REHABILITATION PLAN

MOTHOLLOSVILLE

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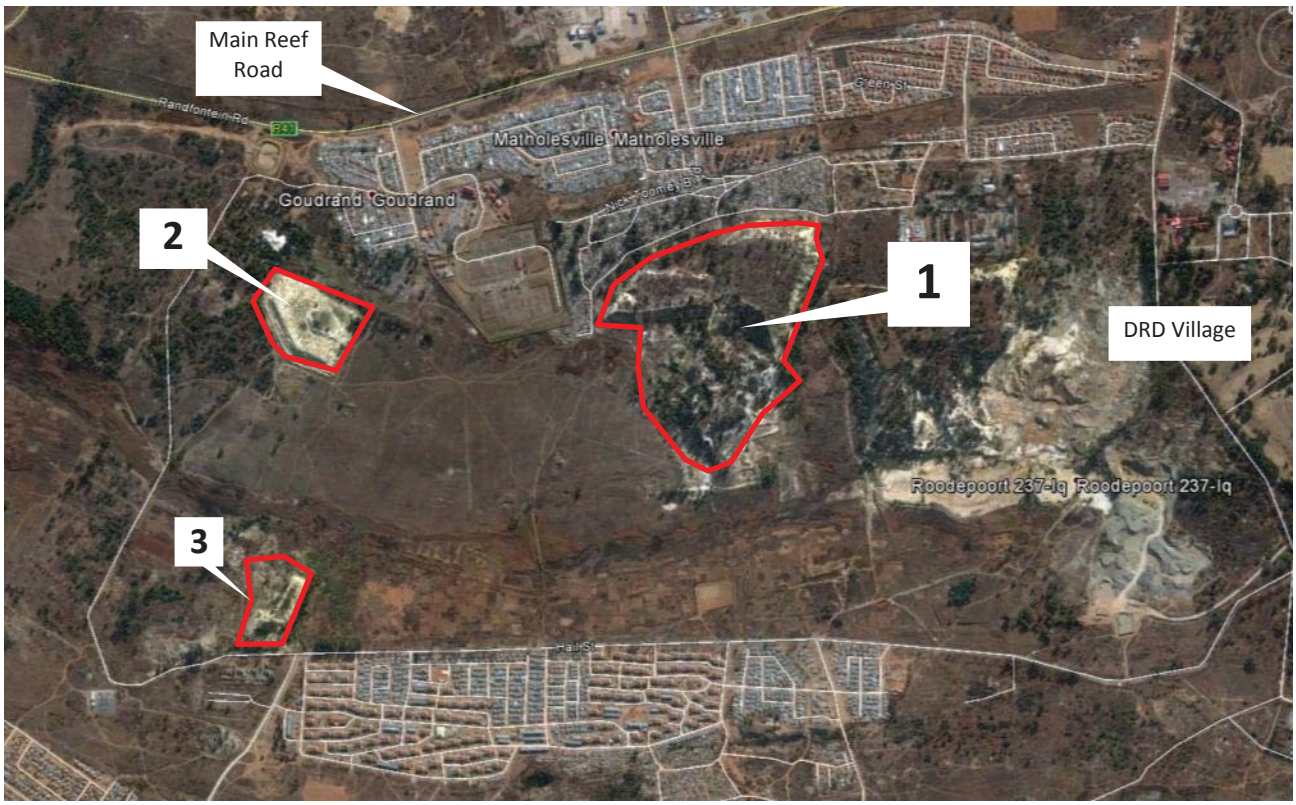
1 INTRODUCTION

