

# Plant Species Compliance Statement

prepared in accordance with the  
*"Protocol for the Specialist Assessment and minimum report content requirements for environmental impacts on Terrestrial Biodiversity"*

Portion 1 of Duinekroon 591, Stilbaai in the Western Cape Province



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# Terrestrial Plant Species Compliance Statement for Portion 1 of Duinekroon 591, Stilbaai in the Western Cape Province

04 August 2022

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# SPECIALIST DETAILS & DECLARATION

This report has been prepared in accordance with the "Protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial biodiversity", as promulgated in terms of Section 24 (5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998), published in GN. No. 320 dated 20 March 2020. It has been prepared independently of influence or prejudice by any parties.

The details of Specialists are as follows –

Table 1: Details of Specialist

Specialist	Qualification and accreditation
Dr David Hoare (Pr.Sci.Nat.)	<ul style="list-style-type: none"><li>• PhD Botany</li><li>• SACNASP Reg. no. 400221/05 (Ecology, Botany)</li></ul>

## Declaration of independence:

David Hoare Consulting (Pty) Ltd in an independent consultant and hereby declare that it does not have any financial or other vested interest in the undertaking of the proposed activity, other than remuneration for the work performed in terms of the National Environmental Management Act, 1998 (Act 107 of 1998). In addition, remuneration for services provided by David Hoare Consulting (Pty) Ltd is not subjected to or based on approval of the proposed project by the relevant authorities responsible for authorising this proposed project.

## Disclosure:

David Hoare Consulting (Pty) Ltd undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) and will provide the competent authority with access to all information at its disposal regarding the application, whether such information is favourable to the applicant or not.

Based on information provided to David Hoare Consulting (Pty) Ltd by the client and in addition to information obtained during the course of this study, David Hoare Consulting (Pty) Ltd present the results and conclusion within the associated document to the best of the author's professional judgement and in accordance with best practise.



Dr David Hoare

04 August 2022  
Date

# TERMS OF REFERENCE

## PROTOCOL FOR THE SPECIALIST ASSESSMENT AND MINIMUM REPORT CONTENT REQUIREMENTS FOR ENVIRONMENTAL IMPACTS ON TERRESTRIAL PLANT SPECIES

This site sensitivity assessment follows the requirements of The Environmental Impact Assessment Regulations, as promulgated in terms of Section 24 (5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998), published in GN. No. 320 dated 20 March 2020.

### General information

1.1 An applicant intending to undertake an activity identified in the scope of this protocol, on a site identified by the screening tool as being of **"very high"** or **"high"** sensitivity for terrestrial plant species, must submit a Terrestrial Plant Species Specialist Assessment Report.

1.2 An applicant intending to undertake an activity identified in the scope of this protocol, on a site identified by the screening tool as being of **"medium"** sensitivity for terrestrial plant species, must submit either a Terrestrial Plant Species Specialist Assessment Report or a Terrestrial Plant Species Compliance Statement, depending on the outcome of a site inspection undertaken in accordance with paragraph 4.

1.3 An applicant intending to undertake an activity identified in the scope of this protocol, on a site identified by the screening tool as being of **"low"** sensitivity for terrestrial plant species, must submit a Terrestrial Plant Species Compliance Statement.

1.4 Where the information gathered from the site sensitivity verification differs from the screening tool designation of "very high" or "high" for terrestrial plant species sensitivity on the screening tool, and it is found to be of a "low" sensitivity, then a Terrestrial Plant Species Compliance Statement must be submitted.

1.5 Where the information gathered from the site sensitivity verification differs from the screening tool designation of "low" terrestrial plant species sensitivity and it is found to be of a "very high" or "high" terrestrial plant species sensitivity, a Terrestrial Plant Species Specialist Assessment must be conducted.

1.6 If any part of the development falls within an area of confirmed "very high" or "high" sensitivity, the assessment and reporting requirements prescribed for the "very high" or "high" sensitivity, apply to the entire development footprint. Development footprint in the context of this protocol, means the area on which the proposed development will take place and includes the area that will be disturbed or impacted.

1.7 The Terrestrial Plant Species Specialist Assessment and the Terrestrial Plant Species Compliance Statement must be undertaken within the study area.

