

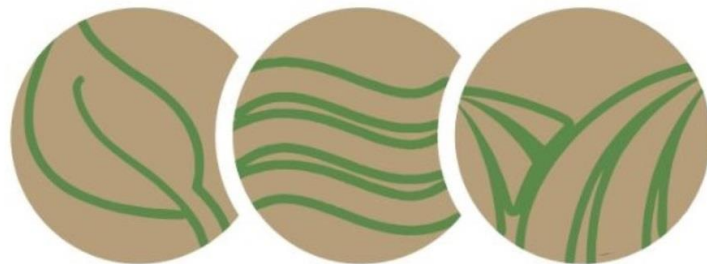
Terrestrial Ecological Assessment

for

KUBA BOELA GAE (PTY) LTD

Prepared by:

Bucandi Environmental Solutions



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*Environmental concerns? Consider it solved!*

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November 2020

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## **1. INTRODUCTION AND BACKGROUND**

A specialist terrestrial flora and fauna survey was conducted by Bucandi Environmental Solutions for the proposed construction of a holiday resort near Boons in the Northwest Province (Figure 1 and Figure 2). This document reports on the findings of a field and desktop survey that were conducted during November 2020.

The proposed development area is located on the Remaining Extent of Portion 1, Portion 4 and Portion 5 of the Elandsfontein 21 IQ and is approximately 20 ha in extent.

## **2. TERMS OF REFERENCE**

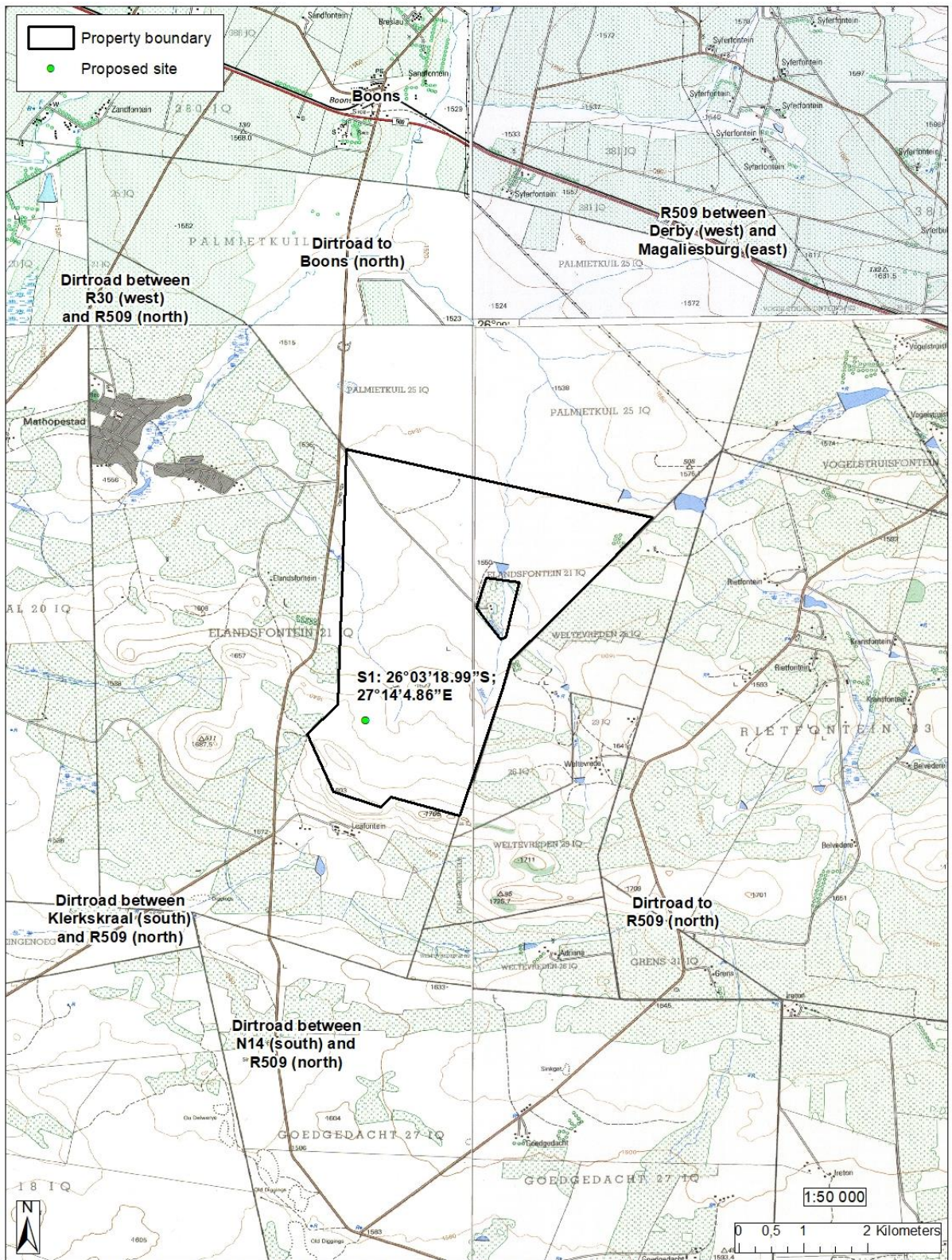
The objective of the study was to conduct a baseline field survey of plant species and animal species on the proposed development area (referred to as the "study area"), focussing primarily on taxa that are of conservation significance.

