mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

APPLICATION FOR PROSPECTING RIGHT WITH BULK SAMPLE ON THE FARM ROODERAND 41 JP AND 902 JP

SUBMITTED FOR ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED)

NAME OF APPLICANT:	**BONIZENZO HOLDINGS (PTY) LTD**
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Details of EAP are included in Part A, Section 3(a) herein as required

2. DESCRIPTION OF THE ASPECT OF THE ACTIVITY

2.1 Location of the Activity

It should be noted that detail information about the location of the activities is covered under Part A. (H) (i) (a) of this application.

2.2 Type of Activity to be undertaken

It should be noted that detail information about the location of the activities is covered under Part A (d) (ii) of this application.

2.3 Composite Map

Refer to Appendix 2 for composite Map

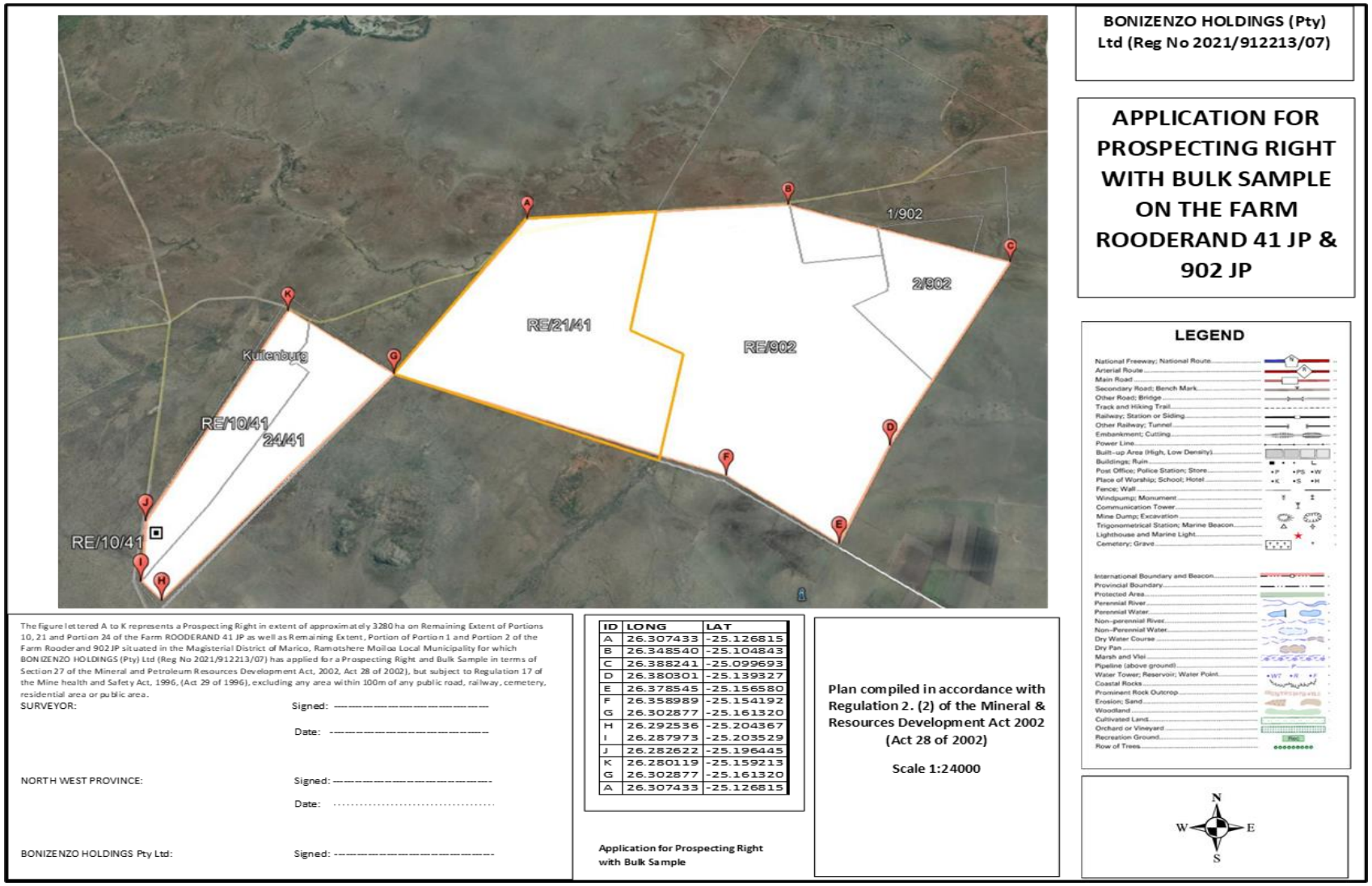

Figure 1: Bonizenzo Prospecting Right Area

3. DESCRIPTION OF IMPACT MANAGEMENT OBJECTIVES INCLUDING MANAGEMENT STATEMENTS

3.1 Determination of closure objectives

The closure objectives represent the key measurable closure targets for the various closure planning aspects, based on the determined closure state, that are within the operation's control. Ultimately, closure objectives should be contextualised to represent achievement of the closure vision and related closure state. The closure objectives for Rooderand Prospecting Right Project include:

- Land use and capability:
    - To mimic regional geomorphological features by maintaining a free-draining topography across the areas that will be disturbed as part of this project.
    - To maintain a grazing land use, as defined in the Guidelines for the Rehabilitation of Mined Land (2007).
    - All disturbed areas adjacent to the infrastructural areas to be re-vegetated with an indigenous grass mix, to re-establish a protective cover, to minimise soil erosion and dust emission.
    - During the decommissioning phase the footprint must be thoroughly cleaned, and all waste material generated should be removed to a licensed disposal facility.
    - Any compacted soils must be ripped to alleviate compaction.
    - Stored topsoil to be replaced (if any) and the footprint graded to a smooth surface.
    - The landscape to be backfilled and reprofiled to mimic the natural topography for potential agricultural activities and grazing opportunities post mining. If possible, ensure a continuation of the pre-mining surface drainage pattern.
    - Slopes of the backfilled surface should change gradually since abrupt changes in slope gradient increase the susceptibility for erosion initiation.
    - The soil fertility status should be determined by soil chemical analysis after levelling (before seeding/re-vegetation). Soil amelioration should be completed, if necessary, according to recommendations by a soil specialist, to correct the pH and nutrition status before revegetation.

