

PLANT RESCUE AND PROTECTION PLAN

1. PURPOSE

The purpose of the plant rescue and protection plan is to implement avoidance and mitigation measures, in addition to the mitigations included in the Environmental Management Programme (EMPr) to reduce the impact of the development of the Hopefield Small Wind Farm on listed and protected plant species and their habitats and to provide guidance on search and rescue of species of conservation concern.

2. RELEVANT ASPECTS OF THE SITE

The site is considered to be part of the Southwest Fynbos bioregion and forms part of the Fynbos biome, located within what is now known as the Core Region of the Greater Cape Floristic Region (GCFR; Manning & Goldblatt 2012). The GCFR is one of only six Floristic Regions in the world, and is the only one largely confined to a single country (the Succulent Karoo component extends into southern Namibia). It is also by far the smallest floristic region, occupying only 0.2% of the world's land surface, and supporting about 11500 plant species, over half of all the plant species in South Africa (on 12% of the land area). At least 70% of all the species in the Cape region do not occur elsewhere, and many have very small home ranges (these are known as narrow endemics). Many of the lowland habitats are under pressure from agriculture, urbanisation and alien plants, and thus many of the range restricted species are also under severe threat of extinction, as habitat is reduced to extremely small fragments.

The study area lies right at the eastern edge of what is generally known as the Sandveld, on the western edge of the Swartland. The Sandveld and the adjacent parts of the Cederberg were identified by Raimondo *et al* (2009) and the C.A.P.E. (Cape Action for People and the Environment) project as an area under heavy transformation pressure, primarily from agriculture, and the latter consequently initiated (via CapeNature) a Fine Scale Vegetation Mapping and Conservation Planning project (FSP) in order to identify key conservation priorities in the region. The vegetation mapping component of this project was completed in 2007 (Helme 2007), and the conservation planning component in 2008 (Pence 2008). The FSP has identified key conservation areas that are needed to meet species, habitat connectivity and process targets in the Sandveld – these are known as Critical Biodiversity Areas (CBAs). However, the Saldanha Municipality Critical Biodiversity Area (CBA) map actually ends literally hundreds of metres west of the study area, and is thus not relevant to the current study.

The SA vegetation map (Mucina & Rutherford 2006) shows that Hopefield Sand Fynbos and Swartland Silcrete Renosterveld would originally have been present in

the study area. The Saldanha Fine Scale Vegetation Map (Helme & Koopman 2007) shows a similar pattern, although with the addition of Swartland Shale Renosterveld and a further Sand Fynbos type (Bergrivier Sand Fynbos). There is however no evidence of Renosterveld anywhere in the study area, all Renosterveld having been ploughed up for cereal cultivation. Thus all remaining natural vegetation in the study area may be considered to be Hopefield Sand Fynbos.

Several protected plant species have been identified along the access road and power line route. These plant species found are protected by the provincial legislation (Western Cape Nature Conservation Laws Amendment Act of 2000).

The following protected plant species have been identified along the access road route; *Echiostachys spicatus*, *Moraea fugax*, *Gladiolus carinatus*, *G. caryophyllaceus*, *Hymenogyne glabra*, *Agathosma capensis*, *Diascia* sp., and *Lachenalia* sp. All of these species have been identified within the high sensitivity area.

The powerline route crosses about 1100m of Medium - High sensitivity Hopefield Sand Fynbos, with the remainder being of Low sensitivity (no natural vegetation). The section north of the R45 is mostly of High sensitivity, whilst the section south of the R45 is mostly of Medium sensitivity.

The High sensitivity area supports the following protected plant species: *Echiostachys spicatus*, *Moraea fugax*, *Gladiolus carinatus*, *Hymenogyne glabra*, *Lampranthus explanatus*, *Serruria fucifolia*, *Agathosma capensis*, *Macrostylis crassifolia*, *Leucospermum rodolentum*, *Leucospermum tomentosum*, *Diascia* sp., and *Lachenalia* sp.

