp. *acuta*	B
Asphodelaceae	*Bulbinella elata*	B	Iridaceae	*Hesperantha bachmannii*	B, GBIF
Asphodelaceae	*Bulbinella latifolia* subsp. *denticulata*	B	Iridaceae	*Hesperantha cucullata*	GBIF
Asphodelaceae	*Bulbinella nutans*	B	Iridaceae	*Hesperantha falcata*	B, GBIF
Asphodelaceae	*Bulbinella nutans* subsp. *nutans*	B, GBIF	Iridaceae	*Hesperantha flava*	GBIF
Asphodelaceae	*Bulbinella nutans* subsp. *turfosicola*	B	Iridaceae	*Hesperantha humilis*	B, GBIF
Asphodelaceae	*Bulbinella triquetra*	B, GBIF	Iridaceae	*Hesperantha marlothii*	B
Asphodelaceae	*Gasteria disticha*	GBIF	Iridaceae	*Hesperantha radiata*	GBIF
Asphodelaceae	*Gasteria disticha* var. *disticha*	B, GBIF	Iridaceae	*Ixia capillaris*	B
Asphodelaceae	*Gasteria disticha var. langebergensis*	GBIF	Iridaceae	*Ixia exiliflora*	B
Asphodelaceae	*Gasteria retusa*	B	Iridaceae	*Ixia fucata*	GBIF, ST

Family	Species	Source	Family	Species	Source
Asphodelaceae	*Haworthia arachnoidea*	GBIF	Iridaceae	*Ixia latifolia*	B, GBIF
Asphodelaceae	*Haworthia arachnoidea* var. *arachnoidea*	B, GBIF	Iridaceae	*Ixia latifolia var. latifolia*	GBIF
Asphodelaceae	*Haworthia herbacea* var. *lupula*	B	Iridaceae	*Ixia mostertii*	B
Asphodelaceae	*Haworthia maculata*	B	Iridaceae	*Ixia nutans*	B
Asphodelaceae	*Haworthia maraisii*	GBIF	Iridaceae	*Ixia oxalidiflora*	B, GBIF, ST
Asphodelaceae	*Haworthia maraisii var. maraisii*	GBIF	Iridaceae	*Ixia paucifolia*	B, GBIF
Asphodelaceae	*Haworthia mucronata*	GBIF	Iridaceae	*Ixia polystachya*	B
Asphodelaceae	*Haworthia pulchella* var. *pulchella*	B, GBIF	Iridaceae	*Ixia simulans*	GBIF
Asphodelaceae	*Haworthia reticulata* var. *reticulata*	B	Iridaceae	*Ixia stenophylla*	GBIF
Asphodelaceae	*Haworthia venosa*	B	Iridaceae	*Ixia stolonifera*	B, GBIF
Asphodelaceae	*Kniphofia sarmentosa*	B, GBIF	Iridaceae	*Ixia vanzijliae*	B
Asphodelaceae	*Kniphofia uvaria*	B, GBIF	Iridaceae	*Lapeirousia plicata*	GBIF
Asphodelaceae	*Trachyandra flexifolia*	B	Iridaceae	*Lapeirousia pyramidalis*	GBIF
Asphodelaceae	*Trachyandra revoluta*	B	Iridaceae	*Lapeirousia pyramidalis subsp. pyramidalis*	GBIF
Asphodelaceae	*Tulista pumila*	GBIF	Iridaceae	*Melasphaerula graminea*	B, GBIF
Aspleniaceae	*Asplenium aethiopicum*	GBIF	Iridaceae	*Moraea angusta*	B
Asteraceae	*Achyranthemum paniculatum*	B, GBIF	Iridaceae	*Moraea ciliata*	B, GBIF
Asteraceae	*Anderbergia elsiae*	ST	Iridaceae	*Moraea cookii*	GBIF
Asteraceae	*Arctotheca calendula*	GBIF	Iridaceae	*Moraea crispa*	GBIF
Asteraceae	*Arctotheca prostrata*	GBIF	Iridaceae	*Moraea cuspidata*	B

Family	Species	Source	Family	Species	Source
Asteraceae	*Arctotis arctotoides*	B	Iridaceae	*Moraea falcifolia*	GBIF
Asteraceae	*Arctotis candida*	B	Iridaceae	*Moraea fugacissima*	GBIF
Asteraceae	*Arctotis dregei*	GBIF	Iridaceae	*Moraea fugax*	GBIF
Asteraceae	*Arctotis revoluta*	B	Iridaceae	*Moraea gawleri*	B, GBIF
Asteraceae	*Arctotis subacaulis*	GBIF	Iridaceae	*Moraea inconspicua*	GBIF
Asteraceae	*Artemisia afra*	GBIF	Iridaceae	*Moraea inconspicua subsp. inconspicua*	GBIF
Asteraceae	*Artemisia afra* var. *afra*	B	Iridaceae	*Moraea karroica*	B, GBIF
Asteraceae	*Athanasia flexuosa*	B	Iridaceae	*Moraea lewisiae*	GBIF
Asteraceae	*Athanasia hirsuta*	B, GBIF, ST	Iridaceae	*Moraea macronyx*	B, GBIF
Asteraceae	*Athanasia linifolia*	B	Iridaceae	*Moraea miniata*	GBIF
Asteraceae	*Athanasia trifurcata*	GBIF	Iridaceae	*Moraea polyanthos*	B
Asteraceae	*Berkheya armata*	GBIF	Iridaceae	*Moraea setifolia*	GBIF
Asteraceae	*Berkheya barbata*	GBIF	Iridaceae	*Moraea thomasiae*	B, GBIF
Asteraceae	*Berkheya carlinifolia*	GBIF	Iridaceae	*Moraea tricuspidata*	GBIF
Asteraceae	*Berkheya heterophylla*	GBIF	Iridaceae	*Moraea tripetala*	B, GBIF
Asteraceae	*Berkheya heterophylla* var. *radiata*	B, GBIF	Iridaceae	*Moraea tripetala subsp. tripetala*	GBIF
Asteraceae	*Berkheya onobromoides*	GBIF	Iridaceae	*Moraea tripetala* subsp. *violacea*	B, GBIF
Asteraceae	*Berkheya onobromoides var. carlinoides*	GBIF	Iridaceae	*Moraea unguiculata*	GBIF
Asteraceae	*Berkheya onobromoides var. onobromoides*	GBIF	Iridaceae	*Moraea virgata*	GBIF

Family	Species	Source	Family	Species	Source
Asteraceae	*Berkheya spinosa*	GBIF	Iridaceae	*Romulea atrandra*	GBIF
Asteraceae	*Bolandia pedunculosa*	GBIF	Iridaceae	*Romulea atrandra* var. *atrandra*	B, GBIF
Asteraceae	*Brachylaena neriifolia*	B, GBIF	Iridaceae	*Romulea atrandra* var. *esterhuyseniae*	B, GBIF
Asteraceae	*Chrysocoma ciliata*	B, GBIF	Iridaceae	*Romulea austinii*	GBIF
Asteraceae	*Chrysocoma valida*	B	Iridaceae	*Romulea flava*	GBIF
Asteraceae	*Cichorium intybus*	GBIF	Iridaceae	*Romulea hallii*	GBIF
Asteraceae	*Cineraria alchemilloides*	B	Iridaceae	*Romulea luteiflora*	B
Asteraceae	*Cirsium vulgare*	GBIF	Iridaceae	*Romulea malaniae*	B, ST
Asteraceae	*Conyza scabrida*	B	Iridaceae	*Romulea minutiflora*	B, GBIF
Asteraceae	*Corymbium villosum*	GBIF	Iridaceae	*Romulea rosea*	GBIF
Asteraceae	*Cotula coronopifolia*	GBIF	Iridaceae	*Romulea rosea var. rosea*	GBIF
Asteraceae	*Cotula macroglossa*	B, GBIF	Iridaceae	*Romulea setifolia* var. *ceresiana*	B
Asteraceae	*Crassothonna alba*	GBIF	Iridaceae	*Romulea setifolia* var. *setifolia*	B
Asteraceae	*Crassothonna capensis*	GBIF	Iridaceae	*Romulea sphaerocarpa*	B
Asteraceae	*Crassothonna protecta*	GBIF	Iridaceae	*Romulea tetragona*	GBIF
Asteraceae	*Cullumia bisulca*	B	Iridaceae	*Romulea tortuosa*	GBIF
Asteraceae	*Cullumia patula subsp. patula*	GBIF	Iridaceae	*Romulea tortuosa* subsp. *depauperata*	B
Asteraceae	*Cullumia patula subsp. uncinata*	GBIF	Iridaceae	*Romulea tortuosa* subsp. *tortuosa*	B, GBIF
Asteraceae	*Cullumia sulcata*	GBIF	Iridaceae	*Romulea vlokii*	GBIF
Asteraceae	*Cullumia sulcata* var. *sulcata*	B, GBIF	Iridaceae	*Tritonia pallida*	GBIF