1.8 Where the nature of the activity is not expected to have an impact on species of conservation concern (SCC) beyond the boundary of the preferred site, the study area means the proposed development footprint within the preferred site.

1.9 Where the nature of the activity is expected to have an impact on SCC beyond boundary of the preferred site, the project areas of influence (PAOI) must be determined by the specialist in accordance with Species Environmental Assessment Guideline, and the study area must include the PAOI, as determined.

## **Terrestrial Plant Species Specialist Assessment**

2.1 The assessment must be undertaken by a specialist registered with the South African Council for Natural Scientific Professions (SACNASP), within a field of practice relevant to the taxonomic groups ("taxa") for which the assessment is being undertaken.

2.2 The assessment must be undertaken within the study area.

2.3 The assessment must be undertaken in accordance with the Species Environmental Assessment Guideline and must:

2.3.1 Identify the SCC which were found, observed or are likely to occur within the study area;

2.3.2 provide evidence (photographs) of each SCC found or observed within the study area, which must be disseminated by the specialist to a recognized online database facility immediately after the site inspection has been performed (prior to preparing the report contemplated in paragraph 3);

2.3.3 identify the distribution, location, viability and detailed description of population size of the SCC identified within the study area;

2.3.4 identify the nature and the extent of the potential impact of the proposed development to the population of the SCC located within the study area;

2.3.5 determine the importance of the conservation of the population of the SCC identified within the study area, based on information available in national and international databases including the IUCN Red List of Threatened Species, Red List of South African Plants, and/or other relevant databases;

2.3.6 determine the potential impact of the proposed development on the habitat of the SCC located within the study area;

2.3.7 include a review of relevant literature on the population size of the SCC, the conservation interventions as well as any national or provincial species management plans for the SCC. This review must provide information on the need to conserve the SCC and indicate whether the development is compliant with the applicable species management plans and if not, a motivation for the deviation;

2.3.8 identify any dynamic ecological processes occurring within the broader landscape, that might be disrupted by the development and result in negative impact on the identified SCC, for example, fires in fire-prone systems;

2.3.9 identify any potential impact on ecological connectivity within the broader landscape, and resulting impacts on the identified SCC and its long term viability;

2.3.10 determine buffer distances as per the Species Environmental Assessment Guidelines used for the population of each SCC; and

2.3.11 discuss the presence or likelihood of additional SCC including threatened species not identified by the screening tool, Data Deficient or Near Threatened Species, as well as any undescribed species; and

2.3.12 identify any alternative development footprints within the preferred development site which would be of "low" sensitivity" or "medium" sensitivity as identified by the screening tool and verified through the site sensitivity verification.

2.4 The findings of the assessment must be written up in a Terrestrial Plant Species Specialist Assessment Report.

### **Terrestrial Plant Species Specialist Assessment Report**

3.1 This report must include as a minimum the following information:

3.1.1 contact details and relevant experience as well as the SACNASP registration number of the specialist preparing the assessment including a curriculum vitae;

3.1.2 a signed statement of independence by the specialist;

3.1.3 a statement on the duration, date and season of the site inspection and the relevance of the season to the outcome of the assessment;

3.1.4 a description of the methodology used to undertake the site sensitivity verification and impact assessment and site inspection, including equipment and modelling used where relevant;

3.1.5 a description of the assumptions made and any uncertainties or gaps in knowledge or data;

3.1.6 a description of the mean density of observations/number of samples sites per unit area of site inspection observations;

3.1.7 details of all SCC found or suspected to occur on site, ensuring sensitive species are appropriately reported;

3.1.8 the online database name, hyperlink and record accession numbers for disseminated evidence of SCC found within the study area;

3.1.9 the location of areas not suitable for development and to be avoided during construction where relevant;

3.1.10 a discussion on the cumulative impacts;

3.1.11 impact management actions and impact management outcomes proposed by the specialist for inclusion in the Environmental Management Programme (EMPr);

3.1.12 a reasoned opinion, based on the findings of the specialist assessment, regarding the acceptability or not, of the development related to the specific theme considered, and if the development should receive approval or not, related to the specific theme being considered, and any conditions to which the opinion is subjected if relevant; and

3.1.13 a motivation must be provided if there were any development footprints identified as per paragraph 2.3.12 above that were identified as having "low" or "medium" terrestrial plant species sensitivity and were not considered appropriate.