- The footprint should be re-vegetated with a grass seed mixture as soon as possible, preferably in spring and early summer to stabilise the soil and prevent soil loss during the rainy season.
- To achieve creation of habitats for local fauna expected to occur within the rehabilitated areas on which a grazing land use is taking place.
- To maintain the visual landform as aligned to the approved surface rehabilitation landform design of the rehabilitated landscape, that blend into the surrounding areas.
- To remove mine infrastructure that cannot be used by a subsequent land owner or a third party. Where buildings can be used by a third party, arrangements will be made to ensure their long-term sustainable use.

- Surface and groundwater:
  - To continue to contribute to the catchment yield associated with the Catchment Management Areas.
  - To prevent any soil and surface/groundwater contamination by managing all water on site.
  - To limit the project study area (natural plume movement) and potential decant to the Leeuwfonteinspruit.
  - To prevent groundwater contamination by continuing with the monitoring of the groundwater boreholes water quality and if the quality deteriorates, it is recommended to start pumping the contaminated into a containment facility for evaporation and to contain the plume.
- Air quality
  - To maintain local ambient air quality parameters of PM_{10} to agreed-on, predefined human health-related against the ambient air quality standards and the dust fallout rates in terms of the National Dust Control Regulations (GNR827 of 2013).
- Social
  - To achieve a safe and healthy environment for people and animals, through achievement of the land use, water and air quality closure objectives.
  - To leave a safe and stable environment for both humans and animals.

- To have completed implementation of the closure-related projects agreed-on in the mine's approved Social and Labour Plan, focusing on personal skills development and local economic development.

- General closure and economic benefits:
    - To follow a process of closure that is progressive and integrated into the short and long term mine plans and that will assess the closure impacts proactively at regular intervals throughout project life.
    - To develop a plan for care-and-maintenance of the related surface infrastructure that has a beneficial re-use, for hand-over to- and accountability by the next land owner.
    - To comply with local and national regulatory requirements.
    - To maintain and monitor all rehabilitated areas following re-vegetation or capping and, if monitoring shows that the objectives have been met, making an application for closure.
    - To leave behind a rehabilitated landscape that will retain long-term economic value for future land owners.

3.2 Values and rate of water use required for the operation

None. Limited domestic water and water for prospecting activities are required. All water will be sourced from a legally accessible site or via a Water Service Provider.

3.3 Has water use licence been applied for?

There are no activities that are triggering section 21 to apply for a water use licence.

4. IMPACTS TO BE MITIGATED IN THEIR RESPECTIVE PHASE

4.1 Project Planning and Design Phase – Placement of Infrastructure

Table 1: Project Planning and Designing Phase - Placement of Infrastructure

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
Site Establishment and clearing of vegetation (which includes site preparation and access roads).	Approximately 100 m^2	Pre-construction or operation	All recommendations and mitigation measures will ensure the preservation of the topsoil for it be used for rehabilitation and assist in reducing any environmental degradation to air quality or damage on heritage sites.	• Vegetation clearance should be limited to the authorised directional drilling footprint only. • At all vertical borehole positions the footprint will be cleared by mowing the sections. No stripping of topsoil or clearing of vegetation will be required. • Dust will be suppressed at all times, the generation of dust will be assessed visually and monitored by the Environmental Control officer	During site establishment, site management and decommissioning.

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				• All designated footprint areas will be secured and demarcated at all times while in use. • All sites disturbed by construction activities must be monitored for exotic or alien invasive plant species and weeds. • Any eradicated exotic/invasive plant or weed vegetation must be removed from site and disposed of at an approved waste disposal facility or dried out and then burned, any method can be used to dispose of the alien invasive plants as long as it is within the law and the plants have no possibility of propagating. • During the process of stripping topsoil care should be taken to ensure that no topsoil is	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				contaminated with oil and grease, foreign material or alien plants. • The topsoil will be stored in a manner that will prevent any loss of topsoil via the natural elements. Topsoil it is to be stripped, stockpiled then once the area has been prepared for rehabilitation, the topsoil will be replaced in its original position. • The topsoil will be hand seeded with an indigenous Highveld grass seeds mix, approved by the Environmental Officer if more than 30% bare ground is seen after one rainy season.	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
Diamond Drilling, Percussion drilling and directional drilling and installation of Sumps	Limited within the drilling sites.	Operation	All recommendations and mitigation measures will ensure little to no permanent impact on the environment this will ensure effective rehabilitation and restoration.	• Ensure that the use of machines do not disrupt any services (i.e. electricity, water, sewer and telephone lines). • The applicable and required safety standards will be strictly adhered to during all works and operations. • All machinery and equipment must be maintained in good working condition and fitted with approved and specified noise muffler systems. • Weekly checks are to be undertaken on all plant and equipment to monitor the status of the equipment. • If any equipment is faulty, it is to be removed to a designated area and repaired or replaced as soon as	During operational activities.