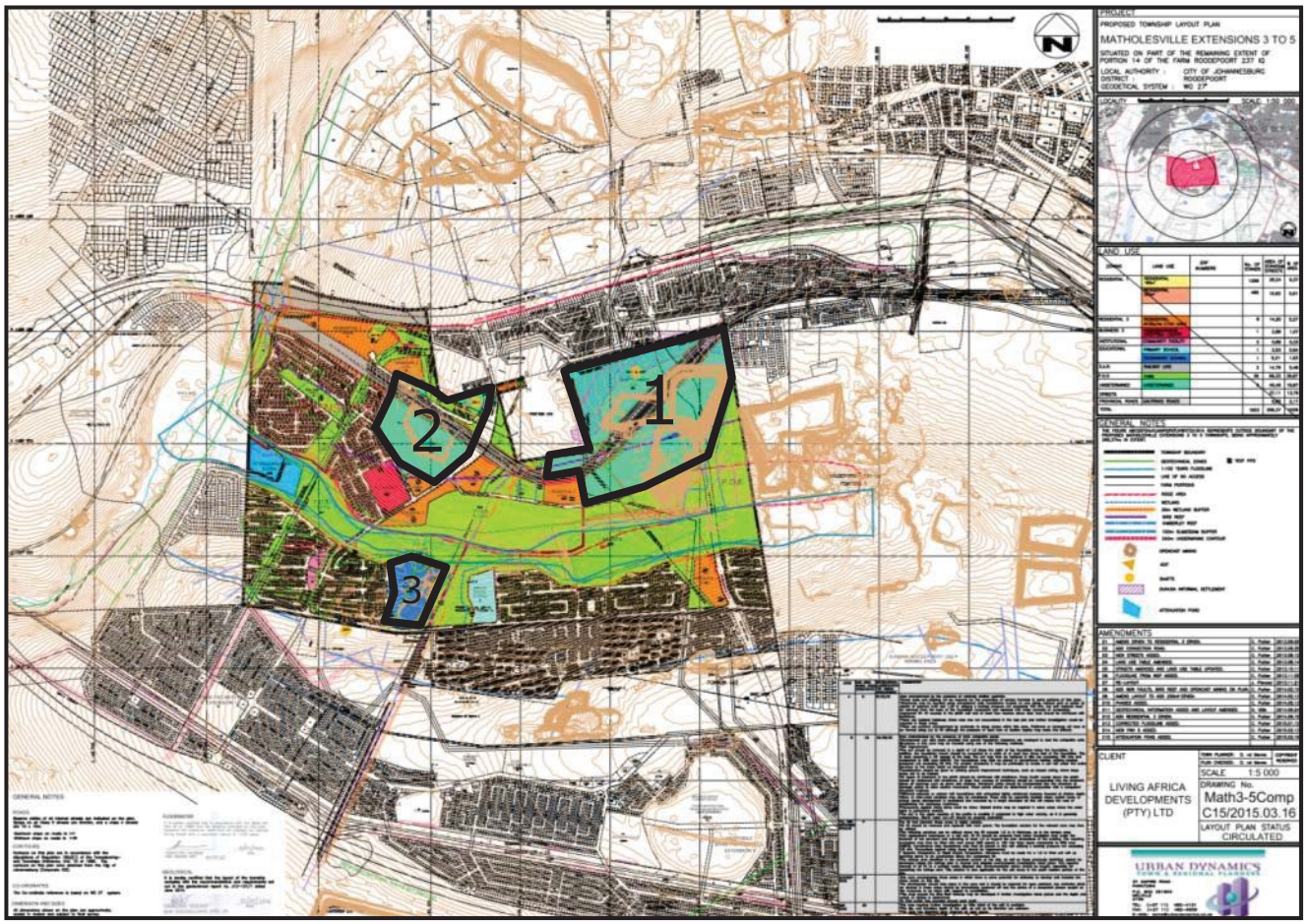
Activities related to the re-development of the de-commissioned mining land have an impact on the environment and it is imperative that precautions be taken to ensure that environmental damage is minimised. The Proposed Mothollesville development is located south-west of the Roodepoort CBD and Main Reef Road.

Three Tailings Storage Facilities have been identified on the property which needs to receive attention, either by the total removal of the facility, by means of maintenance of the existing vegetation cover, or by initiating a new rehabilitation programme for certain sections of the slime and sand dumps. For the purpose of this Rehabilitation Plan reference to the slime and sand dumps will be made as Tailings Storage Facilities (TSF's).

The aerial photograph and map below shows the position of the three Tailings Storage Facilities, numbered 1, 2 and 3 for the purpose of this Rehabilitation Plan.



Aerial image showing the location of the storage facilities under consideration



The purpose of this Rehabilitation Plan for the Tailings Storage Facilities is to give effect to site preparation measures that will be necessary prior to the development and the operational phases of this urban development project. This Rehabilitation Plan will serve as a working document concentrating specifically on certain activities with the purpose of rehabilitation of the areas where the slimes dumps have been removed, stabilising the side walls of the remaining slimes and sand dumps, and ensure proper management of rainwater flow from the dumps. The objectives of the Rehabilitation Plan are to reduce the danger of adverse impacts or effects of the facilities or the remains of it, on the proposed development. The Rehabilitation Plan specifies procedures and practices, which will be implemented during site preparation or pre-development and the operational phases of the proposed project.