3.2 A signed copy of the assessment must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.

## Terrestrial plant species compliance statement

Where the sensitivity in the Screening Report from the web-based Online Screening Tool has been confirmed to be LOW, a Plant Species Compliance Statement is required, either (1) for areas where no natural habitat remains, or (2) in natural areas where there is no suspected occurrence of SCC.

The compliance statement must be prepared by a SACNASP registered specialist under one of the two fields of practice (Botanical Science or Ecological Science).

The compliance statement must:

- be applicable within the study area
- confirm that the study area is of "low" sensitivity for terrestrial plant species; and
- indicate whether or not the proposed development will have any impact on SCC.

The compliance statement must contain, as a minimum, the following information:

- contact details of the specialist, their SACNASP registration number, their field of expertise and a curriculum vitae;
- a signed statement of independence by the specialist;
- a statement on the duration, date and season of the site inspection and the relevance of the season to the outcome of the assessment;
- a baseline profile description of biodiversity and ecosystems of the site;
- the methodology used to verify the sensitivities of the terrestrial biodiversity and plant species features on the site including the equipment and modelling used where relevant;
- in the case of a linear activity, confirmation from the terrestrial biodiversity specialist that, in their opinion, based on the mitigation and remedial measures proposed, the land can be returned to the current state within two years of completion of the construction phase;
- where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMP; and
- a description of the assumptions made as well as any uncertainties or gaps in knowledge or data; and
- any conditions to which this statement is subjected.

A signed copy of the compliance statement must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.



# INTRODUCTION

## Site location

The site is Portion 1 of the Farm Duinekroon 591, Stilbaai in the Western Cape Province. It is situated immediately to the west of the existing town. The site is 10.05 hectares in size. Refer to Figure 1 below for the general location.

The site is accessed from Buitekant Street, which runs along the eastern boundary of the site. The other boundaries are cadastral property boundaries.



**Figure 1: Location of the site.**

## Identified Theme Sensitivities

A sensitivity screening report from the DEA Online Screening Tool was requested in the application category: Transformation of land | From agriculture or afforestation. The DEA Screening Tool report for the area, dated 2/12/2021, indicates the following sensitivities:

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Terrestrial Biodiversity Theme			X	

## Plant Species theme

Sensitivity features are indicated as follows:

Sensitivity	Feature(s)
Medium	<i>Lampranthus ceriseus</i>
Medium	<i>Lampranthus fergusoniae</i>
Medium	<i>Lampranthus foliosus</i>
Medium	<i>Lampranthus pauciflorus</i>
Medium	<i>Ruschia leptocalyx</i>
Medium	<i>Argyrolobium harmsianum</i>
Medium	<i>Aspalathus acutiflora</i>
Medium	<i>Aspalathus arenaria</i>
Medium	<i>Aspalathus calcarea</i>
Medium	<i>Aspalathus odontoloba</i>
Medium	<i>Aspalathus prostrata</i>
Medium	<i>Aspalathus sanguinea</i> subsp. <i>foliosa</i>
Medium	<i>Otholobium</i> sp. nov. (Esterhuysen 33240a BOL)
Medium	<i>Lebeckia gracilis</i>
Medium	<i>Leucadendron galpinii</i>
Medium	<i>Leucospermum praecox</i>
Medium	<i>Wahlenbergia polyantha</i>
Medium	<i>Selago diffusa</i>
Medium	<i>Selago glandulosa</i>
Medium	<i>Selago villicaulis</i>
Medium	<i>Pentameris calcicola</i> var. <i>hirsuta</i>
Medium	Sensitive species 340
Medium	<i>Lobelia valida</i>
Medium	<i>Erica baueri</i> subsp. <i>baueri</i>
Medium	<i>Erica viscosissima</i>
Medium	<i>Erica calcicola</i>
Medium	<i>Erica baueri</i> subsp. <i>gouriquae</i>
Medium	<i>Hermannia lavandulifolia</i>
Medium	<i>Thamnochortus muirii</i>
Medium	<i>Thamnochortus pluristachyus</i>
Medium	<i>Duvalia immaculata</i>
Medium	<i>Heliophila linearis</i> var. <i>reticulata</i>
Medium	<i>Metalasia luteola</i>
Medium	Sensitive species 784
Medium	Sensitive species 764
Medium	<i>Felicia ebracteata</i>
Medium	<i>Oedera steyniae</i>
Medium	<i>Athanasia quinquedentata</i> subsp. <i>rigens</i>
Medium	<i>Chrysocoma strigosa</i>
Medium	<i>Stoebe muirii</i>
Medium	<i>Diosma tenella</i>
Medium	<i>Agathosma eriantha</i>
Medium	<i>Agathosma minuta</i>
Medium	<i>Agathosma muirii</i>
Medium	<i>Agathosma riversdalensis</i>
Medium	<i>Agathosma robusta</i>
Medium	<i>Euchaetis albertiniana</i>
Medium	<i>Cliffortia longifolia</i>
Medium	<i>Muraltia barkeriae</i>
Medium	<i>Polygala pubiflora</i>