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				reasonably possible (within 24 hours if possible) of the identification of the fault. • Compliance with local by-laws and regulations regarding the noise, dust and hours of operation is to be strictly adhered to. • During the excavation of the sumps at the directional drilling site, the topsoil must be removed to a depth of 500mm where possible, after topsoil has been stripped. • The topsoil must be stored separately from the subsoil material. • The remainder of the material from the sump excavation must be placed separately from the topsoil.	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				• All sumps and earth excavations must be monitored during the drilling activities for safety and erosion potential. • Once the works are completed and the sumps are no longer needed, the original inert material from the sump area is to be placed back in the sump, leaving ~300mm for the topsoil to be replaced in the remaining hole. • After replacing the topsoil, the whole footprint must be cleaned of all waste and foreign material. Thereafter the exposed footprint must be ripped to a depth of ~300mm. Once ripped the topsoil will then be placed back and trimmed.	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				• Cooking will only be permitted in designated areas where the crew will be residing.	
Site Establishment and Establishment of additional associated infrastructure such as temporary ablutions, fire breaks, waste storage facilities, water usage, access roads, offices, haul roads and workshops etc;		Operational	All recommendations and mitigation measures will ensure little to no permanent impact on the environment this will ensure effective rehabilitation and restoration.	• Application of dust suppressants such as water in areas prone to dust generation. • Monitor dust emissions by ensuring all vehicles adhere to the speed limit. • Retain vegetation cover as long as possible to reduce the size of areas where wind could generate dust. • Ensure that the use of machines do not disrupt any services (i.e. electricity and telephone lines). • When clearing fire breaks the breaks are to be monitored for erosion and alien vegetation establishment. If any erosion or	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	SIZE AND SCALE OF DISTURBANCE	PHASE In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	COMPLIANCE WITH STANDARDS	MITIGATION MEASURES (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	TIME PERIOD FOR IMPLEMENTATION
				alien plants are evident the area is to be remediated with immediate effect. • All machinery and equipment must be maintained in good working condition and fitted with approved and specified muffler systems. • Compliance with local by-laws and regulations regarding the noise and hours of operation. • All ablutions will be managed in terms of the requirements of the Environmental Management Waste Act (NEMWA). • Noise generation is to be restricted to normal working hours as per the requirements of the Department of Labour.	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				• All sites disturbed by construction activities must be monitored for exotic or alien invasive plant species and weeds. • Oil spillage control kit must always be available on site for any possible spillages. • Ensure that all construction activities are limited to authorised footprint. • All vehicles must adhere to the speed limit on construction site. • Waste generated on site (all general waste) must be disposed in a waste bin and must be stored in an appropriate designated area for disposal at a nearby licensed facility.	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
Storm Water Management and Infrastructure within 500m of a wetland		Pre-construction, Operational and decommissioning and rehabilitation	All the mitigation measures are followed then the area will be in a position where the environment has been protected and rehabilitation will be smooth	• All exposed areas are to be secured in a manner as to prevent any sediment or contaminants entering into the watercourse, drainage lines or wetlands. • Vegetation clearance should be limited to the authorised footprint. • Dust is to be suppressed at all times. Dust nuisance will be assessed visually and complaints assessed and addressed. • All areas outside of the authorised footprint should be regarded as no-go areas. • Vegetation clearing shall take place in a phased manner in order to retain vegetation cover for as long as possible.	During construction and operation phase

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				This would reduce the size of areas where dust can be generated, and sediment runoff may take place. • Site clearance will encourage the introduction of alien invasive plant species • All sites disturbed by construction activities must be monitored for exotic or invasive plant species and a Weed and Alien Plants Control schedule or programme is to be developed prior to disturbance of any area. • Chemical herbicides may not be used in watercourses.	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				• Mechanical removal may be used within a watercourse and/or sensitive ecological areas. • Any eradicated exotic/invasive plant or weed vegetation must be removed from site and disposed of at an approved waste disposal facility or an alternative eradication method approved by the competent authority. • If any burning of plants is needed it may only be done under supervision and in an area approved by the EAP and the senior SHE officer. • In the process of stripping topsoil, care must be taken to ensure that no topsoil is	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				contaminated with oil and grease, foreign material or alien plants. • The topsoil must be stored in a manner to prevent any loss of topsoil from the natural elements. • Topsoil is not to be double handled, it is to be stripped, and stockpiled (outside of the 1:100 year floodline and then further than 32 m from the floodline). • Once the area has been prepared for rehabilitation the topsoil must be replaced to its original position and hand seeded with the indigenous grass seeds of the area if cover does not establish in one growing season. At this point it may	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				be necessary to install erosion protection such as gabions, reno matrices etc. • Alien Plants monitoring and eradication schedule/programme to be implemented. • No ablutions are to be located within 32 m of a water course.	
Designated stockpile areas for the topsoil and excavated material (Bulk sample)		Operational, decommissioning and rehabilitation	If all of the mitigation measures are followed, then the area will be in a position where the environment has been protected and rehabilitation will be smooth	• Vegetation clearance should be limited to the authorised bulk sampling footprint only. • Temporary stockpiling of excavated material shall take place in demarcated areas. • Stockpiles shall be positioned and sloped to create the least visual impact and to reduce dust generation	During operational phase

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	SIZE AND SCALE OF DISTURBANCE	PHASE In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	COMPLIANCE WITH STANDARDS	MITIGATION MEASURES (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	TIME PERIOD FOR IMPLEMENTATION
				and damage from the natural elements. • Topsoil and spoil stockpiles shall be protected from erosion by wind and rain. This can be achieved by providing suitable stormwater cut off drains and/or by establishing suitable temporary vegetation, if necessary. • Topsoil stockpiles must be monitored regularly in accordance to the alien plants monitoring and management schedule. • No inert material, topsoil or fertile soil (dark soil) is to be stored within 32 m of a drainage line.	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				• Site clearance will encourage the introduction of alien invasive plant species, All sites disturbed by construction activities must be monitored for exotic or alien invasive plant species and weeds. • Chemical (Herbicides) or mechanical removal may be used. If chemical methods are used the method of use is to be undertaken in accordance with manufacturer's specification for the weeds and this method and management is to be approved by the EP. • Any eradicated exotic/invasive plant or weed vegetation must be removed	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				from site and disposed of at an approved waste disposal facility or an alternative eradication method approved by the competent authority. • All sites disturbed by construction activities must be monitored for exotic or invasive plant species and weeds. • All equipment used to undertake all these activities are to be inspected daily to prevent any accidental hydraulic spills.	
Loading and hauling of excavated material		Operation and Decommissioning	If all of the mitigation measures are followed then the area will be in a position where the	• Vehicle movement shall be limited to defined tracks and areas. • Movement of construction vehicles shall be limited to daylight hours.	During decommissioning phase