Family	Species	Source	Family	Species	Source
Asteraceae	*Curio acaulis*	GBIF	Iridaceae	*Tritonia pallida* subsp. *pallida*	B
Asteraceae	*Curio archeri*	GBIF	Iridaceae	*Tritoniopsis antholyza*	GBIF
Asteraceae	*Curio citriformis*	GBIF	Iridaceae	*Tritoniopsis dodii*	GBIF
Asteraceae	*Curio radicans*	GBIF	Iridaceae	*Tritoniopsis ramosa*	GBIF
Asteraceae	*Curio repens*	GBIF	Iridaceae	*Tritoniopsis ramosa var. ramosa*	GBIF
Asteraceae	*Curio talinoides*	GBIF	Iridaceae	*Watsonia aletroides*	B, GBIF
Asteraceae	*Curio talinoides var. aizoides*	GBIF	Iridaceae	*Watsonia meriana*	GBIF
Asteraceae	*Cymbopappus adenosolen*	GBIF	Iridaceae	*Watsonia zeyheri*	B
Asteraceae	*Dicerothamnus adpressus*	GBIF	Iridaceae	*Xenoscapa fistulosa*	B, GBIF
Asteraceae	*Dicerothamnus rhinocerotis*	B, GBIF	Juncaceae	*Juncus lomatophyllus*	GBIF
Asteraceae	*Dimorphotheca chrysanthemifolia*	B	Juncaceae	*Juncus punctorius*	B
Asteraceae	*Dimorphotheca cuneata*	B, GBIF	Juncaginaceae	*Triglochin bulbosa*	GBIF
Asteraceae	*Dimorphotheca montana*	B	Lamiaceae	*Coleus barbatus var. grandis*	GBIF
Asteraceae	*Dimorphotheca nudicaulis*	GBIF	Lamiaceae	*Lamium amplexicaule*	GBIF
Asteraceae	*Dimorphotheca nudicaulis* var. *nudicaulis*	B	Lamiaceae	*Leonotis leonurus*	GBIF
Asteraceae	*Dimorphotheca sinuata*	GBIF	Lamiaceae	*Mentha longifolia*	GBIF
Asteraceae	*Disparago pilosa*	B	Lamiaceae	*Mentha longifolia subsp. capensis*	GBIF
Asteraceae	*Dolichothrix ericoides*	GBIF	Lamiaceae	*Plectranthus ramosior*	B
Asteraceae	*Edmondia fasciculata*	B	Lamiaceae	*Pseudodictamnus africanus*	GBIF
Asteraceae	*Edmondia pinifolia*	GBIF	Lamiaceae	*Salvia africana*	GBIF

Family	Species	Source	Family	Species	Source
Asteraceae	*Edmondia sesamoides*	B, GBIF	Lamiaceae	*Salvia chamelaeagnea*	B, GBIF
Asteraceae	*Elytropappus hispidus*	B	Lamiaceae	*Salvia disermas*	GBIF
Asteraceae	*Eriocephalus africanus*	GBIF	Lamiaceae	*Stachys aethiopica*	B, GBIF
Asteraceae	*Eriocephalus africanus* var. *paniculatus*	B	Lamiaceae	*Stachys sublobata*	B
Asteraceae	*Eriocephalus aromaticus*	B, GBIF	Lauraceae	*Cassytha ciliolata*	GBIF
Asteraceae	*Eriocephalus ericoides*	GBIF	Lauraceae	*Cryptocarya angustifolia*	B
Asteraceae	*Eriocephalus ericoides* subsp. *ericoides*	B, GBIF	Lentibulariaceae	*Utricularia bisquamata*	GBIF
Asteraceae	*Eriocephalus microphyllus* var. *carnosus*	ST	Limeaceae	*Limeum aethiopicum*	GBIF
Asteraceae	*Eriocephalus punctulatus*	B	Limeaceae	*Limeum capense*	B
Asteraceae	*Euryops abrotanifolius*	B, GBIF	Limeaceae	*Limeum telephioides var. telephioides*	GBIF
Asteraceae	*Euryops imbricatus*	B, GBIF	Lobeliaceae	*Lobelia setacea*	B
Asteraceae	*Euryops lateriflorus*	B	Loranthaceae	*Moquiniella rubra*	GBIF
Asteraceae	*Euryops othonnoides*	B	Loranthaceae	*Septulina glauca*	GBIF
Asteraceae	*Euryops tagetoides*	B	Lycopodiaceae	*Lycopodium clavatum*	GBIF
Asteraceae	*Euryops tenuissimus*	GBIF	Malvaceae	*Abutilon sonneratianum*	GBIF
Asteraceae	*Euryops tenuissimus* subsp. *tenuissimus*	B, GBIF	Malvaceae	*Anisodontea dissecta*	GBIF
Asteraceae	*Felicia amoena*	GBIF	Malvaceae	*Anisodontea elegans*	B
Asteraceae	*Felicia amoena* subsp. *stricta*	B	Malvaceae	*Anisodontea procumbens*	B
Asteraceae	*Felicia bellidioides* subsp. *foliata*	B	Malvaceae	*Anisodontea triloba*	B, GBIF

Family	Species	Source	Family	Species	Source
Asteraceae	*Felicia denticulata*	B	Malvaceae	*Grewia occidentalis*	GBIF
Asteraceae	*Felicia filifolia*	GBIF	Malvaceae	*Hermannia alnifolia*	GBIF
Asteraceae	*Felicia filifolia* subsp. *bodkinii*	B	Malvaceae	*Hermannia althaeifolia*	B, GBIF
Asteraceae	*Felicia filifolia subsp. filifolia*	GBIF	Malvaceae	*Hermannia angularis*	B, GBIF
Asteraceae	*Felicia filifolia* subsp. *schaeferi*	B, GBIF	Malvaceae	*Hermannia confusa*	GBIF
Asteraceae	*Felicia filifolia* subsp. *schlechteri*	B	Malvaceae	*Hermannia cuneifolia* var. *cuneifolia*	B
Asteraceae	*Felicia hispida*	B	Malvaceae	*Hermannia diversistipula*	GBIF
Asteraceae	*Felicia macrorrhiza*	B	Malvaceae	*Hermannia filifolia*	GBIF
Asteraceae	*Felicia venusta*	B	Malvaceae	*Hermannia filifolia var. filifolia*	GBIF
Asteraceae	*Gazania ×splendens*	GBIF	Malvaceae	*Hermannia holosericea*	GBIF
Asteraceae	*Gerbera serrata*	GBIF	Malvaceae	*Hermannia hyssopifolia*	GBIF
Asteraceae	*Gnaphalium declinatum*	GBIF	Malvaceae	*Hermannia multiflora*	B
Asteraceae	*Gorteria integrifolia*	GBIF	Malvaceae	*Hermannia muricata*	B, GBIF
Asteraceae	*Gorteria piloselloides*	GBIF	Malvaceae	*Hermannia odorata*	GBIF
Asteraceae	*Helichrysum acrophilum*	B	Malvaceae	*Hermannia pulverata*	B
Asteraceae	*Helichrysum asperum* var. *albidulum*	B, GBIF	Malvaceae	*Hermannia salviifolia*	GBIF
Asteraceae	*Helichrysum cylindriflorum*	B, GBIF	Malvaceae	*Hibiscus aethiopicus*	GBIF
Asteraceae	*Helichrysum excisum*	GBIF	Malvaceae	*Hibiscus pusillus*	B, GBIF
Asteraceae	*Helichrysum felinum*	GBIF	Malvaceae	*Hibiscus trionum*	GBIF

Family	Species	Source	Family	Species	Source
Asteraceae	*Helichrysum foetidum*	GBIF	Marsileaceae	*Marsilea macrocarpa*	B
Asteraceae	*Helichrysum hamulosum*	B, GBIF	Melianthaceae	*Melianthus major*	GBIF
Asteraceae	*Helichrysum hebelepis*	B	Menispermaceae	*Cissampelos capensis*	GBIF
Asteraceae	*Helichrysum helianthemifolium*	B	Mniaceae	*Pohlia elongata*	B
Asteraceae	*Helichrysum indicum*	B	Molluginaceae	*Adenogramma glomerata*	GBIF
Asteraceae	*Helichrysum interzonale*	B	Molluginaceae	*Pharnaceum ciliare*	GBIF
Asteraceae	*Helichrysum lambertianum*	B	Molluginaceae	*Pharnaceum dichotomum*	GBIF
Asteraceae	*Helichrysum lancifolium*	B, GBIF	Molluginaceae	*Psammotropha quadrangularis*	GBIF
Asteraceae	*Helichrysum leontonyx*	GBIF	Montiniaceae	*Montinia caryophyllacea*	GBIF
Asteraceae	*Helichrysum moeserianum*	B	Moraceae	*Ficus carica*	GBIF
Asteraceae	*Helichrysum nudifolium var. nudifolium*	GBIF	Myricaceae	*Morella integra*	GBIF
Asteraceae	*Helichrysum pandurifolium*	B	Myricaceae	*Morella quercifolia*	B
Asteraceae	*Helichrysum patulum*	B, GBIF	Myricaceae	*Morella serrata*	GBIF
Asteraceae	*Helichrysum petiolare*	B	Myrsinaceae	*Rapanea melanophloeos*	B, GBIF
Asteraceae	*Helichrysum pulchellum*	B	Myrtaceae	*Eucalyptus camaldulensis*	GBIF
Asteraceae	*Helichrysum retortum*	B	Myrtaceae	*Metrosideros angustifolia*	B, GBIF
Asteraceae	*Helichrysum rutilans*	B, GBIF	Neuradaceae	*Grielum humifusum* var. *humifusum*	B
Asteraceae	*Helichrysum spiralepis*	B	Oleaceae	*Olea europaea*	GBIF
Asteraceae	*Helichrysum stoloniferum*	B	Oleaceae	*Olea europaea subsp. cuspidata*	GBIF

Family	Species	Source	Family	Species	Source
Asteraceae	*Helichrysum teretifolium*	B	Orchidaceae	*Acrolophia capensis*	B
Asteraceae	*Helichrysum tinctum*	B	Orchidaceae	*Bartholina burmanniana*	B, GBIF
Asteraceae	*Helichrysum zeyheri*	GBIF	Orchidaceae	*Bartholina etheliae*	GBIF
Asteraceae	*Heterolepis aliena*	B, GBIF	Orchidaceae	*Bonatea speciosa*	GBIF
Asteraceae	*Hippia frutescens*	GBIF	Orchidaceae	*Ceratandra globosa*	GBIF
Asteraceae	*Hymenolepis calva*	B, GBIF	Orchidaceae	*Disa atricapilla*	B
Asteraceae	*Hymenolepis crithmifolia*	GBIF	Orchidaceae	*Disa atrorubens*	GBIF
Asteraceae	*Hymenolepis dentata*	B	Orchidaceae	*Disa bifida*	VM
Asteraceae	*Hymenolepis gnidioides*	B, GBIF	Orchidaceae	*Disa bifida*	GBIF
Asteraceae	*Hymenolepis incisa*	B	Orchidaceae	*Disa bracteata*	GBIF
Asteraceae	*Hypochaeris radicata*	GBIF	Orchidaceae	*Disa comosa*	GBIF
Asteraceae	*Ifloga ambigua*	GBIF	Orchidaceae	*Disa cornuta*	GBIF
Asteraceae	*Lactuca serriola*	GBIF	Orchidaceae	*Disa densiflora*	GBIF
Asteraceae	*Lasiospermum bipinnatum*	B	Orchidaceae	*Disa graminifolia*	GBIF
Asteraceae	*Macledium spinosum*	GBIF	Orchidaceae	*Disa harveyana subsp. harveyana*	GBIF
Asteraceae	*Mairia burchellii*	GBIF	Orchidaceae	*Disa inflexa*	GBIF
Asteraceae	*Metalasia acuta*	B, GBIF	Orchidaceae	*Disa lineata*	GBIF
Asteraceae	*Metalasia brevifolia*	B	Orchidaceae	*Disa obliqua*	B
Asteraceae	*Metalasia cephalotes*	B	Orchidaceae	*Disa ovalifolia*	VM
Asteraceae	*Metalasia densa*	B, GBIF	Orchidaceae	*Disa ovalifolia*	GBIF
Asteraceae	*Metalasia eburnea*	GBIF	Orchidaceae	*Disa salteri*	GBIF
Asteraceae	*Metalasia fastigiata*	B	Orchidaceae	*Disa spathulata subsp. spathulata*	GBIF