Medium	Sensitive species 5
Medium	<i>Phylla incurvata</i>
Medium	<i>Drosanthemum lavisii</i>
Medium	<i>Aspalathus tyloides</i>
Medium	Sensitive species 800
Medium	Sensitive species 335
Medium	Sensitive species 500
Medium	Sensitive species 654
Medium	<i>Agathosma microcarpa</i>

# ASSESSMENT METHODOLOGY

The detailed methodology followed as well as the sources of data and information used as part of this assessment is described below.

## Project Area of Influence (PAOI)

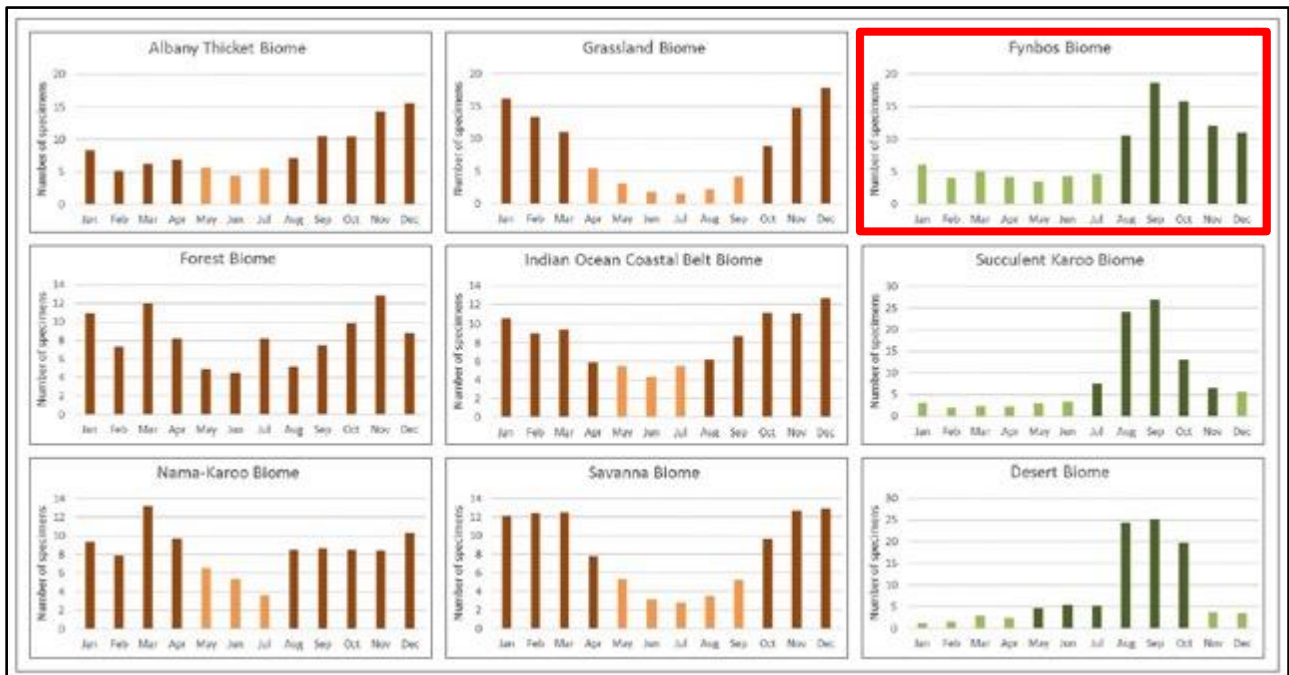
Anticipated impacts will mostly occur during the construction phase. These impacts are not expected to extend beyond the boundaries of the study area. The PAOI is therefore treated here as the development footprint within which direct impacts will occur. An aerial image of the site is shown in Figure 2.