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	SIZE AND SCALE OF DISTURBANCE	PHASE In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	COMPLIANCE WITH STANDARDS	MITIGATION MEASURES (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	TIME PERIOD FOR IMPLEMENTATION
			environment has been protected and rehabilitation will be smooth	• Dangers associated with the movement of large haulage vehicles shall be clearly indicated by safety signs. • Material from drilling sites shall be appropriately secured to ensure safe passage between destinations. • Compliance with local by-laws and regulations regarding the noise and hours of operation. • Avoid working outside normal working hours (i.e. 07:00 to 17:00 weekdays and 7:00 to 13:00 on weekends) and during weekends. • Working outside of normal working hours is to be agreed with the landowner.	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				• Scheduling drilling time is to be agreed with the landowner and the landowner is to be notified at least 3 days prior to drilling operations commencing. • All hauled material is to be secured on the vehicle transporting the material and if soil or inert material is transported the driver is to secure the load from potential dust generation, by covering the material.	
Decommissioning and Rehabilitation		Decommissioning and Rehabilitation	If all of the mitigation measures are followed then the area will be in a position where the environment has been protected and	• Compliance with local by-laws and regulations regarding the noise and hours of operation. • Avoid working outside normal working hours and during weekends.	During decommissioning phase

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
			rehabilitation will be smooth and effective	• Application of soil binders or dust suppressants in areas prone to dust generation. • Construction vehicles should comply with speed limits. • During rehabilitation, the topography would be finished off to blend in with the surrounding environment. • The area is to be cleared of all foreign objects, materials and alien plants. • Once the area is shaped correctly the compacted areas are to be lightly ripped to 300mm before topsoil is to be replaced. • Areas that have not had topsoil striped are to be monitored for alien plant growth and vegetation recovery.	

NAME OF ACTIVITY (e.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc)	**SIZE AND SCALE OF DISTURBANCE**	**PHASE** In which impact is anticipated. (e.g., Construction, commissioning, operational, decommissioning, closure, post-closure)	**COMPLIANCE WITH STANDARDS**	**MITIGATION MEASURES** (Modify, remedy, control, stop) (e.g., noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g., Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**TIME PERIOD FOR IMPLEMENTATION**
				• If after a year the vegetation has not recovered the area is to be hand seeded with a Highveld indigenous grass mix (if the site is located in grasslands).	

4.2 Impact Mitigation Outcomes

Table 2: Impact Mitigation Outcomes

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
Site preparation	Deterioration of Air Quality in the study area	Air Quality	Planning Phase	Dust suppression with water will occur during the construction phase.	Compliance to GNR 827 of 01 November 2013, regulations dealing national dust control for non-residential areas whereby the dust fallout rate (expressed in mg/m2/day over 30 days average exposure) must not exceed 600<D<1200. mg/m2/day for two events within a year but not sequential months
	Contamination of surface water	Water quality	Planning Phase	Clean spillages immediately	Compliance to Section 19 and 20 of NWA

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
	Soil erosion	Soil	Planning phase	Erosion control measures such as hard surfaces and berms will be designed as part of the mine infrastructure to prevent soil erosion.	Compliance to section 28 and 30 of NEMA
	Accidental hydrocarbon spillages	Water quality	Planning phase	Clean accidental hydrocarbon spillages immediately	Compliance to Section 19 and 20 of NWA Compliance to the Hazardous Substances Act and NEMWA. Occupational Health and Safety Act, Act 85 of 1993 and applicable regulations

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
					Mine Health and Safety Act, Act 29 of 1996 and applicable regulations
	Accidental hydrocarbon spillages	Soil quality	Planning phase	Clean accidental hydrocarbon spillages immediately	Compliance to Section 19 and 20 of NWA Compliance to the Hazardous Substances Act and NEMWA. Occupational Health and Safety Act, Act 85 of 1993 and applicable regulations Mine Health and Safety Act, Act 29 of 1996 and applicable regulations

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
Drill rig and other equipment delivery	Dust generation	Air quality	Construction	Reduce speed limit to 40km/h to reduce dust generation.	Compliance to GNR 827 of 01 November 2013, regulations dealing national dust control for non-residential areas whereby the dust fallout rate (expressed in mg/m2/day over 30 days average exposure) must not exceed 600<D<1200 mg/m^2/day for two events within a year but not sequential months.
	Accidental hydrocarbon spillages.	Soil Quality	Planning phase	Clean Accidental spillages immediately	Compliance to section 28 and 30 of NEMA and relevant regulations
	Increase Traffic in the study area	Traffic	Planning Phase	Construction equipment and vehicle must be checked	Compliance with National Road Traffic Act, Act 29 of 1989

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
				and maintained before being delivered on site. The necessary road traffic permits for transporting abnormal equipment should be obtained from the relevant authorities prior to any abnormal trucks leaving their site to deliver material or equipment at the study area.	
Storage of Material and equipment on site	Accidental hydrocarbon spillages.	Soil Quality	Planning phase	Clean Accidental spillages immediately	Compliance to section 28 and 30 of NEMA and relevant regulations

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
	Accidental hydrocarbon spillages.	Water Quality	Planning phase	Clean Accidental spillages immediately	Compliance to section 28 and 30 of NEMA and relevant regulations. Compliance to Section 19 and 20 of NWA
Access of study area	Soil compaction	Soil	Planning Phase	Rip and Loss soils compacted soil during rehabilitation.	Compliance to section 28 and 30 of NEMA
Hydrocarbon spills from vehicle and other hazardous substances	Water contamination	water quality	Construction phase	The entire prospecting area infrastructure is outside of the 1:100 year flood line of adjacent steams. Spillages should be cleaned immediately to avoid contamination of surface water.	Compliance to section 28 and 30 of NEMA and Section 19 and 20 of NWA. Compliance to the Hazardous Substances Act and NEMWA.