Family	Species	Source	Family	Species	Source
Asteraceae	*Metalasia helmei*	B, GBIF, ST	Orchidaceae	*Disa spathulata* subsp. *tripartita*	VM
Asteraceae	*Metalasia muricata*	B	Orchidaceae	*Disa vaginata*	GBIF
Asteraceae	*Metalasia phillipsii* subsp. *incurva*	B	Orchidaceae	*Disa venosa*	B
Asteraceae	*Monticapra pilosa*	B	Orchidaceae	*Disperis bolusiana*	VM
Asteraceae	*Muscosomorphe aretioides*	GBIF	Orchidaceae	*Disperis bolusiana* subsp. *bolusiana*	B, GBIF
Asteraceae	*Myrovernix glandulosus*	GBIF	Orchidaceae	*Disperis capensis*	GBIF
Asteraceae	*Myrovernix scaber*	B	Orchidaceae	*Disperis capensis var. capensis*	GBIF
Asteraceae	*Nidorella ivifolia*	GBIF	Orchidaceae	*Disperis purpurata subsp. purpurata*	GBIF
Asteraceae	*Oedera calycina*	GBIF	Orchidaceae	*Disperis villosa*	B, GBIF
Asteraceae	*Oedera capensis*	B, GBIF	Orchidaceae	*Holothrix aspera*	GBIF
Asteraceae	*Oedera genistifolia*	B, GBIF	Orchidaceae	*Holothrix brevipetala*	B
Asteraceae	*Oedera hirta*	B	Orchidaceae	*Holothrix cernua*	GBIF
Asteraceae	*Oedera pungens subsp. trinervis*	GBIF	Orchidaceae	*Holothrix exilis*	GBIF
Asteraceae	*Oedera resinifera*	B	Orchidaceae	*Holothrix grandiflora*	GBIF
Asteraceae	*Oedera sedifolia*	B	Orchidaceae	*Holothrix secunda*	B, GBIF
Asteraceae	*Oedera speciosa*	GBIF	Orchidaceae	*Holothrix villosa*	GBIF
Asteraceae	*Oedera squarrosa*	B, GBIF	Orchidaceae	*Holothrix villosa var. villosa*	GBIF
Asteraceae	*Oedera tricephala*	GBIF	Orchidaceae	*Orthochilus tabularis*	GBIF
Asteraceae	*Oldenburgia paradoxa*	GBIF	Orchidaceae	*Pachites bodkinii*	ST
Asteraceae	*Oligocarpus calendulaceus*	B	Orchidaceae	*Pterygodium acutifolium*	GBIF

Family	Species	Source	Family	Species	Source
Asteraceae	*Oncosiphon pilulifer*	B	Orchidaceae	*Pterygodium catholicum*	B, GBIF
Asteraceae	*Osteospermum ilicifolium*	GBIF	Orchidaceae	*Pterygodium inversum*	GBIF
Asteraceae	*Osteospermum moniliferum*	GBIF	Orchidaceae	*Pterygodium orobanchoides*	GBIF
Asteraceae	*Osteospermum moniliferum subsp. moniliferum*	GBIF	Orchidaceae	*Pterygodium pentherianum*	B
Asteraceae	*Osteospermum polygaloides*	GBIF	Orchidaceae	*Pterygodium platypetalum*	VM
Asteraceae	*Osteospermum scariosum*	GBIF	Orchidaceae	*Pterygodium platypetalum*	B, GBIF
Asteraceae	*Osteospermum sinuatum*	GBIF	Orchidaceae	*Pterygodium schelpei*	B, GBIF
Asteraceae	*Othonna arbuscula*	B	Orchidaceae	*Pterygodium volucris*	B, GBIF
Asteraceae	*Othonna auriculifolia*	B, GBIF	Orchidaceae	*Satyrium bicorne*	GBIF
Asteraceae	*Othonna gymnodiscus*	GBIF	Orchidaceae	*Satyrium erectum*	B, GBIF
Asteraceae	*Othonna hederifolia*	GBIF	Orchidaceae	*Satyrium humile*	GBIF
Asteraceae	*Othonna lobata*	B	Orchidaceae	*Satyrium pumilum*	GBIF
Asteraceae	*Othonna oleracea*	GBIF	Orchidaceae	*Satyrium rupestre*	GBIF
Asteraceae	*Othonna parviflora*	B, GBIF	Orchidaceae	*Satyrium* sp.	GBIF
Asteraceae	*Othonna perfoliata*	GBIF	Orchidaceae	*Schizodium bifidum*	B
Asteraceae	*Othonna protecta*	B	Orobanchaceae	*Harveya bodkinii*	GBIF
Asteraceae	*Othonna quinquedentata*	B	Orobanchaceae	*Harveya purpurea*	GBIF
Asteraceae	*Othonna ramulosa*	B, GBIF	Orobanchaceae	*Harveya purpurea subsp. purpurea*	GBIF
Asteraceae	*Othonna retrofracta*	GBIF	Orobanchaceae	*Hyobanche glabrata*	B, GBIF
Asteraceae	*Othonna undulosa*	GBIF	Orobanchaceae	*Hyobanche sanguinea*	B, GBIF

Family	Species	Source	Family	Species	Source
Asteraceae	*Pegolettia baccaridifolia*	GBIF	Orobanchaceae	*Phelipanche nana*	GBIF
Asteraceae	*Pentatrichia kuntzei*	GBIF	Osmundaceae	*Osmunda regalis*	B
Asteraceae	*Pentzia dentata*	GBIF	Osmundaceae	*Todea barbara*	GBIF
Asteraceae	*Pentzia elegans*	GBIF	Oxalidaceae	*Oxalis bifida*	GBIF
Asteraceae	*Pentzia incana*	GBIF	Oxalidaceae	*Oxalis burkei*	GBIF
Asteraceae	*Phymaspermum trifidum*	GBIF	Oxalidaceae	*Oxalis capillacea*	GBIF
Asteraceae	*Pteronia aspalatha*	B	Oxalidaceae	*Oxalis caprina*	GBIF
Asteraceae	*Pteronia aspera*	GBIF	Oxalidaceae	*Oxalis ciliaris*	B, GBIF
Asteraceae	*Pteronia bolusii*	B	Oxalidaceae	*Oxalis commutata*	GBIF
Asteraceae	*Pteronia cinerea*	B, GBIF	Oxalidaceae	*Oxalis convexula*	B, GBIF
Asteraceae	*Pteronia elongata*	GBIF	Oxalidaceae	*Oxalis depressa*	B, GBIF
Asteraceae	*Pteronia fasciculata*	GBIF	Oxalidaceae	*Oxalis dregei*	GBIF
Asteraceae	*Pteronia fastigiata*	B	Oxalidaceae	*Oxalis eckloniana*	B, GBIF
Asteraceae	*Pteronia flexicaulis*	GBIF	Oxalidaceae	*Oxalis eckloniana* var. *eckloniana*	B
Asteraceae	*Pteronia glauca*	B	Oxalidaceae	*Oxalis engleriana*	GBIF
Asteraceae	*Pteronia glomerata*	B, GBIF	Oxalidaceae	*Oxalis fergusoniae*	GBIF
Asteraceae	*Pteronia hutchinsoniana*	GBIF	Oxalidaceae	*Oxalis fibrosa*	B, GBIF
Asteraceae	*Pteronia incana*	GBIF	Oxalidaceae	*Oxalis flava*	GBIF
Asteraceae	*Pteronia membranacea*	B	Oxalidaceae	*Oxalis flava* var. *flava*	B, GBIF
Asteraceae	*Pteronia oblanceolata*	B	Oxalidaceae	*Oxalis heterophylla*	B, GBIF
Asteraceae	*Pteronia paniculata*	B, GBIF	Oxalidaceae	*Oxalis inaequalis*	GBIF
Asteraceae	*Pulicaria scabra*	B, GBIF	Oxalidaceae	*Oxalis incarnata*	B