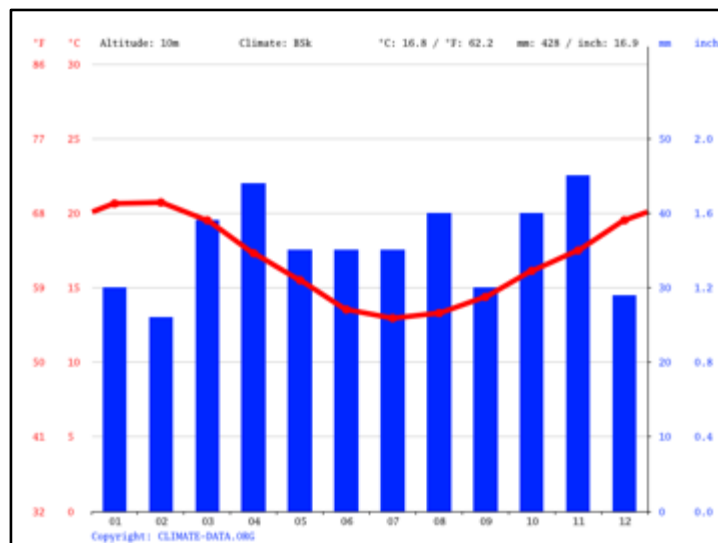
**Figure 2: Aerial image of the site and surrounding areas.**

# Survey timing

The study commenced as a desktop-study followed by site-specific field study on 5 April 2022. The site is within the Fynbos Biome with an all-year rainfall season with a slight dip in early winter (Figure 3). A more accurate indication of rainfall seasonality, which drives most ecological processes, is shown in Figure 4, which shows that Stilbaai has year-round rainfall, with a peak in April and November. The timing of the survey in April is therefore optimal in terms of assessing the terrestrial habitat of the site. The overall condition of the vegetation was able to be assessed with a high degree of confidence.



**Figure 3: Recommended survey periods for different biomes (Species Environmental Assessment Guidelines). The site is within the Fynbos Biome.**



**Figure 4: Climate diagram for Stilbaai.**

## Field survey approach

During the field survey of habitats on site, the entire site was assessed on foot. A meander approach was adopted with no time restrictions - the objective was to comprehensively examine all natural areas. Digital photographs were taken of features and habitats on site, as well as of all plant species that were seen.

Aerial imagery from Google Earth was used to identify and assess habitats on site. This included historical imagery that may show information not visible in any single dated image. Patterns identified from satellite imagery were verified on the ground.

## Sources of information

### **Plant species**

- Broad vegetation types occurring on site were obtained from Mucina and Rutherford (2006), with updates according to the SANBI BGIS website (<http://bgis.sanbi.org>). The description of each vegetation type includes a list of plant species that may be expected to occur within the particular vegetation type.
- Plant species that could potentially occur on in the general area was extracted from the NewPosa database of the South African National biodiversity Institute (SANBI) for the quarter degree grid/s in which the site is located.
- The IUCN Red List Category for plant species, as well as supplementary information on habitats and distribution, was obtained from the SANBI Threatened Species Programme (Red List of South African Plants, <http://redlist.sanbi.org>).
- Lists were compiled specifically for any species at risk of extinction (Red List species) previously recorded in the area. Historical occurrences of threatened plant species were obtained from the South African National Biodiversity Institute (<http://posa.sanbi.org>) for the quarter degree square/s within which the study area is situated. Habitat information for each species was obtained from various published sources. The probability of finding any of these species was then assessed by comparing the habitat requirements with those habitats that were found, during the field survey of the site, to occur there.
- Regulations published for the National Forests Act (Act 84 of 1998) (NFA) as amended, provide a list of protected tree species for South Africa. The species on this list were assessed in order to determine which protected tree species have a geographical distribution that coincides with the study area and habitat requirements that may be met by available habitat in the study area. The distribution of species on this list were obtained from published sources (e.g. van Wyk & van Wyk 1997) and from the SANBI Biodiversity Information System website (<http://sibis.sanbi.org/>) for quarter degree grids in which species have been previously recorded. Species that have been recorded anywhere in proximity to the site (within 100 km), or where it is considered possible that they could occur there, were listed and were considered as being at risk of occurring there.