The Medium sensitivity area south of the R45 supports the following protected plant species: *Moraea fugax*, *Gladiolus carinatus*, *Hymenogyne glabra*, *Lampranthus explanatus*, *Leucospermum rodolentum* and *Leucospermum tomentosum*.

All protected plants that occur on routes and sites will be affected by the development and permits from the relevant authority (Western Cape Department of Environmental Affairs and Development Planning) should be obtained for these species prior to any form of disturbance. The powerline construction should not have a significant impact on the underlying natural vegetation, and it is unlikely that loss of all the protected plant species noted for this section will in fact take place. In any event, even a 4m wide disturbance corridor will contain relatively few specimens of each species, constituting an insignificant percentage of the

local populations of these species. Nevertheless, the requisite permits should be obtained from CapeNature, for all species noted. The applicants should ensure that they get the relevant permits from CapeNature for the removal or loss of the small site populations of the 8 Protected Species identified along the access road route.

Search and Rescue of the relevant species is not recommended as not only is the timing (seasonality) of this sort of operation critical, but not all the protected species are in fact threatened species (as per Raimondo et al 2009), only about half the species are likely to survive translocation, and finding suitable receiving sites is always a problem, as they need to be planted in similar habitat, but without causing even further disturbance.

3. PRINCIPLES FOR SEARCH AND RESCUE

Successful plant rescue can only be achieved if:

- » Species can be removed from their original habitat with minimal damage to the plant, especially the roots.
- » All plants removed are safely stored and treated according to their specific requirements prior to being transplanted again.
- » They are relocated into a suitable habitat and protected from further damage and all disturbances to aid their re-establishment.
- » Timing of planting activities is planned with the onset of the growing season.
- » Steps are taken where necessary to aid the initial establishment of vegetation, including occasional watering.

The following principles apply in terms of plant rescue and protection:

- » A permit is required from the CapeNature to translocate or destroy any listed and protected species identified by the ecological walkthrough survey undertaken for the optimised final Hopefield Small Wind Farm layout, even if they do not leave the property. This permit should be obtained prior to any search and rescue operations being undertaken.
- » Where suitable species are identified, a search and rescue operation of these species should be undertaken within the development footprint, where these species would be affected, and prior to the commencement of construction.
- » As far as possible, timing of search and rescue activities should be planned with the onset of the growing season.
- » Affected individuals should be translocated to a similar habitat outside of the development footprint and marked and recorded for monitoring purposes. For each individual plant that is rescued, the plant must be photographed before removal, tagged with a unique number or code and a latitude longitude position recorded using a hand-held GPS device.

- » The rescued plants must be planted into a container to be housed within a temporary nursery on site or immediately planted into the target habitat.
- » Rescued plants, if re-planted back in the wild, should be placed as close as possible to where they were originally removed. Re-planting into the wild must cause as little disturbance as possible to existing natural ecosystems. The position of the rescued individual/s must be recorded to aid in future monitoring of that plant as noted earlier.
- » During construction, the Environmental Control Officer (ECO)/ Contractor's Environmental Officer (EO)/ Environmental Representative must monitor vegetation clearing at the site. Any deviations from the plans that may be required should first be checked for listed species by the Environmental Control Officer (ECO)/ Contractor's Environmental Officer (EO/ Environmental Representative or Environmental Officer and any listed species present which are able to survive translocation should be translocated to a safe site.
- » Any listed species suitable for translocation observed within the development footprint, and that would be affected, that were not previously observed be translocated to a safe site.
- » The collecting of plants or their parts should be strictly forbidden (as per the mitigations included in the EMPr). Staff should be informed of the legal and conservation aspects of harvesting plants from the wild as part of the environmental induction training as per the mitigations including the EMPr).
- » Sensitive habitats and area outside project development should be clearly demarcated as no go areas during the construction and operational phase to avoid accidental impacts.