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
	Soil contamination	Soil Quality	Construction phase	Clean hydrocarbon spill using hydrocarbon spillage measures	Compliance to the Hazardous Substances Act, NEMA, NWA, MPRDA and NEMWA.
Accidental fires	Air pollution	Air quality	Construction phase	Prevent making open fire on site, firefighting equipment to be erected on site to prevent any fire occurring during the construction and operation phase.	National Veld and Forest Fire Act, Act 101 of 1998
Visual Impacts result from movement of vehicle in the study area	Soil and overburden stockpiles will be visible from adjacent farms	Visual aspect	Construction	No Mitigation	Compliance with relevant Visual standards and regulations

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
Drilling of Exploration boreholes	Loss of Geological Formation in the study area.	Geology	Operation	No mitigation	
	Increase in Ambient Noise due to drilling activities	Noise Quality	Operation phase	Monitor Noise generation	Compliance with Noise standards and relevant regulations.
	Increase in dust generation	Air quality	Operation phase	Dust suppression with water will occur during the operation phase.	Compliance to GNR 827 of 01 November 2013, regulations dealing national dust control for non-residential areas whereby the dust fallout rate (expressed in mg/m2/day over 30 days average

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
					exposure) must not exceed 600<D<1200. mg/m2/day for two events within a year but not sequential months
Decommissioning	Increase in alien species population	Flora	Decommissioning phase	The control of declared weed and invaders with the infrastructure area should be maintained	National Environmental Management Biodiversity Act 10 of 2004
	Dust generated by vehicles during rehabilitation	Air quality	Decommissioning phase	Apply dust suppression measures to roads	Compliance to GNR 827 of 01 November 2013, regulations dealing national dust control for non-residential areas whereby the dust fallout rate (expressed in mg/m2/day over 30 days average exposure) must not exceed

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
					600<D<1200. mg/m2/day for two events within a year but not sequential months
Rehabilitation of affected area	Noise during rehabilitation activities	Noise	Rehabilitation phase	Rehabilitation activities must Conduct work during daylight to limit generation of noise at night.	Compliance with relevant noise standards and regulations
	Increase of dust	Air quality	Rehabilitation phase	Dust suppression measures should be applied to control dust generation.	Compliance to GNR 827 of 01 November 2013, regulations dealing national dust control for non-residential areas whereby the dust fallout rate (expressed in mg/m2/day over 30 days average exposure) must not exceed

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PROJECT PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational, decommissioning, closure, post-closure)	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED** (Impact avoided, noise level, dust level, rehabilitation standards, end use objectives etc)
					600<D<1200. mg/m2/day for two events within a year
	Alien species	Flora	Rehabilitation phase	The control of declared weeds and invaders within the areas associated with the infrastructure area should be maintained	Compliance with National Environmental Management Biodiversity Act, Act 10 of 2004 and MPRDA

4.3 Impact Management Actions

Table 3: Impact Management Actions

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
Site Establishment and clearing of vegetation (which includes site preparation and preparation and upgrade of access roads)	Loss of natural vegetation and faunal habitat	Site clearance and soil stripping	Pre-construction Construction	**Remedy through Rehabilitation and Control through management and monitoring.** • All areas outside of the borehole drilling sites should be regarded as 'no-go' areas. • All animals are not to be disturbed, and no gates are to be left open at any times. • Any vehicle travelling in game camps or in camps with animals are	Rehabilitation standards

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				to reduce their speed to 20km, no arm is to come to any animals. • No items may be harvested from the farms where work is being undertaken by any member of Applicant, a record is to be kept that all staff are being trained to refrain from harvesting any crops or animals from the farm where works is been undertaken.	
	Visual impacts			**Remedy through Rehabilitation and Control through management and monitoring.**	Aesthetically pleasing

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• All areas outside of the borehole footprints should be regarded as no-go areas. • Topsoil, fertile soil (dark soil) and inert material are to be stored no higher than 2m to reduce the visual P;impact of the site.	
	Soil erosion			**<u>Remedy through Rehabilitation and Control through management and monitoring.</u>** • Topsoil must be removed immediately after clearing vegetation cover, to prevent water	No Erosion or degradation of the Landscape

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				and wind erosion from reducing the volume of soil. • No topsoil or fertile soil (dark soil) may be stored within 32 m of a drainage line, watercourse or wetland • Where applicable, construct berms in order to prevent rill erosion and donga formation • All cleared areas and sumps are to be monitored for erosion daily, any erosion forming is to be remediated with immediate effect.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
	Introduction of alien invasive plant species			**Remedy through Rehabilitation and Control through management and monitoring.** • All sites disturbed by construction activities must be monitored for exotic or invasive plant species and weeds. • Site clearance will encourage the introduction of alien invasive plant species, Applicant should train the labourers on the removal and disposal of alien vegetation (Mechanical and Chemical).	Area free of Alien Invasive plant species

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Chemical or mechanical removal may be used. If chemical methods are used the method of use is to be undertaken in accordance with manufacturer's specification for the weeds and this method and management is to be approved by the EP. • Any eradicated exotic/invasive plant or weed vegetation must be removed from site and disposed of at an approved waste disposal facility or an alternative eradication	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				method approved by the competent authority.	
	Loss of Heritage Sites			**<u>Control through monitoring and management and through avoidance.</u>** • In the initial activity of clearing if any heritage artefacts or graves are uncovered, the site is to be secured and demarcated with danger tape and it is to be communicated that that area is a no-go area until an archaeologist has investigated the	All heritage artefacts are preserved

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				matter and SHRAH has given further instruction. • Once the permit has been obtained, the archaeologist is then to monitor and manage the process of destruction of the artefact or translocation. Once all items have been destroyed or moved the establishment activities can continue.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
	Dust Generation			**<u>Remedy through Rehabilitation and Control through management and monitoring.</u>** • Dust is to be kept to a minimum at all times, by restricting speed of vehicles and undertaking dust suppression. The area is not to exceed the ambient air quality standards for rural areas.	Area is free from dust

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
	Loss of Topsoil			**<u>Remedy through Rehabilitation and Control through management and monitoring.</u>** • All topsoil (stripping of ~150 mm over grazing and agricultural land) should be stored in an area where the environmental element do not weather or erode the soils away. A number of methods can be used to protect the topsoil, such as installing storm water cut off drains, seeding the stockpiles with Highveld indigenous grass mix,	Rehabilitation objectives will be achieved

