

REVEGETATION AND HABITAT REHABILITATION PLAN

1. PURPOSE

The purpose of the Revegetation and Habitat Rehabilitation Plan is to ensure that areas cleared or impacted during construction and operational activities within the development footprint of the Richards Bay Gas Power 2 (Pty) Ltd 400MW gas to power plant, and that are not required for operation, are rehabilitated to their original state, and that the risk of erosion from these areas is reduced. The purpose of the Revegetation and Habitat Rehabilitation Plan for the site can thus be summarised as follows:

- » Achieve long-term stabilisation of all disturbed areas.
- » Re-vegetate all disturbed areas not required for the facility with suitable local plant species.
- » Minimise visual impact of disturbed areas.
- » Ensure that disturbed areas are rehabilitated to a condition similar to that found prior to disturbance.

This Revegetation and Habitat Rehabilitation Plan should be read in conjunction with other site-specific plans, including the Erosion Management Plan, Alien Invasive Management Plan and Plant Rescue and Protection Plan. Prior to the commencement of construction, a detailed Revegetation and Rehabilitation Method Statement for the site must be compiled with the aid of a suitably qualified, professionally registered specialist (with a botanical or equivalent qualification).

2. RELEVANT ASPECTS OF THE BROADER STUDY AREA AND DEVELOPMENT AREA

The site is located within a fragmented and previously transformed Maputaland Wooded Grassland community (Endangered threat status, moderately protected in KZN) which was found to be dominated by two indigenous plant communities, namely (i) *Aristida junciformis* subsp. *junciformis* – *Helichrysum kraussii* wooded grassland and (ii) *Themeda triandra* - *Parinari capensis* subsp. *incohata* wooded grassland. Most species of plants identified (including grasses/graminoids, small herbs and woody shrubs/small trees) were identified as locally common species of Least Concern (SANBI) with two plant species of conservation significance recorded: *Crinum delagoense* ('Declining' threat status, specially protected in KZN) and *Ledebouria ovatifolia* (SA Endemic species, specially protected in KZN). These plants species were observed in patches within the broader grassland community. Evidence of one red listed 'Declining' *Crinum* cf. *delagoense* and nine *Ledebouria* cf. *ovatifolia* were observed during the ecological walk-through conducted on the 24th of June 2020.

Signs of past disturbance at the site were evident, with remnant stumps of *Eucalyptus* sp. trees scattered throughout the vegetation unit assessed, evidence of the past use of the site for commercial forestry plantation. Tarmac, old dilapidated brick buildings and fences within the eastern sections of the site are evidence of the small model airfield that once operated at the site. Other onsite disturbances include numerous vehicle, human and animal tracks and fill material deposited on the site as well as the maintained (mowed) firebreaks around the Tata steel factory perimeter to the south of the site. As a result of the disturbance created by forestry and other human activities a number of Invasive Alien Plants (IAPs) and exotic weeds characterise the site, with the most abundant woody alien plant being *Psidium guajava* (Guava). Livestock (cattle) grazing was evident throughout the vegetation community assessed, with cattle tracks/paths and heavily grazed grass tussocks identified.

The modified/secondary wooded grassland vegetation community sampled at the site was determined to be fairly similar to the benchmark vegetation unit, Maputaland Wooded Grassland when comparing the species composition with the benchmark/reference type. The plant communities defined for the site and study area were assessed qualitatively in terms of their ecological condition (based on a combination of species composition; structural intactness and existing levels of anthropogenic disturbance) and conservation importance in order to estimate relative floristic sensitivity. Whilst composition has been modified in comparison to the reference grassland type, with an increase in pioneer and alien/weedy/undesirable species and structure appeared patchy with greatly reduced basal cover in places, sections of the grassland appeared more intact and harboured protected plant species. Ecological sensitivity arranged from very low/low within the more degraded areas associated with the old airfield and forestry activities to moderate, with patches containing high densities of protected plants considered moderately high in terms of ecological sensitivity.