2 OBJECTIVES

The objectives of the Rehabilitation Plan are to:

- Create a safe environment for the development of a residential township and urban environment;
- Ensure that the potential risk of dust from the Tailings Storage Facilities is minimised;
- Ensure that the possibilities of wind and water erosion of the side walls are minimised;
- Ensure that all pertinent environmental concerns are addressed;
- Ensure that the project is in compliance with national, provincial and local and environmental legislation and regulations;
- Ensure acceptability of design and construction practices with respect to identified impacts and prescribed mitigation measures;
- Integrate the design strategies with construction;
- Ensure that strategies are in place for the maintenance of the Storage Facilities ; and
- Integrate this Rehabilitation Plan with the aims and objectives of the EMPr.

To ensure the effective implementation of these objectives the developer must be committed to undertake a program of supervision and monitoring during all the phases of the development project. The Environmental Control Officer (ECO) must include the monitoring of the Rehabilitation Plan in the services to the developer. The Environmental Control Officer (ECO) will also ensure compliance by all contractors and subcontractors with the Rehabilitation Plan.

3 DESIGN AND SPECIFICATIONS

The Rehabilitation Plan involves the following activities:

- Conduct chemical analysis to determine:
    - pH characteristic of the Tailings Storage Facilities materials.
    - Determine the nutrient deficiencies.
    - Determine macro- an micro elements.
    - Determine the cation exchange capacity.
- Determine the stormwater control measures.
- Determine water sources and irrigation methods.

- Formulate an Amelioration Plan for the application of:
    - Lime
    - Fertilisers
    - Compost
    - Mulch
- Design the water supply and micro irrigation systems.
- Installation of a stormwater management system.
- Formulate an indigenous seed mix based on the results of the analysis and local conditions.
- Prepare a construction programme which will minimise the exposure of bare soils with a risk of dust pollution.

4 CONSTRUCTION SUPERVISION

An Environmental Control Officer must be appointed to ensure that the rehabilitation activities comply with the specifications. Supervision will reduce the possibility of damage to the existing vegetation cover and an integration with the aims and objectives of the Environmental Management Programme (EMPr) .

Responsibilities of the ECO will include:

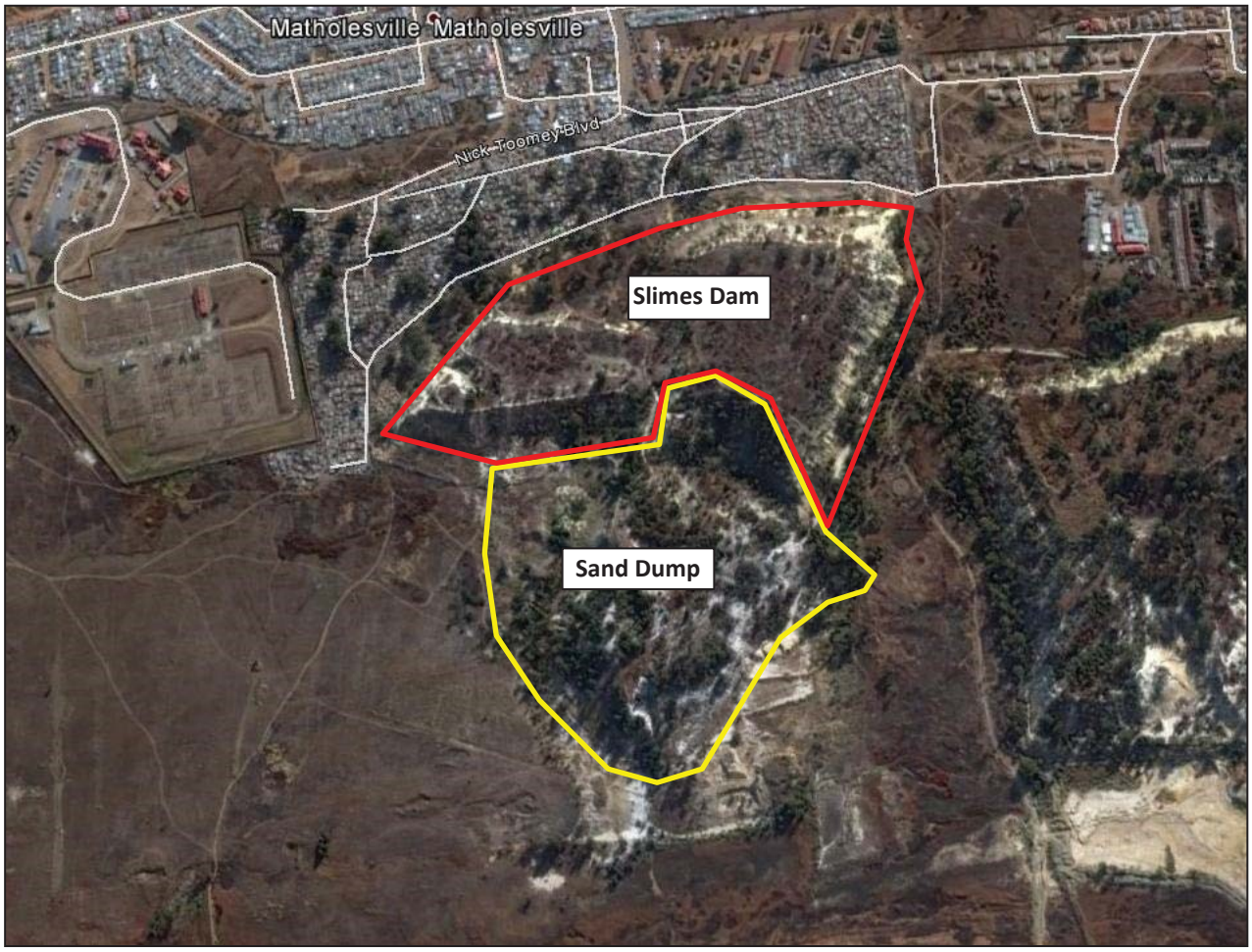
- Liasing with regulatory government authorities as required;
- Delivering environmental education and awareness programs;
- Providing technical assistance on environmental matters;
- Inspecting all activities during the rehabilitation process to ensure compliance with terms and conditions and specifications;
- Reporting on the activities and actions taken;
- Provide specific guidelines for the rehabilitation of the areas in close proximity to wetland areas.

5 SPECIFICATIONS, CONDITIONS AND GUIDELINES

To assist in complying with the aims and objectives of the Rehabilitation Plan, the following Specifications, Conditions or Guidelines should be implemented:

5.1 Tailings Storage Facility No. 1

The aerial image below shows the outline of the Slimes and Sand Dumps, referred to as Facility No. 1. At closure of the mine, the dumps were well contained with paddocks on all sides. The dumps were also well vegetated with grasses and trees at the time of the mine closure. However, there are currently signs of erosion breakage and spillage onto the adjacent southern and south-western area. The dumps are still well covered with trees and grasses, but illegal mining on the sidewalls caused serious damages to the vegetation. The erosion of the sidewalls will continue for as long as the site is undeveloped. Proceeding with the formal development of the site will put a stop to these activities and hence improve the long term environmental stability of the site.



Aerial image of the slimes and sand dump - Facility No. 1

5.1.1 Slimes Dump

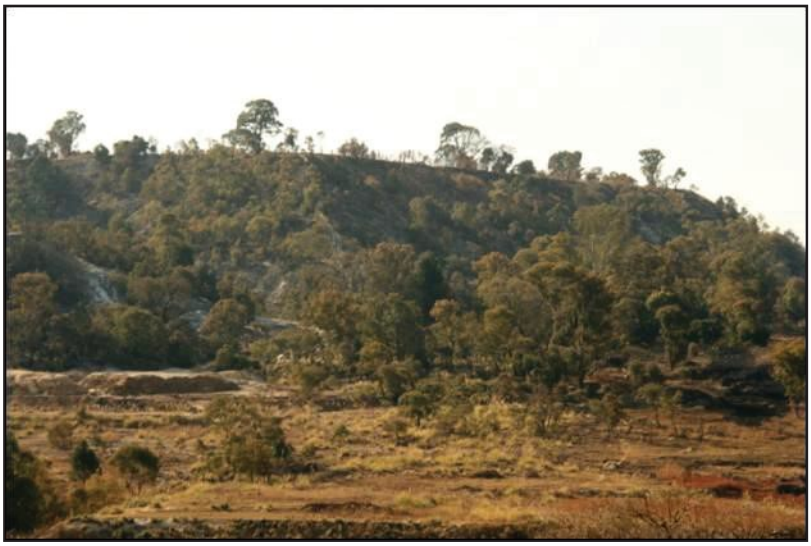
Although the slimes dump was well covered by vegetation at the closure of the mine, no on-going maintenance was done. In addition, illegal mining activities and the removal of large quantities of slimes from the dump, resulted in the exposure of the slimes to stormwater and wind erosion. This illegal activities will continue for as long as the site remains undeveloped and therefore it can also be expected that the erosion of the sidewalls will escalate. It is therefore of vital importance that the larger surrounding portion of the property be developed in order to secure the slimes area and stabilise the sidewalls. The photographs below show the exposed sidewall areas and gives an indication of the proximity of existing developments and housing to the dumps.