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				covering the soil with a tarp or a cover of kinds or bunding the soil in. The objective is not to prescribe a method to protect the soil but to ensure that Applicant takes all measures to protect the soil and ensure no topsoil is lost. • The soil is to be protected and kept free of any contaminants. • No drip trays, or other equipment is to be stored or placed on the topsoil stockpiles.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• No contaminants such as hydrocarbons, concrete, inert material, fertile soil (dark organic soil) etc may contaminate the topsoil. • Daily checks should be conducted to ensure the topsoil is being kept in a good constituency.	
	Degradation to any water courses or wetlands			**<u>Avoidance Control through management and monitoring.</u>** • This is only possible in clearing or and upgrading roads as no	Watercourses or wetlands will not be affected

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				watercourse will be impact on in the site layout as no activity will be undertaken within 100m of a watercourse, wetland or drainage line. • However, when working on roads through drainage lines, wetlands or watercourse Applicant is to ensure that no contaminants enter into the systems and that no sediment is allowed to be deposited into the systems.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• During flowing water conditions, the water is to be quality tested (according to the DWS general limits) up and down stream of the works on a weekly basis during construction of the road over water courses or drainage lines, this will define the impact the activity is having on the watercourse.	
Construction of structures and/or facilities (storage, berms, fence,	Noise pollution	General construction activities	Construction	**Control through management, monitoring, minimizing and avoidance.**	Noise will be undetectable or kept to a minimum

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
ablution facilities etc.)				• All machinery and equipment must be maintained in good working order and fitted with approved and specified muffler systems. • Compliance with local by-laws and regulations regarding the noise and hours of operation	
	Soil erosion			**<u>Remedy through Rehabilitation and control through management and monitoring</u>** • Erosion protection measures to be installed and daily checks to be	No Erosion of Soil

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				undertaken on erosion potential. Any erosion seen is to be mitigated immediately. • Drainage channels must be provided to prevent scour, so that runoff will be collected and conducted past the footprint, all areas are to be free flowing of water and no pooling of water is allowed.	
	Dust generation Socio Economic impact on the landowner Traffic congestion			Remedy through Rehabilitation and Control through management and monitoring	Dust levels

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
	Introduction of weeds and alien invasive plants			• Application of soil binders or dust suppressants in areas prone to dust generation where Applicant are utilising the roads. • Speed is to be restricted to ensure nuisance dust does not become an issue	
Construction of access roads	Noise pollution	General construction activities	Construction	**<u>Control through management and Monitoring</u>** • All machinery and equipment must be maintained in good working	Low Noise levels

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				order, and fitted with approved and specified muffler systems. • Compliance with local by-laws and regulations regarding the noise and hours of operation.	
	Soil erosion			**<u>Remedy through Rehabilitation and Control through management and monitoring</u>** • Erosion protection measures being in place. • Drainage channels must be provided to prevent scouring, to ensure runoff will be collected and	Soil exposure

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				directed past the excavation or stockpile area. • Erosion is to be monitored after every rainfall event. Any erosion is to be corrected immediately.	
	Dust generation			**<u>Remedy through Rehabilitation and Control through management and monitoring</u>** Application of soil binders or dust suppressants in areas prone to dust generation in all areas Applicant have access.	Dust levels

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Limit speed on all access roads to ensure nuisance dust does not become an issue. • Retain vegetation cover as long as possible to reduce the size of areas where wind could generate dust.	
	Traffic congestion			**<u>Control through management and monitoring</u>** • Ensure that the use of machines do not disrupt any services (i.e., electricity and telephone lines).	Traffic levels

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• The applicable and required safety standards will be strictly adhered to during blasting. (if blasting is to occur) Affected and neighbouring landowners/occupiers will be informed timeously of planned blasting events.	
Dimond Drilling, Percussion drilling and directional drilling and	Dust generation	Operational activities	Operation	**<u>Control through management and monitoring</u>** Application of soil binders or dust suppressants in areas prone to dust generation.	Dust levels

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
installation of Sumps				• Construction vehicles should comply with speed limits outlined by Applicant Projects	
	Noise pollution			**<u>Control through management and monitoring</u>** • Compliance with local by-laws and regulations regarding the noise and hours of operation. • Avoid working outside normal working hours (i.e. 08:00 to 17:00) and during weekends.	Noise levels

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• All machinery to be fitted with appropriate mufflers to reduce noise.	
	Ecological Impact			**<u>Remedy through Rehabilitation and Control through management and monitoring</u>** • Retain all vegetation cover over the vertical drilling sites, the grass is to be mowed as part of site establishment. • Retain vegetation cover as long as possible at the directional drilling site.	Rehabilitation standards

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Remove or eradicate all alien invasive vegetation growing on stockpiles or in any area of the drilling site footprint. • Rehabilitate disturbed areas, rehabilitation undertaken with the rehabilitation measures recommended for each drilling site.	
	Loss of heritage / Archaeological features			**<u>Control through monitoring and management and through avoidance.</u>** • No heritage features must be destroyed or removed without a permit in terms of NHRA.	Impacts avoid destruction of heritage features

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Should any heritage features or remains be uncovered, work is to stop, the area is to be demarcated and a qualified Archaeologist is to be contacted and contracted to evaluate the site and apply for the appropriate permit if needed. Once the permit has been obtained from SAHRA the archaeologist is then to supervise the removal or destruction of the item. Once it has been moved or destroyed works can continue	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
	Waste generation			**<u>Control through monitoring and management and through avoidance</u>**. • Bins (sufficient number and capacity) to store general and hazardous produced on a daily basis shall be provided at each drilling site. • The bins are to be animal proof, sealed bins that cannot leak leachate material and waterproof that rain water cannot enter into them. • Bins shall be emptied on a weekly basis or if there is a nauseous smell	Waste management

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				coming from them or vectors are breading within them. • An integrated waste management approach shall be used, based on the principles of waste minimisation, reduction, re-use and recycling of materials. • No waste material or litter shall be burnt or buried on site.	
	Disruption of services			**<u>Control through monitoring and management and through avoidance.</u>**	Protection of infrastructure

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Ensure that material extraction and use of machinery do not disrupt any services (i.e. electricity and telephone lines) in close proximity to the drilling sites • Repair any damaged infrastructure as soon as possible	
	Soil erosion			**<u>Remedy through Rehabilitation and Control through management and monitoring.</u>** • Erosion protection measures are to be undertaken. Daily erosion	Soil exposure

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				protection monitoring is to take place at each drilling site prior to commencement of the daily works. If any erosion is identified, it is to be remediated prior to the commencement of works. • Daily erosion checks are to be undertaken on the sump area. If cracks or erosion is identified the side walls are to be battered back to ensure a safe environment for all. • Drainage channels must be kept free draining at all times.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• No pooling of water will be allowed, drainage diversions must be provided to prevent scour of the site, and this is also to direct water away from the impacted area to prevent erosion.	
	Surface and ground water contamination			Control through monitoring and management and through avoidance • Clean drinking water is to be provided for all staff on site at all times. • Store and contain all material	Water quality.