It is important to note that the EA issued for the project (DEA Ref: 4/12/16/3/3/2/867) was based on the development requiring the clearance of the entire development footprint (i.e. an area of 7.3ha). As such, very little disturbed habitat, if any, will be rehabilitated following construction, with all other areas being occupied by project infrastructure or landscaping. **This plan is thus applicable only to the areas that are disturbed and which will not ultimately be utilised by the power plant or associated infrastructure.**

3. REHABILITATION METHODS AND PRACTISES

The following general management practices should be encouraged or strived for:

- » Clearing of invaded areas should be conducted as per the Alien Management Plan included in the EMPr.
- » Soil loss is related to the length of time that soils are exposed prior to rehabilitation or stabilisation. Therefore, the timeframe between construction activities and rehabilitation should be minimised. Phased construction and progressive rehabilitation, where practically possible, are therefore important elements of the erosion control and rehabilitation strategy.
- » No harvesting or clearing of vegetation may be undertaken outside the area to be disturbed by construction activities.
- » Indigenous plant material must be kept separate from alien material, which must be disposed of off-site in an appropriate manner in accordance with the relevant regulations.
- » Topsoil removed during construction should be preserved wherever possible on site, to be utilised during rehabilitation.
- » Water used for the irrigation of re-vegetated areas should be free of chlorine and other pollutants that might have a detrimental effect on the plants.
- » All seeded, planted or sodded grass areas and all shrubs or trees planted are to be irrigated at regular intervals.
- » Any areas where revegetation is required should be reseeded using locally occurring species.
- » No alien plant species should be used for landscaping within the power station area.
- » The final rehabilitated area should resemble the current composition and structure of the soil as far as practicably possible.
- » Progressive rehabilitation is an important element of the rehabilitation strategy and should be implemented where feasible.
- » No construction equipment, vehicles or unauthorised personnel should be allowed onto areas that are to be rehabilitated.

- » Any runnels, erosion channels or wash-aways developing after revegetation should be backfilled and consolidated and the areas restored to a proper stable condition.
- » Where herbicides are used to clear vegetation, species-specific chemicals should be applied to individual plants only. General spraying should be strictly prohibited, and only the correct herbicide type should be applied.
- » Once rehabilitated, areas should be protected to prevent trampling and erosion.
- » Fencing should be removed once a sound vegetative cover has been achieved.

4. MONITORING AND FOLLOW-UP ACTION

Throughout the lifecycle of the development, regular monitoring and adaptive management must be in place to detect any new degradation of rehabilitated areas. During the construction phase, the Environmental Officer (EO) and EPC Contractor will be responsible for initiating and maintaining a suitable monitoring system. Once the development is operational, the Developer will need to identify a suitable entity that will be able to take over and maintain the monitoring cycle and initiate adaptive management as soon as it is required. Monitoring personnel must be adequately trained.

The following are the minimum criteria that should be monitored:

- » Associated nature and stability of surface soils.
- » Re-emergence of alien and invasive plant species. If noted, remedial action must be taken immediately, as per the alien management plan and mitigation measures contained within the EMPr.

Rehabilitation success, monitoring and follow-up actions are important to achieve the desired cover and soil protection. The following monitoring protocol is recommended:

- » Rehabilitation areas should be monitored in an ongoing manner in conjunction with and according to the erosion and alien plant monitoring frequency.
- » Any areas showing erosion, should be adaptively managed with particular erosion control measures, depending on the situation.
- » Any areas showing alien plant invasion, should be adaptively managed with particular alien plant control measures, depending on the situation.

If the current state of the environment prior to construction (which will be disturbed during the construction phase) is not achieved post impact, within the specified rehabilitation period, maintenance of these areas must continue until an acceptable state is achieved (excluding alien plant species or weeds). Additional rehabilitation methods may be necessary to achieve the current state before construction commences.

Monitoring of the rehabilitation success, as well as follow-up adaptive management, combined with the clearing of emerging alien plant species should all continue for as long as is considered necessary, depending on regrowth rates.