Family	Species	Source	Family	Species	Source
Asteraceae	*Relhania calycina* subsp. *apiculata*	B	Oxalidaceae	*Oxalis leptogramma*	GBIF
Asteraceae	*Relhania tricephala*	B	Oxalidaceae	*Oxalis lindaviana*	B
Asteraceae	*Rhynchopsidium sessiliflorum*	GBIF	Oxalidaceae	*Oxalis melanosticta*	GBIF
Asteraceae	*Rosenia humilis*	B	Oxalidaceae	*Oxalis melanosticta var. melanosticta*	GBIF
Asteraceae	*Schistostephium umbellatum*	B	Oxalidaceae	*Oxalis multicaulis*	B
Asteraceae	*Senecio abbreviatus*	GBIF	Oxalidaceae	*Oxalis obtusa*	B, GBIF
Asteraceae	*Senecio agapetes*	B	Oxalidaceae	*Oxalis orbicularis*	GBIF
Asteraceae	*Senecio albifolius*	B	Oxalidaceae	*Oxalis pardalis*	B
Asteraceae	*Senecio amabilis*	B	Oxalidaceae	*Oxalis pes-caprae*	GBIF
Asteraceae	*Senecio bipinnatus*	GBIF	Oxalidaceae	*Oxalis pes-caprae var. sericea*	GBIF
Asteraceae	*Senecio chrysocoma*	B	Oxalidaceae	*Oxalis pocockiae*	B, GBIF
Asteraceae	*Senecio comptonii*	GBIF	Oxalidaceae	*Oxalis polyphylla*	GBIF
Asteraceae	*Senecio cymbalariifolius*	GBIF	Oxalidaceae	*Oxalis polyphylla var. polyphylla*	GBIF
Asteraceae	*Senecio incertus*	B	Oxalidaceae	*Oxalis purpurea*	B
Asteraceae	*Senecio junceus*	GBIF	Oxalidaceae	*Oxalis* sp.	GBIF
Asteraceae	*Senecio lineatus*	GBIF	Oxalidaceae	*Oxalis stellata*	GBIF
Asteraceae	*Senecio paarlensis*	B	Oxalidaceae	*Oxalis stenorrhyncha*	B
Asteraceae	*Senecio paniculatus*	B, GBIF	Oxalidaceae	*Oxalis truncatula*	B
Asteraceae	*Senecio pinifolius*	B, GBIF	Papaveraceae	*Cysticapnos cracca*	GBIF
Asteraceae	*Senecio pubigerus*	B	Papaveraceae	*Eschscholzia californica* subsp. *californica*	B
Asteraceae	*Senecio purpureus*	GBIF	Papaveraceae	*Fumaria muralis subsp. muralis*	GBIF

Family	Species	Source	Family	Species	Source
Asteraceae	*Senecio robertiifolius*	B	Peraceae	*Clutia alaternoides*	GBIF
Asteraceae	*Senecio sarcoides*	GBIF	Peraceae	*Clutia alaternoides* var. *alaternoides*	B
Asteraceae	*Senecio umbellatus*	B	Peraceae	*Clutia laxa*	GBIF
Asteraceae	*Seriphium plumosum*	B, GBIF	Peraceae	*Clutia marginata*	B, GBIF
Asteraceae	*Seriphium spirale*	GBIF	Peraceae	*Clutia rubricaulis*	B
Asteraceae	*Stoebe aethiopica*	B, GBIF	Peraceae	*Clutia tomentosa*	GBIF
Asteraceae	*Stoebe capitata*	GBIF	Phytolaccaceae	*Phytolacca dioica*	GBIF
Asteraceae	*Stoebe fusca*	B, GBIF	Pinaceae	*Pinus pinaster*	GBIF
Asteraceae	*Stoebe spiralis*	B	Pinaceae	*Pinus radiata*	GBIF
Asteraceae	*Syncarpha canescens*	GBIF	Piperaceae	*Peperomia retusa*	GBIF
Asteraceae	*Syncarpha canescens* subsp. *canescens*	B	Pittosporaceae	*Pittosporum undulatum*	GBIF
Asteraceae	*Syncarpha canescens subsp. tricolor*	GBIF	Plantaginaceae	*Misopates orontium*	B, GBIF
Asteraceae	*Syncarpha dregeana*	GBIF	Plantaginaceae	*Misopates orontium subsp. orontium*	GBIF
Asteraceae	*Syncarpha dykei*	B	Plantaginaceae	*Plantago cafra*	B
Asteraceae	*Syncarpha eximia*	GBIF	Plantaginaceae	*Veronica anagallis-aquatica*	GBIF
Asteraceae	*Syncarpha gnaphaloides*	GBIF	Plantaginaceae	*Veronica persica*	GBIF
Asteraceae	*Syncarpha loganiana*	B, GBIF	Plumbaginaceae	*Limonium amoenum*	B
Asteraceae	*Syncarpha staehelina*	B, GBIF	Plumbaginaceae	*Limonium sinuatum subsp. sinuatum*	GBIF
Asteraceae	*Syncarpha variegata*	GBIF	Poaceae	*Anthoxanthum dregeanum*	B

Family	Species	Source	Family	Species	Source
Asteraceae	*Syncarpha vestita*	B	Poaceae	*Aristida congesta* subsp. *congesta*	B
Asteraceae	*Tripteris aghillana*	B	Poaceae	*Arundo donax*	GBIF
Asteraceae	*Ursinia anethoides*	GBIF	Poaceae	*Briza maxima*	B, GBIF
Asteraceae	*Ursinia anthemoides*	GBIF	Poaceae	*Briza minor*	GBIF
Asteraceae	*Ursinia anthemoides* subsp. *anthemoides*	B, GBIF	Poaceae	*Bromus diandrus*	B
Asteraceae	*Ursinia calenduliflora*	B	Poaceae	*Bromus pectinatus*	B, GBIF
Asteraceae	*Ursinia macropoda*	B	Poaceae	*Capeochloa arundinacea*	GBIF
Asteraceae	*Ursinia nana*	GBIF	Poaceae	*Cenchrus caudatus*	GBIF
Asteraceae	*Ursinia oreogena*	B	Poaceae	*Cenchrus setaceus*	GBIF
Asteraceae	*Ursinia pilifera*	B, GBIF	Poaceae	*Chaetobromus involucratus* subsp. *dregeanus*	B
Asteraceae	*Zyrphelis microcephala* subsp. *microcephala*	B	Poaceae	*Cymbopogon marginatus*	GBIF
Bartramiaceae	*Anacolia breutelii* var. *breutelii*	B	Poaceae	*Cynodon dactylon*	GBIF
Bartramiaceae	*Bartramia hampeana*	B, GBIF	Poaceae	*Digitaria eriantha*	B
Bartramiaceae	*Breutelia substricta*	B	Poaceae	*Ehrharta calycina*	B, GBIF
Blechnaceae	*Blechnaceae*	GBIF	Poaceae	*Ehrharta delicatula*	B
Blechnaceae	*Blechnum inflexum*	B	Poaceae	*Ehrharta eburnea*	B
Blechnaceae	*Blechnum punctulatum* var. *atherstonei*	B	Poaceae	*Ehrharta erecta* var. *erecta*	B
Blechnaceae	*Lomariocycas tabularis*	GBIF	Poaceae	*Ehrharta longiflora*	B
Boraginaceae	*Amsinckia menziesii*	GBIF	Poaceae	*Ehrharta melicoides*	B
Boraginaceae	*Anchusa capensis*	GBIF	Poaceae	*Ehrharta thunbergii*	B, GBIF

Family	Species	Source	Family	Species	Source
Boraginaceae	*Lobostemon echioides*	B, GBIF	Poaceae	*Eragrostis curvula*	B
Boraginaceae	*Lobostemon fruticosus*	B, GBIF	Poaceae	*Fingerhuthia africana*	B
Boraginaceae	*Lobostemon glaber*	B	Poaceae	*Hordeum capense*	B
Boraginaceae	*Lobostemon glaucophyllus*	GBIF	Poaceae	*Hyparrhenia hirta*	B, GBIF
Boraginaceae	*Lobostemon laevigatus*	B	Poaceae	*Karroochloa purpurea*	B
Boraginaceae	*Lobostemon oederiaefolius*	B	Poaceae	*Koeleria capensis*	B
Brassicaceae	*Alyssum minutum*	B, GBIF	Poaceae	*Melica racemosa*	B
Brassicaceae	*Brassica rapa*	GBIF	Poaceae	*Melinis repens*	GBIF
Brassicaceae	*Heliophila arenosa*	B	Poaceae	*Merxmuellera stricta*	B
Brassicaceae	*Heliophila bulbostyla*	B, GBIF	Poaceae	*Paspalum dilatatum*	GBIF
Brassicaceae	*Heliophila carnosa*	B, GBIF	Poaceae	*Pentameris acinosa*	B
Brassicaceae	*Heliophila cornuta*	GBIF	Poaceae	*Pentameris airoides* subsp. *airoides*	B
Brassicaceae	*Heliophila cornuta* var. *squamata*	B, GBIF	Poaceae	*Pentameris densifolia*	B
Brassicaceae	*Heliophila crithmifolia*	B, GBIF	Poaceae	*Pentameris eriostoma*	GBIF
Brassicaceae	*Heliophila dregeana*	B	Poaceae	*Pentameris horrida*	B
Brassicaceae	*Heliophila elata*	ST	Poaceae	*Pentameris pallida*	B
Brassicaceae	*Heliophila juncea*	B, GBIF	Poaceae	*Pentameris rigidissima*	B
Brassicaceae	*Heliophila linearis var. linearifolia*	GBIF	Poaceae	*Pentaschistis airoides* subsp. *airoides*	B
Brassicaceae	*Heliophila meyeri*	GBIF	Poaceae	*Pentaschistis eriostoma*	B

Family	Species	Source	Family	Species	Source
Brassicaceae	*Heliophila pectinata*	B, GBIF	Poaceae	*Pentaschistis horrida*	B
Brassicaceae	*Heliophila pendula*	B, GBIF	Poaceae	*Pentaschistis pallida*	B
Brassicaceae	*Heliophila pinnata*	B, GBIF	Poaceae	*Pentaschistis rigidissima*	B
Brassicaceae	*Heliophila scoparia*	GBIF	Poaceae	*Phragmites australis*	GBIF
Brassicaceae	*Heliophila scoparia var. aspera*	GBIF	Poaceae	*Phragmites australis subsp. australis*	GBIF
Brassicaceae	*Heliophila squamata*	B	Poaceae	*Polypogon monspeliensis*	B
Brassicaceae	*Heliophila suavissima*	B	Poaceae	*Stipagrostis zeyheri* subsp. *macropus*	B
Brassicaceae	*Heliophila suborbicularis*	B	Poaceae	*Tenaxia stricta*	B, GBIF
Brassicaceae	*Heliophila subulata*	GBIF	Poaceae	*Themeda triandra*	GBIF
Brassicaceae	*Heliophila subulata subsp. subulata*	GBIF	Poaceae	*Tribolium hispidum*	B, GBIF
Brassicaceae	*Heliophila tricuspidata*	GBIF	Poaceae	*Tribolium obliterum*	B
Brassicaceae	*Heliophila xylopoda*	GBIF	Poaceae	*Tribolium obtusifolium*	B
Brassicaceae	*Lepidium africanum subsp. africanum*	GBIF	Poaceae	*Tribolium purpureum*	B
Brassicaceae	*Sisymbrium capense*	GBIF	Poaceae	*Urochloa serrata*	GBIF
Bruniaceae	*Audouinia esterhuyseniae*	B	Polygalaceae	*Muraltia alopecuroides*	B
Bruniaceae	*Berzelia abrotanoides*	GBIF	Polygalaceae	*Muraltia ericaefolia*	B
Bruniaceae	*Brunia noduliflora*	B, GBIF	Polygalaceae	*Muraltia ericifolia*	GBIF
Bruniaceae	*Pseudobaeckea africana*	B	Polygalaceae	*Muraltia heisteria*	B, GBIF
Bruniaceae	*Staavia capitella*	B	Polygalaceae	*Muraltia macrocarpa*	B