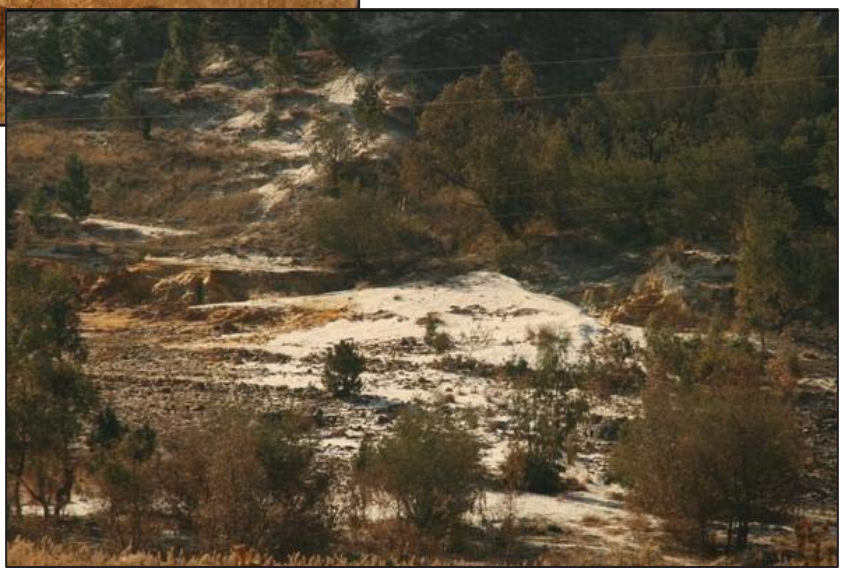
View of the slimes dump from the northern and north-eastern side

5.1.2 Sand Dump

The southern side of the dumps appears to be well covered by trees and grasses. However, there are areas which show signs of erosion and spillage. The re-instatement of retention paddocks will be an essential part of the rehabilitation process.

Tree cover on southern side of the sand dump





Areas affected by erosion and spillage

5.1.3 Rehabilitation Process

The following measures should be implemented:

- Move all the loose sand and slimes materials from the land on the southern side of the dumps back to the dump footprint.
- Remove the slimes material which have been washed into low-lying areas on the south of the dump and place back on the dump footprint area.
- Rehabilitate the affected low-laying areas as per specification from a qualified Ecologist or Environmental Manager.
- Ensure that slimes materials are placed and contained within the footprint of the Tailings Storage Facility.
- Erect a fence/ barrier between the existing houses and the dump footprint in order to restrict unauthorised access to the slimes material.
- Re-instate stormwater retention paddocks.
- Prepare levels or terraces with the loose tailings materials that will be favourable for vegetation growth.
- Do not remove any existing trees or vegetation.
- Prepare tailings materials for vegetation by the application of fertilisers and other growth materials and determined in the Amelioration Plan.
- Install irrigation system where applicable.
- Apply grass seeds on level areas and water regularly.
- Source natural grass tufts from new development project where site clearing is done and plant on steep sides.
- Monitor stormwater run-off and repair damage immediately.
- Monitor the vegetation growth on a quarterly basis and do in-planting in bare areas. This is an on-going process for as long as the slimes dump exists on the property.
- Continue with watering of the grasses until properly established.
- Introduce practical and safe measures to prevent uncontrolled fires and burning of the vegetation on the dumps.