# OUTCOME OF THE ASSESSMENT

## Historical disturbance on site

Historical aerial photographs from 1954, 1964 and 1967 show that the site was cultivated at that time. It is therefore certain that the original vegetation that occurred naturally in this area was removed by cultivation. Any vegetation on site is therefore definitely secondary.

## Assessment of habitat suitability on site

Based on a detailed field survey to verify conditions on site, it was determined that no natural habitat remains on site. The entire site consists of secondary grassland in previously cultivated areas. A series of photographs are provided below that give various views on site (Figures 5 - 8). Note that the expected natural habitat for this site is Hartenbos Dune Thicket. Examples of the vegetation that would be expected to be found on site may be seen approximately 300 m south of the site.

A list of plant species was compiled for the site (see Appendix 1). A total of only 16 plant species were recorded on site, of which four are naturalized exotics. The dominant species are the grasses, *Cenchrus clandestinus*\* (kikuya) and *Cynodon dactylon* (kweek). No sensitive or threatened plant species were found on site. None of the plant species flagged in the Online Screening Tool report were found on site. Habitat on site is not considered to be important for any of these plant species, all of which occur in natural habitat, or in well-established vegetation, not in secondary grassland of old lands.

## Protected tree on site

One species of protected tree was found on site, a single individual of white milkwood (Figure 9). If this individual is to be damaged by the proposed development, then a permit is required.

### ***Sideroxylon inerme* (White milkwood)**

A single individual of white milkwood (*Sideroxylon inerme*) was found on site, near the edge of the property (Figure 9). This is a medium-sized tree that was probably retained when the site was ploughed. It has survived since then, but is stunted and partially deformed. This species is protected under the National Forests Act of 1998.





**Figure 6: Typical view of the site.**



**Figure 5: Fenceline along Reservoir Road side of site.**





**Figure 8: Secondary thicket along boundary fence.**



**Figure 7: Typical ground-cover on site.**



**Figure 9: Single individual of protected tree found on site.**

# CONCLUSION

Desktop information, field data collection and mapping from aerial imagery provides the following verifications of patterns for various themes:

1. The entire site consists of secondary grassland, consisting primarily of weedy species. It is not suitable habitat for any of the plant species flagged for the site in the Online Screening Tool report.
2. The site is therefore confirmed to have LOW sensitivity with respect to the Plant Species Theme.
3. A single individual of protected tree (milkwood) was found on site. A permit will be required if this is affected by the proposed development.
4. The proposed development is entirely within areas mapped as secondary grassland that has low sensitivity. It will have no impact on listed plant species of concern. The development is therefore supported.

# REFERENCES

- Germishuizen, G., Meyer, N.L., Steenkamp, Y And Keith, M. (eds.) (2006). A checklist of South African plants. Southern African Botanical Diversity Network Report No. 41, SABONET, Pretoria.
- IUCN (2001). *IUCN Red Data List categories and criteria: Version 3.1*. IUCN Species Survival Commission: Gland, Switzerland.

# APPENDICES:

## Appendix 1: Plant species recorded on site.

Asparagus suaveolens  
Azima tetraantha  
Cenchrus clandestinus\*  
Cynanchum viminalis  
Cynodon dactylon  
Empodium plicatum  
Lepidium bonariense\*  
Mesembryanthemum aitonis  
Osteospermum moniliferum  
Pseudodictamnus africanus  
Rumex spinosus\*  
Searsia pterota  
Senecio inaequidens  
Sideroxylon inerme (PROTECTED)  
Solanum linnaeanum\*