Family	Species	Source	Family	Species	Source
Bryaceae	*Bryum canariense*	B	Polygalaceae	*Muraltia muraltioides*	GBIF
Cactaceae	*Cylindropuntia imbricata subsp. imbricata*	GBIF	Polygalaceae	*Muraltia parvifolia*	B, GBIF
Cactaceae	*Opuntia aurantiaca*	B	Polygalaceae	*Muraltia rhamnoides*	GBIF
Cactaceae	*Opuntia ficus-indica*	GBIF	Polygalaceae	*Muraltia spinosa*	B, GBIF
Cactaceae	*Trichocereus spachianus*	GBIF	Polygalaceae	*Polygala affinis*	GBIF
Campanulaceae	*Cyphia digitata*	GBIF	Polygalaceae	*Polygala bracteolata*	GBIF
Campanulaceae	*Cyphia volubilis*	GBIF	Polygalaceae	*Polygala fruticosa*	GBIF
Campanulaceae	*Grammatotheca bergiana*	GBIF	Polygalaceae	*Polygala microlopha*	GBIF
Campanulaceae	*Lobelia capillifolia*	GBIF	Polygalaceae	*Polygala microlopha var. microlopha*	GBIF
Campanulaceae	*Lobelia erinus*	GBIF	Polygalaceae	*Polygala scabra*	B
Campanulaceae	*Lobelia linearis*	GBIF	Polygalaceae	*Polygala teretifolia*	B, GBIF
Campanulaceae	*Lobelia pinifolia*	GBIF	Polygalaceae	*Polygala umbellata*	B
Campanulaceae	*Lobelia tomentosa*	GBIF	Polygalaceae	*Polygala wittebergensis*	B
Campanulaceae	*Prismatocarpus diffusus*	B, GBIF	Polygonaceae	*Persicaria decipiens*	GBIF
Campanulaceae	*Prismatocarpus pedunculatus*	B, GBIF	Polygonaceae	*Polygonum aviculare*	B
Campanulaceae	*Prismatocarpus sessilis*	B	Polygonaceae	*Polygonum plebeium*	GBIF
Campanulaceae	*Prismatocarpus sessilis* var. *sessilis*	B	Polygonaceae	*Rumex acetosella*	GBIF
Campanulaceae	*Prismatocarpus tenerrimus*	B	Polygonaceae	*Rumex cordatus*	GBIF
Campanulaceae	*Wahlenbergia capensis*	GBIF	Pottiaceae	*Ephemerum namaquense*	B
Campanulaceae	*Wahlenbergia cernua*	GBIF	Pottiaceae	*Pseudocrossidium crinitum*	B

Family	Species	Source	Family	Species	Source
Campanulaceae	*Wahlenbergia neorigida*	B	Pottiaceae	*Tetrapterum tetragonum*	B
Campanulaceae	*Wahlenbergia nodosa*	GBIF	Pottiaceae	*Triquetrella mxinwana*	B, GBIF
Campanulaceae	*Wahlenbergia oxyphylla*	GBIF	Primulaceae	*Lysimachia arvensis*	GBIF
Capparaceae	*Cadaba aphylla*	B, GBIF	Primulaceae	*Lysimachia loeflingii*	GBIF
Caryophyllaceae	*Dianthus bolusii*	GBIF	Primulaceae	*Myrsine africana*	GBIF
Caryophyllaceae	*Herniaria pearsonii*	GBIF	Proteaceae	*Aulax pallasia*	B
Caryophyllaceae	*Petrorhagia dubia*	GBIF	Proteaceae	*Banksia speciosa*	B
Caryophyllaceae	*Petrorhagia prolifera*	GBIF	Proteaceae	*Brabejum stellatifolium*	GBIF
Caryophyllaceae	*Pollichia campestris*	GBIF	Proteaceae	*Hakea sericea*	GBIF
Caryophyllaceae	*Silene burchellii*	GBIF	Proteaceae	*Leucadendron arcuatum*	B
Caryophyllaceae	*Silene burchellii subsp. pilosellifolia*	GBIF	Proteaceae	*Leucadendron barkerae*	B, GBIF
Caryophyllaceae	*Silene gallica*	GBIF	Proteaceae	*Leucadendron comosum*	B
Caryophyllaceae	*Silene gallica var. quinquevulnera*	GBIF	Proteaceae	*Leucadendron comosum* subsp. *comosum*	B, GBIF
Caryophyllaceae	*Silene undulata*	B, GBIF	Proteaceae	*Leucadendron cordatum*	B, GBIF, ST
Caryophyllaceae	*Silene undulata subsp. undulata*	GBIF	Proteaceae	*Leucadendron eucalyptifolium*	GBIF
Caryophyllaceae	*Spergularia media*	GBIF	Proteaceae	*Leucadendron glaberrimum* subsp. *glaberrimum*	B
Caryophyllaceae	*Spergularia rubra*	GBIF	Proteaceae	*Leucadendron pubescens*	B
Caryophyllaceae	*Stellaria media*	GBIF	Proteaceae	*Leucadendron rubrum*	B, GBIF
Celastraceae	*Gloveria integrifolia*	GBIF	Proteaceae	*Leucadendron salignum*	B, GBIF
Celastraceae	*Gymnosporia buxifolia*	GBIF	Proteaceae	*Leucadendron spissifolium*	B, GBIF

Family	Species	Source	Family	Species	Source
				subsp. *spissifolium*	
Celastraceae	*Maytenus acuminata*	GBIF	Proteaceae	*Leucadendron teretifolium*	GBIF
Celastraceae	*Maytenus acuminata* var. *acuminata*	B, GBIF	Proteaceae	*Leucospermum calligerum*	B, GBIF
Celastraceae	*Maytenus oleoides*	B, GBIF	Proteaceae	*Leucospermum catherinae*	B
Celastraceae	*Pterocelastrus tricuspidatus*	GBIF	Proteaceae	*Leucospermum cordifolium*	GBIF
Colchicaceae	*Colchicum burchellii subsp. burchellii*	GBIF	Proteaceae	*Leucospermum reflexum*	GBIF
Colchicaceae	*Colchicum cuspidatum*	B, GBIF	Proteaceae	*Leucospermum spathulatum*	B
Colchicaceae	*Ornithoglossum undulatum*	GBIF	Proteaceae	*Leucospermum tottum*	B
Colchicaceae	*Wurmbea inusta*	GBIF	Proteaceae	*Mimetes cucullatus*	B, GBIF
Colchicaceae	*Wurmbea marginata*	GBIF	Proteaceae	*Paranomus candicans*	B
Colchicaceae	*Wurmbea variabilis*	GBIF	Proteaceae	*Protea acaulos*	B
Commelinaceae	*Commelina africana*	GBIF	Proteaceae	*Protea acuminata*	B
Commelinaceae	*Commelina africana subsp. africana*	GBIF	Proteaceae	*Protea amplexicaulis*	B
Convolvulaceae	*Ipomoea albivenia*	B	Proteaceae	*Protea aurea subsp. aurea*	GBIF
Crassulaceae	*Adromischus caryophyllaceus*	GBIF	Proteaceae	*Protea canaliculata*	B, GBIF
Crassulaceae	*Adromischus filicaulis*	B, GBIF	Proteaceae	*Protea coronata*	GBIF
Crassulaceae	*Adromischus filicaulis* subsp. *marlothii*	B, GBIF	Proteaceae	*Protea cynaroides*	GBIF
Crassulaceae	*Adromischus leucophyllus*	B	Proteaceae	*Protea effusa*	B
Crassulaceae	*Adromischus maculatus*	GBIF	Proteaceae	*Protea eximia*	B, GBIF
Crassulaceae	*Adromischus triflorus*	B, GBIF	Proteaceae	*Protea grandiceps*	GBIF

Family	Species	Source	Family	Species	Source
Crassulaceae	*Cotyledon cuneata*	GBIF	Proteaceae	*Protea holosericea*	ST
Crassulaceae	*Cotyledon orbiculata*	GBIF	Proteaceae	*Protea humiflora*	GBIF
Crassulaceae	*Cotyledon orbiculata var. orbiculata*	GBIF	Proteaceae	*Protea laevis*	B, GBIF
Crassulaceae	*Cotyledon orbiculata var. spuria*	GBIF	Proteaceae	*Protea lanceolata*	GBIF
Crassulaceae	*Cotyledon papillaris*	GBIF	Proteaceae	*Protea laurifolia*	B, GBIF
Crassulaceae	*Crassula arborescens*	GBIF	Proteaceae	*Protea lorifolia*	B, GBIF
Crassulaceae	*Crassula atropurpurea*	GBIF	Proteaceae	*Protea magnifica*	B, GBIF
Crassulaceae	*Crassula atropurpurea var. anomala*	GBIF	Proteaceae	*Protea neriifolia*	B, GBIF
Crassulaceae	*Crassula atropurpurea* var. *atropurpurea*	B	Proteaceae	*Protea nitida*	B, GBIF
Crassulaceae	*Crassula atropurpurea* var. *purcellii*	B	Proteaceae	*Protea pendula*	B
Crassulaceae	*Crassula atropurpurea* var. *watermeyeri*	B	Proteaceae	*Protea punctata*	B, GBIF
Crassulaceae	*Crassula barbata*	GBIF	Proteaceae	*Protea repens*	B, GBIF
Crassulaceae	*Crassula biplanata*	GBIF	Proteaceae	*Protea revoluta*	B, GBIF
Crassulaceae	*Crassula campestris*	GBIF	Proteaceae	*Protea rupicola*	ST
Crassulaceae	*Crassula capitella subsp. thyrsiflora*	GBIF	Proteaceae	*Protea scabriuscula*	B
Crassulaceae	*Crassula ciliata*	GBIF	Proteaceae	*Protea scolopendriifolia*	B, GBIF
Crassulaceae	*Crassula clavata*	GBIF	Proteaceae	*Protea* sp.	GBIF
Crassulaceae	*Crassula columnaris*	GBIF	Proteaceae	*Protea subulifolia*	B
Crassulaceae	*Crassula columnaris subsp. columnaris*	GBIF	Proteaceae	*Protea sulphurea*	B, GBIF
Crassulaceae	*Crassula cotyledonis*	GBIF	Proteaceae	*Protea welwitschii*	B

