

NOBELSFONTEIN WIND ENERGY FACILITY

PLANT RESCUE AND PROTECTION PLAN



OCTOBER 2012

PURPOSE

The purpose of the plant rescue and protection plan is to implement avoidance and mitigation measures to reduce the impact of the development of the Noblesfontein Wind Energy Facility on listed and protected plant species and their habitats.

BACKGROUND & IDENTIFICATION OF SPECIES OF CONSERVATION CONCERN

The recently promulgated ToPS (Threatened and Protected Species) regulations provide for the regulation of activities which may directly or indirectly impact threatened and protected species. Such species are identified under NEMBA as well as by the National Red Data List of Plants. At a provincial level, the Northern Cape Nature Conservation Act (2009) also provides lists of species which are protected within the province. Species listed under the National Red Data List of Plants as well as those protected under the provincial legislation must be specified on permit applications required for site clearing.

MITIGATION & AVOIDANCE OPTIONS

Where listed plant species fall within the development footprint and avoidance is not possible, then it may be possible to translocate the affected individuals outside of the development footprint. However, not all species are suitable for translocation as only certain types of plants are able to survive the disturbance. Suitable candidates for translocation include most geophytes and succulents. Although there are exceptions, the majority of woody species do not survive translocation well.

RESCUE AND PROTECTION PLAN

Preconstruction

- Identification of all listed species which may occur within the site.

A walk-through survey to locate and identify all listed and protected species which fall within the development footprint has already been conducted and contains a full list of localities where listed species occur and the number of affected individuals in each instance. These results should be used to inform any final minor adjustments to the layout, as well as direct preconstruction search and rescue at the site. However, before construction commences at the site, the following actions should be taken:

- Search and rescue operation of all listed species within the development footprint that cannot be avoided. Affected individuals should be translocated to a similar habitat outside of the development footprint and marked for monitoring purposes.

Construction

- ECO to monitor vegetation clearing at the site. Any deviations from the plans that may be required should first be checked for listed species by the ECO and any listed species present which are able to survive translocation should be translocated to a safe site.
- Any listed species observed within the development footprint that were missed during the preconstruction plant sweeps should be translocated to a safe site.
- Many listed species are also sought after for traditional medicine or by collectors and so the ECO should ensure that all staff attend environmental induction training in which the legal and conservation aspects of harvesting plants from the wild are discussed.
- The ECO should monitor construction activities in sensitive habitats such as near rivers and wetlands carefully to ensure that impacts to these areas are minimized.

Operation

- Access to the site should be strictly controlled and all personnel entering or leaving the site should be required to sign in and out with the security officers.
- The collecting of plants or their parts should be strictly forbidden and signs stating so should be placed at the entrance gates to the site.

IDENTIFICATION OF LISTED SPECIES

In this section, the listed species known to occur in the area based on the site visit and previous studies according to the SANBI SIBIS database.

According to the SIBIS database 330 species are known from the quarter degree squares 3123CA, CB, CC and CD. Only four species are not listed as Least Concern, which are provided below in Table 1.

Table 1. Listed species known from the vicinity of the Noblesfontein Wind Energy facility.

Family	Species	Status
AMARYLLIDACEAE	<i>Boophone disticha</i>	Declining
ASPHODELACEAE	<i>Aloe broomii</i> var. <i>tarkaensis</i>	Rare
OXALIDACEAE	<i>Oxalis crispula</i>	DDD
MESEMBRYANTHEMACEAE	<i>Delosperma neethlingiae</i>	DDT

PROVINCIALY PROTECTED SPECIES

Apart from the species listed under the South African Red Data list of Plants, a number of genera are listed in their entirety as protected by the Northern Cape Nature Conservation Act of 2009. Of particular relevance to the current site, are the species within the following families and genera:

Schedule 1: Specially Protected Flora

- Family GERANIACEAE - Pelargonium spp. all species

Schedule 2 Protected Flora

- *Amaryllidaceae* – All species
- *Apiaceae* – All Species
- *Apocynaceae* – All Species
- *Asphodelaceae* – All species except *Aloe ferox*
- *Iridaceae* – All species
- *Mesembryanthemaceae* – All species
- *Capparaceae* - *Boscia* spp. Sheperd’s trees, all species
- *Androcymbium* spp. - All species
- *Crassulaceae* - All species except those listed in Schedule 1
- *Euphorbiaceae* - *Euphorbia* spp. All species
- *Oxalidaceae* - *Oxalis* spp All species
- *Portulacaceae* - *Anacampseros* spp. All species

Species observed at the site include *Boophone disticha* and *Aloe broomii* which were common as well as other species such as *Stomatium peersii* and *Haworthia arachnoidea* which were occasional. A full list of protected species encountered during a preconstruction survey of the site is provided below. Not all species are active throughout the year and the extensive nature of the site means that not all protected species present may have been observed during the preconstruction survey. Therefore, the ECO on duty during the construction phase of the development should ensure that no other protected species are within the development footprint.

Table 1. List of protected species observed during a preconstruction survey of the development footprint of the Noblesfontein Wind Energy Facility.

Family	Species
<i>Amaryllidaceae</i>	<i>Boophone disticha</i>
<i>Asphodelaceae</i>	<i>Aloe broomii</i>
<i>Mesembryanthemaceae</i>	<i>Stomatium peersii</i>
<i>Asphodelaceae</i>	<i>Haworthia arachnoidea</i>
<i>Apocynaceae</i>	<i>Pachypodium succulentum</i>
<i>Iridaceae</i>	<i>Babiana sp. cf hypogea</i>
<i>Crassulaceae</i>	<i>Adromischus maculatus</i>
<i>Geraniaceae</i>	<i>Pelargonium abrotanifolium</i>
<i>Geraniaceae</i>	<i>Pelargonium ramosissimum</i>
<i>Asphodelaceae</i>	<i>Trachyandra acocksii</i>
<i>Portulacaceae</i>	<i>Anacampseros filamentosa</i>

MONITORING & REPORTING REQUIREMENTS

The following reporting and monitoring requirements are recommended as part of the plant rescue and protection plan:

- Monitoring during construction by the ECO to ensure that listed species and sensitive habitats are avoided. All incidents should be recorded along with the remedial measures implemented.
- Post construction monitoring of plants translocated during search and rescue should be done to evaluate the success of the intervention. Monitoring for a year post-transplant should be sufficient to gauge success.
- Operational phase compliance monitoring of any incidents and transgressions.