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				on the site appropriately to prevent contamination of surface- and groundwater. • Properly maintain all machinery and equipment so that leaks do not appear and ensure that during servicing all oil, grease etc. is disposed of correctly to prevent contamination of surface- and groundwater.	
Site Establishment and Establishment of additional	Dust generation	Operational activities	Operation	**Remedy through Rehabilitation and Control through management and monitoring**.	Dust generation

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
associated infrastructure such as temporary ablutions, fire breaks, waste storage facilities, water usage, access roads, offices, vehicle turning points workshops etc;				• Application of soil binders or dust suppressants in areas prone to dust generation. • Construction vehicles should comply with speed limits outlined by Applicant.	
	Noise pollution			**<u>Control through management and monitoring</u>** • Compliance with local by-laws and regulations regarding the noise and hours of operation.	Noise pollution

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Avoid working outside normal working hours (i.e. 06:00 to 18:00 weekdays and 6;00 to 12:00 on Saturday). • All machinery to be fitted with appropriate mufflers to reduce noise.	
	Soil erosion			**<u>Remedy through Rehabilitation and Control through management and monitoring.</u>** • Erosion protection measures are to be undertaken, daily erosion protection monitoring is to take place	Soil exposure

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				at each drilling site prior to commencement of the daily works, if any erosion is identified it is to be remediated prior to the commencement of works. • Drainage channels must be kept free draining at all times. • No pooling of water will be allowed, drainage diversions must be provided to prevent scour of the site, and this is also to direct water away from the impacted area to prevent erosion.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
	Ecological Impact			**<u>Remedy through Rehabilitation and Control through management and monitoring.</u>** • Retain all vegetation cover over the vertical drilling sites. The grass is to be mowed as part of site maintenance. • Fire breaks are to be made in collaboration with the land owner, the land owner is to be informed of the making of fire breaks and the method used to make them.	Ecological Impact

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Fire deterrents are to be on standby at all times during the project (they are to be checked for their expiry date prior to them being installed on site). • Retain vegetation cover as long as possible at all sites • Remove or eradicate all alien invasive vegetation growing on stockpiles or in any on the site footprint. • Rehabilitate disturbed areas, rehabilitation undertaken with the	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				rehabilitation measures recommended area. • Fire extinguishers and equipment will be kept on site and serviced regularly at all times for emergencies.	
	Loss of heritage / Archaeological features			**<u>Control through monitoring and management and through avoidance</u>** • No heritage features must be destroyed or removed without a permit in terms of NHRA.	Loss of heritage / Archaeological features

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Should any heritage features or remains be uncovered, works is to stop, the area is to be demarcated and a qualified Archaeologist is to be contacted and contracted to evaluate the site and apply for the appropriate permit if needed. Once the permit has been obtained from SAHRA the archaeologist is then to supervise the removal or destruction of the item. Once it has been moved or destroyed works can continue.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
	Waste generation			**<u>Control through monitoring and management and through avoidance</u>** • Bins (sufficient number and capacity) to store general and hazardous waste produced on a daily basis shall be provided at each drilling site. • The bins are to be animal proof; sealed bins that cannot leak	Waste generation

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				leachate material; and waterproof that rain water cannot enter into them. • Bins shall be emptied on a weekly basis or if there is a nauseous smell coming from them or vectors are breading within them. • An integrated waste management approach shall be used, based on the principles of waste	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				minimisation, reduction, re-use and recycling of materials. • No waste material or litter shall be burnt or buried on site. • All solid waste shall be disposed of offsite at an approved municipal landfill site. • No wastewater shall be disposed of directly into watercourses unless the water quality meets the DWS general discharge limits.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• All hazardous waste is to be stored in a hazardous waste container (sealed, leak proof, water proof container) clearly labelled. • The hazardous waste is to be collected and transported to a registered hazardous waste facility. All waste manifestos are to be kept on site and up to date.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				Weekly checks are to be done to see if all registers are up to date. • All ablutions are to be serviced weekly by a registered service provided, no contamination of sewage will be allowed on site. • The Service provider for ablutions is to ensure that when servicing the toilets, it is done in a manner as to prevent any spills from occurring.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• All servicing of plant and equipment is to be undertaken off site, in the event of an emergency service on site all precautions are to be taken to avoid any spills or harm to the environment. • In the case where an emergency service is required for plant or equipment on site, the soil is to be protected from any potential spills	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				prior to the emergency service commences. • Hydrocarbon spill kits are to be located at every drilling site and kept stocked. A register of the spill kits content is to be kept inside of the kit. Once an item is used the item is to be re-placed immediately therefore extra items used to clean up a spill are to be kept on standby at all times.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
	Visual impacts			Control through monitoring and management and remedy through rehabilitation. • Retain vegetation cover as long as possible to reduce the size of exposed areas. • Rehabilitate disturbed areas must be in line with rehabilitation measures recommended for each area.	Aesthetically pleasing

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
Storm Water Infrastructure	Waste generation	Operational activities	Operation	**<u>Control through monitoring and management and through avoidance</u>** • Bins (sufficient number and capacity) to store general and hazardous waste produced on a daily basis shall be provided at each drilling site. • The bins are to be animal proof; sealed bins that cannot leak	Avoid pollution