Family	Species	Source	Family	Species	Source
Crassulaceae	*Crassula decumbens var. decumbens*	GBIF	Proteaceae	*Protea witzenbergiana*	B
Crassulaceae	*Crassula deltoidea*	GBIF	Proteaceae	*Serruria acrocarpa*	B
Crassulaceae	*Crassula dependens*	B	Proteaceae	*Serruria balanocephala*	GBIF
Crassulaceae	*Crassula expansa*	GBIF	Proteaceae	*Serruria decipiens*	B
Crassulaceae	*Crassula expansa subsp. expansa*	GBIF	Proteaceae	*Serruria dodii*	B
Crassulaceae	*Crassula hemisphaerica*	GBIF	Proteaceae	*Serruria gremialis*	B
Crassulaceae	*Crassula lanceolata subsp. lanceolata*	GBIF	Proteaceae	*Sorocephalus lanatus*	B
Crassulaceae	*Crassula montana*	GBIF	Proteaceae	*Spatalla incurva*	B
Crassulaceae	*Crassula montana subsp. montana*	GBIF	Proteaceae	*Vexatorella latebrosa*	GBIF
Crassulaceae	*Crassula multiflora*	GBIF	Proteaceae	*Vexatorella obtusata*	B
Crassulaceae	*Crassula multiflora subsp. multiflora*	GBIF	Proteaceae	*Vexatorella obtusata subsp. albomontana*	GBIF
Crassulaceae	*Crassula muricata*	GBIF	Proteaceae	*Vexatorella obtusata* subsp. *obtusata*	B, GBIF
Crassulaceae	*Crassula muscosa*	GBIF	Pteridaceae	*Adiantum aethiopicum*	B
Crassulaceae	*Crassula muscosa* var. *muscosa*	B, GBIF	Pteridaceae	*Cheilanthes capensis*	GBIF
Crassulaceae	*Crassula natans*	GBIF	Pteridaceae	*Cheilanthes contracta*	B, GBIF
Crassulaceae	*Crassula natans var. natans*	GBIF	Pteridaceae	*Cheilanthes hastata*	GBIF
Crassulaceae	*Crassula nemorosa*	GBIF	Pteridaceae	*Cheilanthes parviloba*	GBIF
Crassulaceae	*Crassula nudicaulis*	B, GBIF	Pteridaceae	*Pellaea calomelanos*	GBIF
Crassulaceae	*Crassula nudicaulis var. platyphylla*	GBIF	Pteridaceae	*Pellaea pteroides*	GBIF

Family	Species	Source	Family	Species	Source
Crassulaceae	*Crassula obtusa*	GBIF	Pylaisiadelphaceae	*Isopterygium tenerum*	B
Crassulaceae	*Crassula orbicularis*	GBIF	Ranunculaceae	*Clematis brachiata*	GBIF
Crassulaceae	*Crassula pageae*	GBIF	Ranunculaceae	*Knowltonia tenuifolia*	GBIF
Crassulaceae	*Crassula pellucida*	GBIF	Ranunculaceae	*Knowltonia vesicatoria subsp. vesicatoria*	GBIF
Crassulaceae	*Crassula perforata*	GBIF	Ranunculaceae	*Myosurus minimus*	GBIF
Crassulaceae	*Crassula perforata subsp. perforata*	GBIF	Ranunculaceae	*Ranunculus multifidus*	GBIF
Crassulaceae	*Crassula pubescens*	GBIF	Restionaceae	*Anthochortus ecklonii*	B
Crassulaceae	*Crassula pubescens* subsp. *pubescens*	B	Restionaceae	*Askidiosperma capitatum*	B
Crassulaceae	*Crassula pyramidalis*	GBIF	Restionaceae	*Askidiosperma nitidum*	B
Crassulaceae	*Crassula rupestris*	GBIF	Restionaceae	*Cannomois aristata*	GBIF
Crassulaceae	*Crassula rupestris subsp. rupestris*	GBIF	Restionaceae	*Cannomois congesta*	GBIF
Crassulaceae	*Crassula saxifraga*	GBIF	Restionaceae	*Cannomois parviflora*	B, GBIF
Crassulaceae	*Crassula sebaeoides*	GBIF	Restionaceae	*Cannomois primosii*	B
Crassulaceae	*Crassula simulans*	GBIF	Restionaceae	*Cannomois robusta*	B
Crassulaceae	*Crassula strigosa*	GBIF	Restionaceae	*Cannomois scirpoides*	B
Crassulaceae	*Crassula subaphylla*	GBIF	Restionaceae	*Cannomois virgata*	B
Crassulaceae	*Crassula subulata*	GBIF	Restionaceae	*Elegia asperiflora*	B
Crassulaceae	*Crassula subulata var. hispida*	GBIF	Restionaceae	*Elegia capensis*	B
Crassulaceae	*Crassula subulata var. subulata*	GBIF	Restionaceae	*Elegia filacea*	B
Crassulaceae	*Crassula tetragona*	GBIF	Restionaceae	*Elegia stokoei*	B

Family	Species	Source	Family	Species	Source
Crassulaceae	*Crassula tetragona subsp. lignescens*	GBIF	Restionaceae	*Hydrophilus rattrayi*	B
Crassulaceae	*Crassula tetragona subsp. tetragona*	GBIF	Restionaceae	*Hypodiscus laevigatus*	GBIF
Crassulaceae	*Crassula thunbergiana subsp. thunbergiana*	GBIF	Restionaceae	*Hypodiscus neesii*	B
Crassulaceae	*Crassula tomentosa*	GBIF	Restionaceae	*Hypodiscus striatus*	B
Crassulaceae	*Crassula tomentosa var. tomentosa*	GBIF	Restionaceae	*Ischyrolepis sieberi*	B
Crassulaceae	*Crassula umbella*	GBIF	Restionaceae	*Restio aridus*	B, ST
Crassulaceae	*Crassula umbellata*	GBIF	Restionaceae	*Restio capensis*	GBIF
Crassulaceae	*Crassula vaillantii*	GBIF	Restionaceae	*Restio distichus*	B
Crassulaceae	*Tylecodon cacalioides*	GBIF	Restionaceae	*Restio distractus*	B
Crassulaceae	*Tylecodon paniculatus*	B, GBIF	Restionaceae	*Restio distylis*	B
Crassulaceae	*Tylecodon reticulatus*	GBIF	Restionaceae	*Restio laniger*	B
Crassulaceae	*Tylecodon reticulatus subsp. reticulatus*	GBIF	Restionaceae	*Restio luxurians*	B, GBIF
Crassulaceae	*Tylecodon ventricosus*	GBIF	Restionaceae	*Restio nanus*	GBIF
Crassulaceae	*Tylecodon wallichii*	GBIF	Restionaceae	*Restio ocreatus*	B
Crassulaceae	*Tylecodon wallichii* subsp. *wallichii*	B, GBIF	Restionaceae	*Restio paniculatus*	B, GBIF
Cucurbitaceae	*Cucumis myriocarpus*	GBIF	Restionaceae	*Restio perplexus*	B
Cucurbitaceae	*Kedrostis capensis*	B, GBIF	Restionaceae	*Restio quadratus*	GBIF
Cucurbitaceae	*Kedrostis nana var. zeyheri*	GBIF	Restionaceae	*Restio rudolfii*	B
Cunoniaceae	*Cunonia capensis*	GBIF	Restionaceae	*Restio sieberi*	GBIF
Cupressaceae	*Widdringtonia nodiflora*	GBIF	Restionaceae	*Restio strobilifer*	B
Cyatheaceae	*Cyathea capensis*	GBIF	Restionaceae	*Restio triticeus*	GBIF

Family	Species	Source	Family	Species	Source
Cyperaceae	*Carex capensis*	GBIF	Restionaceae	*Restio venustulus*	B
Cyperaceae	*Cyperus marginatus*	B	Restionaceae	*Restio vimineus*	GBIF
Cyperaceae	*Cyperus nitidus*	GBIF	Restionaceae	*Restio virgeus*	GBIF
Cyperaceae	*Cyperus polystachyos var. polystachyos*	GBIF	Restionaceae	*Restio wittebergensis*	GBIF
Cyperaceae	*Cyperus thunbergii*	GBIF	Restionaceae	*Rhodocoma capensis*	GBIF
Cyperaceae	*Eleocharis limosa*	GBIF	Restionaceae	*Rhodocoma fruticosa*	GBIF
Cyperaceae	*Ficinia brevifolia*	GBIF	Restionaceae	*Staberoha cernua*	B
Cyperaceae	*Ficinia deusta*	GBIF	Restionaceae	*Staberoha distachyos*	B
Cyperaceae	*Ficinia esterhuyseniae*	B	Restionaceae	*Thamnochortus acuminatus*	B
Cyperaceae	*Ficinia marginata*	GBIF	Restionaceae	*Thamnochortus cinereus*	B
Cyperaceae	*Ficinia nigrescens*	GBIF	Restionaceae	*Thamnochortus fruticosus*	GBIF
Cyperaceae	*Ficinia nodosa*	GBIF	Restionaceae	*Thamnochortus platypteris*	B
Cyperaceae	*Ficinia stolonifera*	B	Restionaceae	*Thamnochortus schlechteri*	B
Cyperaceae	*Fuirena hirsuta*	GBIF	Restionaceae	*Willdenowia arescens*	GBIF
Cyperaceae	*Isolepis digitata*	GBIF	Restionaceae	*Willdenowia bolusii*	B
Cyperaceae	*Isolepis prolifera*	B, GBIF	Rhamnaceae	*Noltea africana*	GBIF
Cyperaceae	*Tetraria involucrata*	GBIF	Rhamnaceae	*Phylica ambigua*	B
Cyperaceae	*Tetraria ustulata*	GBIF	Rhamnaceae	*Phylica buxifolia*	B
Cytinaceae	*Cytinus sanguineus*	B, GBIF	Rhamnaceae	*Phylica comptonii*	ST
Dennstaedtiaceae	*Pteridium aquilinum subsp. capense*	GBIF	Rhamnaceae	*Phylica debilis*	B
Dipsacaceae	*Scabiosa columbaria*	B, GBIF	Rhamnaceae	*Phylica excelsa* var. *excelsa*	B