The vegetation study was to include the following:

- Determination of vegetation types based on Mucina & Rutherford (2006).
- Indication of the proximity to any Formal or Informal Protected Areas.
- Indication of the proximity to any areas identified in the National Protected Areas Expansion Act.
- Description of broad-scale habitat units (vegetation associations) in terms of the floristic structure, dominant species, cover abundance and overall species composition.
- Mapping of broad-scale vegetation units according to structurally discrete vegetation associations as well as transformed areas.
- Description of the broad-scale vegetation units in terms of sensitivity, biodiversity value and conservation importance.
- Recommendations on aspects such as management of plant species of conservation concern and sensitive habitat types, and eradication / control of alien invasive species.

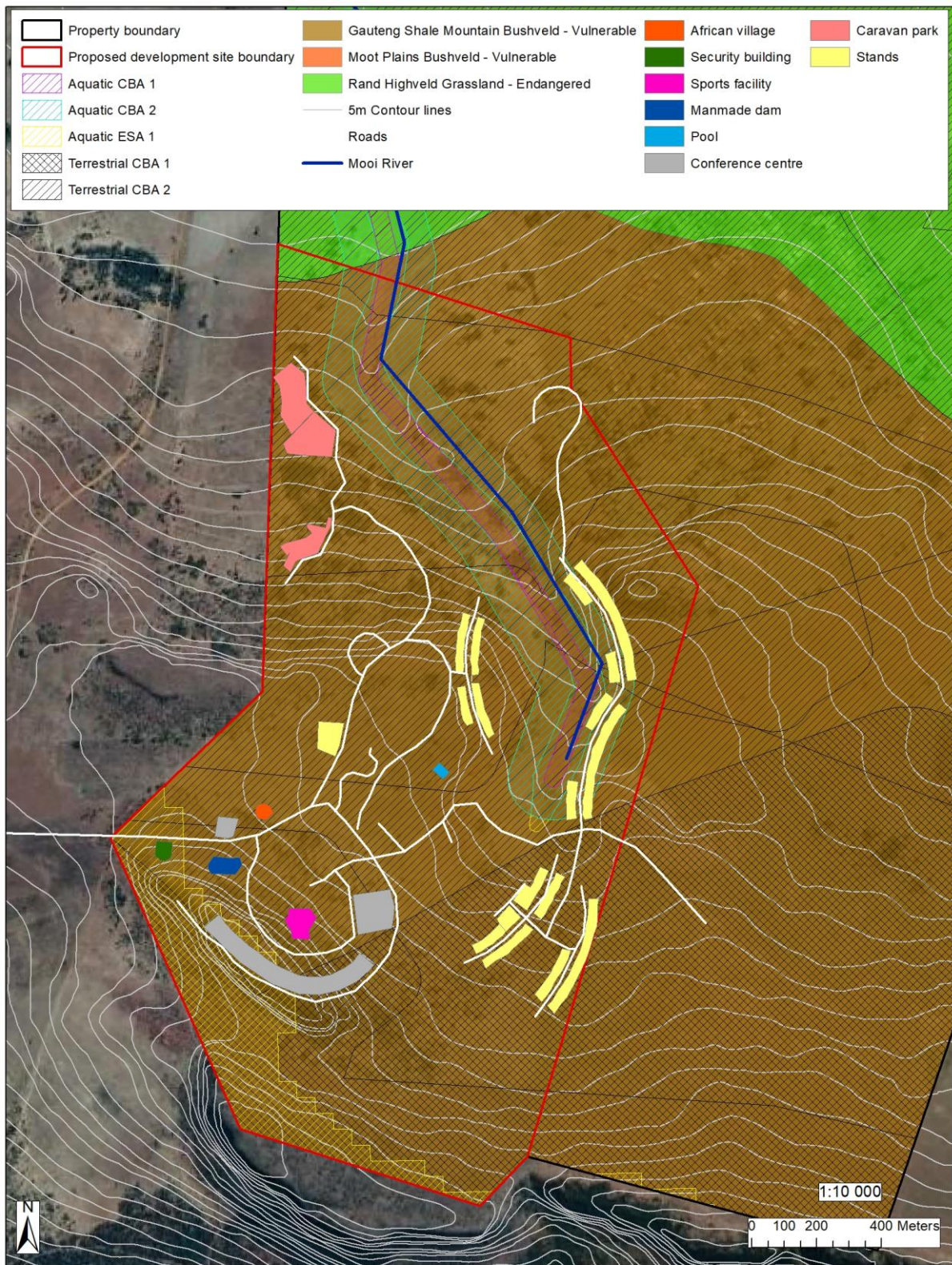
The faunal study was to include the following:

- Desktop review of potentially occurring conservation-important animal taxa.
- Recommendations on aspects such as management of threatened and near threatened animal species, and the eradication / control of alien invasive species.



Locality map for the proposed resort development on the Remaining Extent of Portion 1, Portion 4 and Portion 5 of the farm Elandsfontein 21 IQ  
 (1:50 000 Topographical map 2627AA Mathopestad; 1:50 000 Topographical map 2627AB Syferbult)  
 (1:50 000 Topographical map 2527CC Derby; 1:50 000 Topographical map 2527CD Maanhaarrand)

**Figure 1: Locality map**



Layout plan for the proposed resort development on the Remaining Extent of Portion 1, Portion 4 and Portion 5 of the farm Elandsfontein 21 IQ

**Figure 2:** Layout plan for the proposed development.

### **3. METHODOLOGY**

The site was classified into areas of High sensitivity, Medium sensitivity and Low vegetation based on the conservation status of the natural vegetation, the level of overgrazing and subsequent transformation and the terrestrial and aquatic biodiversity classification.

### **4. RESULTS AND DISCUSSION**

#### **4.1 Proximity to Protected areas**

##### 4.1.1 Formally Protected Areas

The proposed development area is located 22km south of the Magaliesberg Protected Natural Environment, 37km west of the Cradle of Humankind World Heritage Site, 45km west of the Krugersdorp Municipal Nature Reserve, 25km north of Abe Bailey Provincial Nature Reserve and 50km northeast of Schoonspruit Nature Reserve.

##### 4.1.2 Informally Protected Areas

The proposed development area is located 30km southwest of Mountain Sanctuary Park.