5.2 Slimes Dump - Tailings Facility No. 2

This is a small slimes dump of less than 3 hectares in area. It is relatively low with a height of approximately 12 -15 metres. The slime deposits were well contained at the time of the mine closure. No signs of erosion of spillage are noticeable as the slime has consolidated to a hard crust with sparse vegetation.

As part of the development of this property, this dump will be removed in its entirety. The material removal will be by way of excavators and trucks, with water sprinklers for dust control. The material will be removed during September to December 2015. The required Radon tests will be undertaken to confirm acceptable and safe levels prior to any developments will take place on the land on the land.

Once all the slimes materials have been removed, the footprint area will be covered with topsoil. The exposed bare soil areas will be protected from stormwater erosion by creating a system of berm walls and small paddocks where necessary. Seeding of grasses will be done to reduce the exposure of the bare soil to wind and water erosion.

The removal of this slimes dump and the rehabilitation of the surface area must be completed during the pre-development phase prior to human occupation of the site and surrounding properties.

Aerial image of the slimes dump that will be removed - Facility No. 2

Picture of the slimes dump taken from the southern side

5.2.1 Rehabilitation process

This facility will be removed in total under the jurisdiction and specific specifications of the Department of Mineral Resources. Once all slimes deposits and materials have been removed, it will be necessary to rehabilitate and prepared the surface area for development. The following environmental measures should be applied, in addition to the specified removal conditions of any authority involved with the removal activity;

- The rehabilitation process may only commence once the required clearances have been given by regulating authorities.
- The rehabilitation could be initiated in phases as areas have been cleared to the satisfaction of the regulating authorities.
- The land to be rehabilitated must be levelled to natural ground levels to conform to the levels of the adjoining land.
- A sufficient layer of topsoil must be placed over the levelled surface, especially where no building or roads will be constructed.
- Create berm walls and other stormwater management methods to reduce the danger of soil erosion.
- Apply seeding where necessary.
- Water until new vegetation have established properly.
- Monitor for dust and soil erosion.

5.3 Slimes Dump: Facility No. 3

Remains of the slimes dump - Facility No. 3

The slimes dump is sparsely covered with trees and grasses. This facility will be completely removed under the jurisdiction and specific specifications of the Department of Mineral Resources. Once all slimes deposits and materials have been removed, it will be necessary to rehabilitate and prepared the surface area for development. The following environmental measures should be applied, in addition to the specified removal conditions of any authority involved with the removal activity:

- The rehabilitation process may only commence once the required clearances have been given by the relevant authorities.
- The rehabilitation could be initiated in phases as sections have been cleared to the satisfaction of the regulating authorities.
- The land to be rehabilitated must be levelled to natural ground levels to conform to the levels of the adjoining land.
- A sufficient layer of topsoil must be placed over the levelled surface, especially where no building or roads will be constructed.
- Apply seeding where necessary.
- Water until new vegetation have established properly.
- Monitor for dust and soil erosion.

5.4 Other Conditions and Guidelines

- **Stormwater Drainage**
    - Install berm walls along drainage lines to contain eroded water.
    - Level areas to be grassed should be in the form of small "paddocks" to contain water.
    - Natural stormwater drainage lines to be maintained.

- **Air Pollution**
    - Rehabilitation work should be phased where possible in order to restrict the area of exposed soils.
    - Watering should be applied to bare areas to limit dust pollution by winds.
    - Rehabilitated areas must be grassed as soon as possible to restrict the dispersion of dust particulars.

- **Water Pollution**
    - Buffer areas along the footprint of the dump which will remain, should be grassed to contain rain water flowing from the facilities.
    - Rainwater flowing from the dump should be retained in paddocks or retention ponds before flowing into a natural drainage system.
    - Overwatering of the newly planted grasses and seeds should be prevented.

- **Safety and Security**
    - Rehabilitated areas should be demarcated as No-go areas for the general public.
    - Trenches for water irrigation systems should be clearly marked and closed as soon as pipes have been installed.

6 AMENDMENTS TO REHABILITATION PLAN

The rehabilitation process must be closely monitored and where circumstances and local conditions require it, changes and amendment can be made to the Rehabilitation Plan in order to improve the effectiveness of the Plan. Any changes should be in consultation and with the approval of the Environmental Consultant and/or Rehabilitation Specialist.