Family	Species	Source	Family	Species	Source
Ditrichaceae	*Ceratodon purpureus* subsp. *stenocarpus*	B	Rhamnaceae	*Phylica odorata*	B, GBIF
Droseraceae	*Drosera acaulis*	B	Rosaceae	*Acaena latebrosa*	B, GBIF
Droseraceae	*Drosera aliciae*	GBIF	Rosaceae	*Cliffortia atrata*	B
Droseraceae	*Drosera capensis*	B	Rosaceae	*Cliffortia baccans*	B
Droseraceae	*Drosera cistiflora*	GBIF	Rosaceae	*Cliffortia crenata*	B, GBIF
Droseraceae	*Drosera ramentacea*	GBIF	Rosaceae	*Cliffortia cristata*	B
Droseraceae	*Drosera trinervia*	B, GBIF	Rosaceae	*Cliffortia erectisepala*	GBIF
Droseraceae	*Drosera zeyheri*	GBIF	Rosaceae	*Cliffortia gracillima*	GBIF
Ebenaceae	*Diospyros austroafricana*	GBIF	Rosaceae	*Cliffortia hantamensis*	GBIF
Ebenaceae	*Diospyros glabra*	B, GBIF	Rosaceae	*Cliffortia neglecta*	GBIF
Ebenaceae	*Euclea polyandra*	GBIF	Rosaceae	*Cliffortia odorata*	GBIF
Ebenaceae	*Euclea undulata*	GBIF	Rosaceae	*Cliffortia pulchella*	GBIF
Ericaceae	*Erica abietina* subsp. *aurantiaca*	B	Rosaceae	*Cliffortia ruscifolia*	GBIF
Ericaceae	*Erica anguliger*	B, GBIF	Rosaceae	*Cliffortia sericea*	GBIF
Ericaceae	*Erica arcuata*	B	Rosaceae	*Cliffortia strobilifera*	B, GBIF
Ericaceae	*Erica areolata*	B	Rubiaceae	*Anthospermum galioides*	GBIF
Ericaceae	*Erica articularis*	GBIF	Rubiaceae	*Anthospermum spathulatum*	GBIF
Ericaceae	*Erica benthamiana*	B	Rubiaceae	*Carpacoce scabra*	GBIF
Ericaceae	*Erica bergiana*	GBIF	Rubiaceae	*Galium tomentosum*	GBIF
Ericaceae	*Erica bruniades*	B	Rubiaceae	*Rubia petiolaris*	GBIF
Ericaceae	*Erica caffra*	GBIF	Ruscaceae	*Eriospermum bayeri*	B

Family	Species	Source	Family	Species	Source
Ericaceae	*Erica caffra* var. *caffra*	B, GBIF	Rutaceae	*Acmadenia matroosbergensis*	B, GBIF, ST
Ericaceae	*Erica calycina*	GBIF	Rutaceae	*Acmadenia sheilae*	GBIF
Ericaceae	*Erica calycina* var. *calycina*	B	Rutaceae	*Acmadenia teretifolia*	B
Ericaceae	*Erica calycina* var. *longibracteata*	B	Rutaceae	*Adenandra mundiifolia*	GBIF
Ericaceae	*Erica cerinthoides*	GBIF	Rutaceae	*Agathosma adenandriflora*	B
Ericaceae	*Erica cerinthoides* var. *cerinthoides*	B, GBIF	Rutaceae	*Agathosma barnesiae*	B
Ericaceae	*Erica cetrata*	B	Rutaceae	*Agathosma capensis*	B
Ericaceae	*Erica coacervata*	B	Rutaceae	*Agathosma cerefolium*	B
Ericaceae	*Erica coccinea*	B, GBIF	Rutaceae	*Agathosma crassifolia*	B, GBIF
Ericaceae	*Erica coccinea subsp. coccinea*	GBIF	Rutaceae	*Agathosma divaricata*	B
Ericaceae	*Erica conspicua* subsp. *conspicua*	B	Rutaceae	*Agathosma foetidissima*	GBIF
Ericaceae	*Erica conspicua* subsp. *roseoflora*	B	Rutaceae	*Agathosma marlothii*	B
Ericaceae	*Erica constantia*	ST	Rutaceae	*Agathosma ovata*	B
Ericaceae	*Erica corifolia* var. *corifolia*	B	Rutaceae	*Agathosma pentachotoma*	B
Ericaceae	*Erica cristiflora* var. *cristiflora*	B	Rutaceae	*Agathosma squamosa*	B
Ericaceae	*Erica curviflora*	B, GBIF	Rutaceae	*Agathosma subteretifolia*	B
Ericaceae	*Erica daphniflora* var. *daphniflora*	B	Rutaceae	*Diosma acmaeophylla*	B
Ericaceae	*Erica daphniflora* var. *muscari*	B	Rutaceae	*Diosma pedicellata*	B
Ericaceae	*Erica discolor*	GBIF	Rutaceae	*Diosma strumosa*	B
Ericaceae	*Erica dodii*	B	Rutaceae	*Euchaetis elsieae*	B, GBIF

Family	Species	Source	Family	Species	Source
Ericaceae	*Erica erasmia*	B	Rutaceae	*Macrostylis tenuis*	B
Ericaceae	*Erica eremioides* subsp. *eremioides*	B	Salicaceae	*Populus ×canescens*	GBIF
Ericaceae	*Erica glandulipila*	B, ST	Salicaceae	*Salix mucronata*	GBIF
Ericaceae	*Erica glauca* var. *glauca*	B	Santalaceae	*Colpoon compressum*	GBIF
Ericaceae	*Erica gnaphaloides*	B	Santalaceae	*Thesidium podocarpum*	B
Ericaceae	*Erica grandiflora*	GBIF	Santalaceae	*Thesium carinatum*	B
Ericaceae	*Erica grandiflora subsp. grandiflora*	GBIF	Santalaceae	*Thesium juncifolium*	B
Ericaceae	*Erica grata*	GBIF	Sapindaceae	*Dodonaea viscosa*	GBIF
Ericaceae	*Erica haemastoma*	B	Sapindaceae	*Dodonaea viscosa subsp. angustifolia*	GBIF
Ericaceae	*Erica haematosiphon*	B	Sapotaceae	*Sideroxylon inerme subsp. inerme*	GBIF
Ericaceae	*Erica hispiduloides*	B	Schizaeaceae	*Schizaea pectinata*	B, GBIF
Ericaceae	*Erica junonia var. junonia*	B	Scrophulariaceae	*Aptosimum indivisum*	GBIF
Ericaceae	*Erica junonia* var. *minor*	B	Scrophulariaceae	*Buddleja saligna*	GBIF
Ericaceae	*Erica lateralis*	B, GBIF	Scrophulariaceae	*Chaenostoma caeruleum*	B, GBIF
Ericaceae	*Erica leptopus*	B	Scrophulariaceae	*Chaenostoma decipiens*	B
Ericaceae	*Erica leptopus* var. *leptopus*	B, GBIF	Scrophulariaceae	*Chaenostoma glabratum*	B
Ericaceae	*Erica leucanthera*	B, GBIF	Scrophulariaceae	*Chaenostoma macrosiphon*	B
Ericaceae	*Erica leucodesmia*	B, GBIF	Scrophulariaceae	*Chaenostoma uncinatum*	B
Ericaceae	*Erica leucopelta*	GBIF	Scrophulariaceae	*Chenopodiopsis hirta*	B

Family	Species	Source	Family	Species	Source
Ericaceae	*Erica leucopelta* var. *leucopelta*	B	Scrophulariaceae	*Cromidon varicalyx*	B
Ericaceae	*Erica maderi*	B	Scrophulariaceae	*Diascia hexensis*	B
Ericaceae	*Erica maesta* var. *maesta*	B	Scrophulariaceae	*Diascia humilis*	B
Ericaceae	*Erica mammosa*	B, GBIF	Scrophulariaceae	*Diascia maculata*	B
Ericaceae	*Erica maximiliani*	B	Scrophulariaceae	*Diascia parviflora*	B, GBIF
Ericaceae	*Erica mira*	B	Scrophulariaceae	*Diascia sacculata*	B
Ericaceae	*Erica monsoniana*	GBIF	Scrophulariaceae	*Freylinia lanceolata*	B, GBIF
Ericaceae	*Erica monsoniana* var. *monsoniana*	B, GBIF	Scrophulariaceae	*Freylinia undulata*	B
Ericaceae	*Erica nubigena*	B	Scrophulariaceae	*Hemimeris centrodes*	GBIF
Ericaceae	*Erica nudiflora*	GBIF	Scrophulariaceae	*Hemimeris racemosa*	B
Ericaceae	*Erica orculiflora*	B, GBIF	Scrophulariaceae	*Jamesbrittenia atropurpurea*	GBIF
Ericaceae	*Erica oresigena*	B	Scrophulariaceae	*Lyperia antirrhinoides*	B, GBIF
Ericaceae	*Erica palliiflora*	B	Scrophulariaceae	*Lyperia formosa*	B, GBIF
Ericaceae	*Erica parilis*	GBIF	Scrophulariaceae	*Lyperia tristis*	GBIF
Ericaceae	*Erica parilis* var. *parilis*	B, GBIF	Scrophulariaceae	*Manulea cheiranthus*	GBIF
Ericaceae	*Erica parilis* var. *parviflora*	B, GBIF	Scrophulariaceae	*Manulea minor*	B
Ericaceae	*Erica penicilliformis*	GBIF	Scrophulariaceae	*Microdon dubius*	B, GBIF
Ericaceae	*Erica peziza*	GBIF	Scrophulariaceae	*Microdon parviflorus*	GBIF
Ericaceae	*Erica plukenetii*	B, GBIF	Scrophulariaceae	*Microdon polygaloides*	B
Ericaceae	*Erica plukenetii* subsp. *plukenetii*	B, GBIF	Scrophulariaceae	*Nemesia barbata*	GBIF
Ericaceae	*Erica polycoma*	B	Scrophulariaceae	*Nemesia diffusa* var. *diffusa*	B