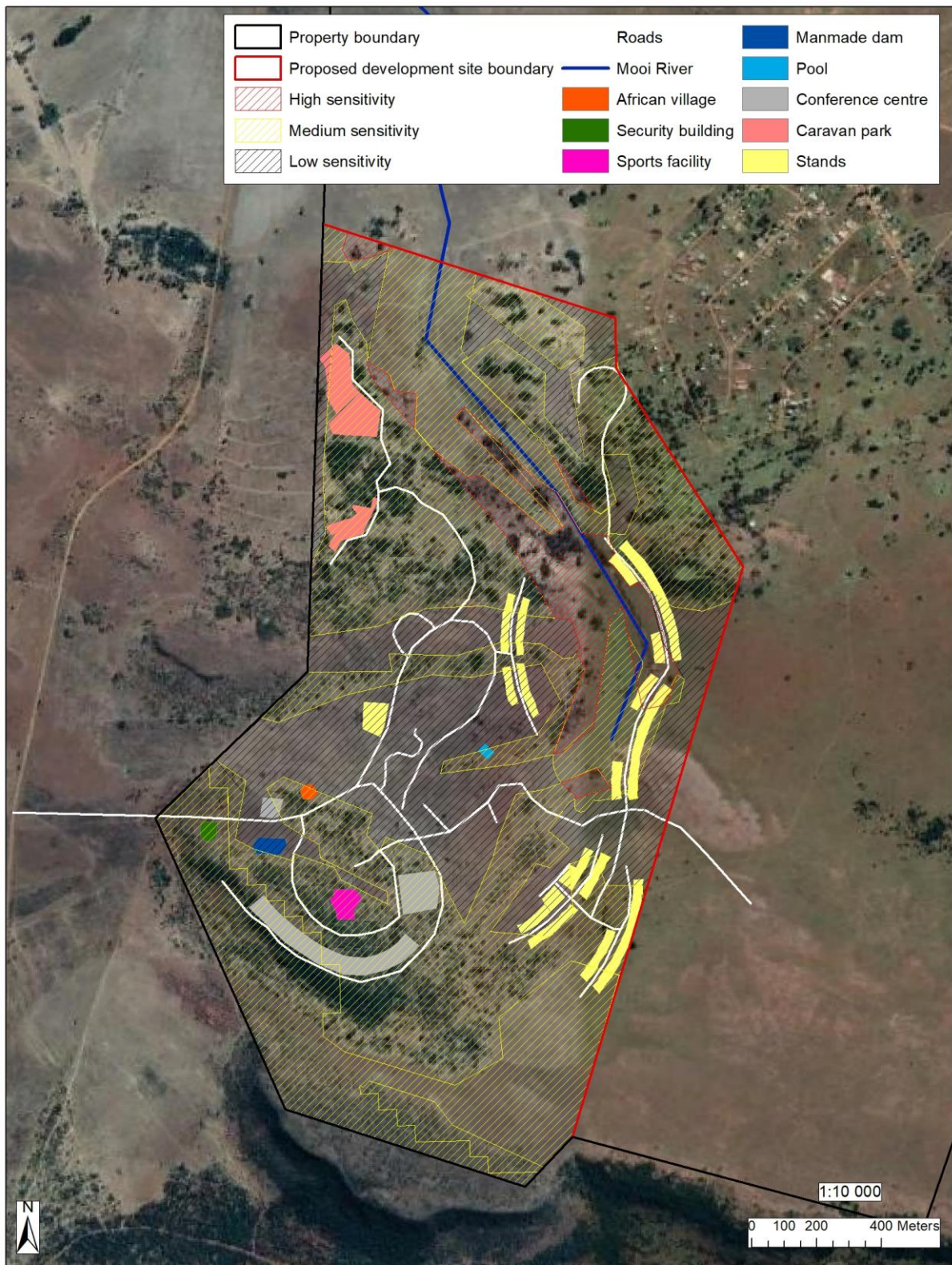
##### 4.1.3 NPAES Focus Areas

The proposed development area is located 9km south of a Focus Area identified as NW/Gauteng Bushveld and 25km north of a Focus Area identified as Vaal Grasslands.

##### 4.1.4 Site sensitivity

The proposed development is located on Gauteng Shale Mountain Bushveld, a vegetation type ranked as Vulnerable. The footprint occurs on areas noted as Critical Biodiversity Areas and Ecological Support Areas. However, the habitats on site have been partially transformed by heavy grazing and uncontrolled burning practices. The study area was ranked according to high, medium and low sensitivity based on combining the historical vegetation type, biodiversity classification and the impact of overgrazing and regular burning.

The development footprint consists of 485m of roads and 0.72ha of other infrastructure located in the high sensitivity zone, 6 141m of roads and 13.2ha of other infrastructure located in the medium sensitivity zone and 4 601m of roads and 4.44ha of other infrastructure located in the low sensitivity zone. The majority of the impact will take place in the medium sensitivity zone and it is crucial that the recommended mitigation and management measures are strictly adhered to.



Sensitivity map for the proposed resort development on the Remaining Extent of Portion 1, Portion 4 and Portion 5 of the farm Elandsfontein 21 IQ

July 2020  
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**Figure 3:** The impact of the proposed development footprint on the sensitivity zones.

## 5. CONCLUSION

The study site coincides with three sensitivity zones that range from high to low sensitivity. It contains untransformed and transformed grassland, including semi-transformed bush clump habitat. From an ecological perspective, the impact of the proposed development/activity will not have any significant effect on a threatened vegetation type or species. Likewise, the potential occurrence of threatened or near threatened plant and fauna species on any of the identified habitat units on the study site is low, and given the fragmented nature of the untransformed grassland areas, it is unlikely that the proposed development/activity will have a detrimental effect on the local ecological integrity of prevalent ecological processes, especially when considering the portion of the study site that has been historically transformed by overgrazing, localized agriculture and regular burning.

The dominant fauna composition consists mainly of generalist species with widespread distribution ranges, while the untransformed grassland unit appears to have limited ecological connectivity to the west and south. For this reason, the long-term conservation value of the untransformed grassland unit on the study site is questionable based on its limited ecological connectedness.

In order to avoid or minimize the impacts of the proposed development the following mitigation and management measures are recommended:

- In the event of any protected or Declining species being recorded within the approved development site, permission for the removal of such species should be obtained from the Permitting Office of DEDECT, and the appropriate in situ and / or ex situ conservation measures should be developed and implemented with the approval of the DEDECT conservation authorities. Where feasible, protected or Declining species can be translocated to degraded or untransformed parts of the study area which provide potentially suitable habitat, but such translocations will have to be carried out in a way that ensures no ecological degradation of the host habitat occurs, and will have to be evaluated by an ecologist for each species and each potential translocation area. Alternatively, protected or Declining species can be rescued and donated to appropriate conservation and research institutions such as the Walter Sisulu National Botanical Garden (Roodepoort) or the Pretoria National Botanical Garden of SANBI
- Where possible, development should avoid habitat identified with high ecological sensitivity.
- According to the AIS regulations all declared alien weeds must be effectively controlled or eradicated.