Family	Species	Source	Family	Species	Source
Ericaceae	*Erica pubescens*	GBIF	Scrophulariaceae	*Nemesia leipoldtii*	B
Ericaceae	*Erica quadrangularis*	B	Scrophulariaceae	*Nemesia pageae*	B, GBIF
Ericaceae	*Erica racemosa* var. *racemosa*	B	Scrophulariaceae	*Oftia africana*	GBIF
Ericaceae	*Erica rigidula*	B	Scrophulariaceae	*Phyllopodium elegans*	GBIF
Ericaceae	*Erica setacea*	GBIF	Scrophulariaceae	*Polycarena aurea*	B
Ericaceae	*Erica setulosa*	B, ST	Scrophulariaceae	*Polycarena rariflora*	B
Ericaceae	*Erica sphaerocephala*	B	Scrophulariaceae	*Selago albida*	B
Ericaceae	*Erica steinbergiana* var. *steinbergiana*	B	Scrophulariaceae	*Selago corymbosa*	GBIF
Ericaceae	*Erica tegetiformis*	B, GBIF	Scrophulariaceae	*Selago dolosa*	GBIF
Ericaceae	*Erica tenuifolia*	B	Scrophulariaceae	*Selago eckloniana*	B, GBIF
Ericaceae	*Erica tenuis*	B	Scrophulariaceae	*Selago geniculata*	B
Ericaceae	*Erica terniflora*	B	Scrophulariaceae	*Selago gloiodes*	B
Ericaceae	*Erica totta*	B, GBIF	Scrophulariaceae	*Selago glutinosa*	B, GBIF
Ericaceae	*Erica transparens*	B	Scrophulariaceae	*Selago gracilis*	B
Ericaceae	*Erica tumida* var. *minor*	B	Scrophulariaceae	*Selago hispida*	GBIF
Ericaceae	*Erica tumida* var. *tumida*	B	Scrophulariaceae	*Selago triquetra*	B
Ericaceae	*Erica verecunda*	B	Scrophulariaceae	*Sutera foetida*	GBIF
Ericaceae	*Erica vestita*	GBIF	Scrophulariaceae	*Sutera glabrata*	B
Ericaceae	*Erica viscaria*	B	Scrophulariaceae	*Teedia lucida*	B, GBIF
Euphorbiaceae	*Euphorbia clandestina*	GBIF	Scrophulariaceae	*Zaluzianskya capensis*	GBIF
Euphorbiaceae	*Euphorbia eustacei*	B	Scrophulariaceae	*Zaluzianskya ovata*	B
Euphorbiaceae	*Euphorbia genistoides*	B, GBIF	Solanaceae	*Datura stramonium*	GBIF

Family	Species	Source	Family	Species	Source
Euphorbiaceae	*Euphorbia hamata*	B	Solanaceae	*Solanum guineense*	GBIF
Euphorbiaceae	*Euphorbia heptagona*	GBIF	Solanaceae	*Solanum linnaeanum*	GBIF
Euphorbiaceae	*Euphorbia mauritanica*	GBIF	Solanaceae	*Solanum mauritianum*	GBIF
Euphorbiaceae	*Euphorbia nesemannii*	GBIF	Solanaceae	*Solanum nigrum*	GBIF
Euphorbiaceae	*Euphorbia rhombifolia*	GBIF	Solanaceae	*Solanum retroflexum*	GBIF
Euphorbiaceae	*Euphorbia silenifolia*	GBIF	Solanaceae	*Solanum tomentosum*	GBIF
Euphorbiaceae	*Euphorbia stolonifera*	GBIF	Stilbaceae	*Halleria elliptica*	GBIF
Euphorbiaceae	*Euphorbia tenax*	GBIF	Stilbaceae	*Halleria lucida*	GBIF
Euphorbiaceae	*Euphorbia tuberosa*	B, GBIF	Stilbaceae	*Halleria ovata*	B
Euphorbiaceae	*Ricinus communis*	GBIF	Stilbaceae	*Ixianthes retzioides*	B
Fabaceae	*Acacia mearnsii*	GBIF	Targioniaceae	*Targionia hypophylla*	B
Fabaceae	*Acacia saligna*	GBIF	Tecophilaeaceae	*Cyanella hyacinthoides*	GBIF
Fabaceae	*Amphithalea ciliaris*	B	Tecophilaeaceae	*Cyanella lutea*	GBIF
Fabaceae	*Amphithalea dahlgrenii*	ST	Tecophilaeaceae	*Cyanella lutea subsp. lutea*	GBIF
Fabaceae	*Amphithalea muraltioides*	B	Thesiaceae	*Lacomucinaea lineata*	GBIF
Fabaceae	*Amphithalea pageae*	GBIF, ST	Thesiaceae	*Thesium funale*	GBIF
Fabaceae	*Amphithalea spinosa*	B, GBIF, ST	Thesiaceae	*Thesium strictum*	GBIF
Fabaceae	*Amphithalea villosa*	B, GBIF	Thurniaceae	*Prionium serratum*	GBIF
Fabaceae	*Amphithalea violacea*	GBIF	Thymelaeaceae	*Gnidia anomala*	B
Fabaceae	*Argyrolobium argenteum*	GBIF	Thymelaeaceae	*Gnidia clavata*	B

Family	Species	Source	Family	Species	Source
Fabaceae	*Aspalathus acuminata* subsp. *acuminata*	B, GBIF	Thymelaeaceae	*Gnidia geminiflora*	B
Fabaceae	*Aspalathus aemula*	B	Thymelaeaceae	*Gnidia juniperifolia*	GBIF
Fabaceae	*Aspalathus alpestris*	B, GBIF	Thymelaeaceae	*Gnidia laxa*	GBIF
Fabaceae	*Aspalathus angustifolia* subsp. *angustifolia*	B	Thymelaeaceae	*Gnidia nitida*	B
Fabaceae	*Aspalathus angustifolia* subsp. *robusta*	B	Thymelaeaceae	*Gnidia oppositifolia*	B, GBIF
Fabaceae	*Aspalathus arida* subsp. *arida*	B	Thymelaeaceae	*Lachnaea eriocephala*	B
Fabaceae	*Aspalathus bracteata*	B	Thymelaeaceae	*Lachnaea oliverorum*	B, GBIF
Fabaceae	*Aspalathus candicans*	GBIF	Thymelaeaceae	*Passerina comosa*	B
Fabaceae	*Aspalathus cliffortioides*	B	Thymelaeaceae	*Passerina filiformis* subsp. *filiformis*	B
Fabaceae	*Aspalathus corrudifolia*	B	Thymelaeaceae	*Passerina obtusifolia*	GBIF
Fabaceae	*Aspalathus costulata*	B	Thymelaeaceae	*Passerina truncata* subsp. *truncata*	B
Fabaceae	*Aspalathus cymbiformis*	B	Thymelaeaceae	*Struthiola ciliata*	GBIF
Fabaceae	*Aspalathus divaricata* subsp. *divaricata*	B	Thymelaeaceae	*Struthiola eckloniana*	GBIF
Fabaceae	*Aspalathus filicaulis*	B	Thymelaeaceae	*Struthiola leptantha*	B
Fabaceae	*Aspalathus grandiflora*	B	Urticaceae	*Urtica lobulata*	B
Fabaceae	*Aspalathus hirta* subsp. *hirta*	B, GBIF	Viscaceae	*Viscum capense*	GBIF
Fabaceae	*Aspalathus hispida*	GBIF	Viscaceae	*Viscum rotundifolium*	GBIF

Family	Species	Source	Family	Species	Source
Fabaceae	*Aspalathus intricata* subsp. *oxyclada*	ST	Vitaceae	*Cyphostemma sandersonii*	B
Fabaceae	*Aspalathus nigra*	B, GBIF	Withheld	Sensitive Species 1209	ST
Fabaceae	*Aspalathus nudiflora*	B	Withheld	Sensitive Species 142	ST
Fabaceae	*Aspalathus pachyloba* subsp. *pachyloba*	B, GBIF	Withheld	Sensitive Species 207	B, ST
Fabaceae	*Aspalathus pedicellata*	GBIF	Withheld	Sensitive Species 654	ST
Fabaceae	*Aspalathus perfoliata* subsp. *phillipsii*	B	Withheld	Sensitive Species 692	ST
Fabaceae	*Aspalathus perforata*	B, GBIF	Withheld	Sensitive Species 871	B, ST
Fabaceae	*Aspalathus pigmentosa*	B	Withheld	Senstive Species 521	GBIF, ST
Fabaceae	*Aspalathus rigidifolia*	GBIF	Zygophyllaceae	*Roepera flexuosa*	B
Fabaceae	*Aspalathus rostrata*	B, GBIF, ST	Zygophyllaceae	*Roepera foetida*	GBIF
Fabaceae	*Aspalathus rugosa*	B	Zygophyllaceae	*Roepera fulva*	B, GBIF
Fabaceae	*Aspalathus shawii*	B, GBIF	Zygophyllaceae	*Roepera pygmaea*	B
Fabaceae	*Aspalathus shawii subsp. glabripetala*	GBIF	Zygophyllaceae	*Tribulus terrestris*	GBIF
Fabaceae	*Aspalathus shawii* subsp. *longispica*	GBIF, ST			

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