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				leachate material; and waterproof that rain water cannot enter into them. • Bins shall be emptied on a weekly basis or if there is a nauseous smell coming from them or vectors are breading within them. • An integrated waste management approach shall be used, based on the principles of waste	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				minimisation, reduction, re-use and recycling of materials. • No waste material or litter shall be burnt or buried on site. • All solid waste shall be disposed of offsite at an approved municipal landfill site. • No wastewater shall be disposed of directly into watercourses unless the water quality meets the DWS general discharge limits.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• All hazardous waste is to be stored in a hazardous waste container (sealed, leak proof, water proof container) clearly labelled. • The hazardous waste is to be collected and transported to a registered hazardous waste facility. All waste manifestos are to be kept on site and up to date.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				Weekly checks are to be done to see if all registers are up to date. • All ablutions are to be serviced weekly by a registered service provided, no contamination of sewage will be allowed on site. • The Service provider for ablutions is to ensure that when servicing the toilets, it is done in a manner as to prevent any spills from occurring.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• All servicing of plant and equipment is to be undertaken off site, in the event of an emergency service on site all precautions are to be taken to avoid any spills or harm to the environment. • In the case where an emergency service is required for plant or equipment on site, the soil is to be protected from any potential spills	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				prior to the emergency service commences. • Hydrocarbon spill kits are to be located at every drilling site and kept stocked. A register of the spill kits content is to be kept inside of the kit. Once an item is used the item is to be re-placed immediately therefore extra items used to clean up a spill are to be kept on standby at all times.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
	Within 500m of a wetland and crossing over watercourse on existing tracks and roads			**<u>Control through monitoring and management and through avoidance</u>** • This is only possible in clearing or upgrading roads as no watercourse will be impact on in the site layout as no activity will be undertaken within 100 m of a watercourse, wetland or drainage line.	Preservation of watercourse

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• However, when working on roads through drainage lines, wetlands or watercourse Applicant is to ensure that no contaminants enter into the systems and that no hydro-carbons, foreign material or sediment is allowed to be deposited into the systems. • If we have a flow of water, water is to be quality tested (according to the DWS general limits) up and	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				down stream of the works on a weekly basis during construction of the road, this will define the impact the activity is having on the watercourse.	
	Soil erosion			**<u>Control through monitoring and management and through avoidance and remedy through Rehabilitation</u>**	Soil exposure

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Erosion protection measures are to be undertaken, daily erosion protection monitoring is to take place at all site prior to commencement of the daily works, if any erosion is identified it is to be remediated prior to the commencement of works. • Drainage channels must be kept free draining at all times.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• No pooling of water will be allowed, drainage diversions must be provided to prevent scour of the site, and this is also to direct water away from the impacted area to prevent erosion.	
Designating stockpile areas for the excavated	Public safety	Operational activities	Operation	**Control through monitoring and management.**	Rehabilitation standards

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
material and for topsoil				• Vehicle movement shall be limited to defined tracks and no driving on stockpiles will be permitted. • Movement of construction vehicles shall be limited to daylight hours. • Dangers associated with the movement of large vehicles shall be clearly sign-posted and haul vehicles shall comply with speed limits.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• All are to be kept closed and locked at all times and no driver may stop and harvest crops or animals from the farms, the farm areas are considered as no go areas.	
	Soil erosion			**<u>Control through monitoring and management and through avoidance and remedy through rehabilitation</u>**	Soil exposure

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Erosion protection measures are to be undertaken, daily erosion protection monitoring is to take place at each drilling site prior to commencement of the daily works, if any erosion is identified it is to be remediated prior to the commencement of works. • Drainage channels must be kept free draining at all times.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• No pooling of water will be allowed, drainage diversions must be provided to prevent scour of the site, this is also to direct water away from the impacted area to prevent erosion.	
	Noise pollution			**Control through monitoring and management and through avoidance**	Safety

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Compliance with local by-laws and regulations regarding the noise and hours of operation. • Avoid working outside normal working hours (i.e. 07:00 to 17:00 weekdays and between 7:00 and 13:00 on weekends). • All works outside, or normal working hours is to be agreed and communicated with the landowner.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• The landowner and/or land occupiers are to be notified at least 3 days prior to any drilling activity commences.	
	Dust pollution			**<u>Control through monitoring and management and through avoidance and remedy through Rehabilitation.</u>** • The area is to be wetted or covered to ensure that the	Air Quality

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				material does not produce high levels of dust.	
Decommissioning and Rehabilitation	Noise Pollution	Decommissioning	Decommissioning and Rehabilitation	**<u>Control through monitoring and management and through avoidance</u>** • Compliance with local by-laws and regulations regarding the noise and hours of operation.	Noise levels

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Avoid working outside normal working hours (i.e. 08:00 to 17:00) and during weekends. • Application of soil binders or dust suppressants in areas prone to dust generation. • Construction vehicles should comply with speed limits.	
	Ecological integrity and waste management			**Control through monitoring and management and through**	Rehabilitation standards

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				<u>avoidance and remedy through Rehabilitation.</u> • During rehabilitation, the topography would be finished off to blend in with the surrounding environment. • The area is to be cleared of all foreign objects, materials, and alien plants	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Once the area is shaped correctly the compacted areas are to be ripped at 300mm and topsoil is to be replaced. • Areas that have not had topsoil striped are to be monitored for alien plant growth and vegetation recovery. If after a year the vegetation has not recovered the area is to be hand seeded with a	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				Highveld indigenous grass mix (if the site is located in grasslands). • The area is then to be seeded with to the indigenous grasses of the area (Highveld grass mix). **<u>Control through monitoring and management and through avoidance</u>**	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• All the waste from demolition must collected from site for disposal. • Compliance with local by-laws and regulations regarding the noise and hours of operation. • Application of soil binders or dust suppressants in areas prone to dust generation. • Material loads must be properly covered during transportation.	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				Speed limits for vehicles on unpaved roads must be enforced and haul distances minimised as far as possible. • Rehabilitation of drilling sites are to be undertaken in a phased manner in line with the mining and rehabilitation plans and recommended rehabilitation measures	

Name of Activity (E.g.: prospecting- drilling site, camp site, accommodation, equipment storage, site office access route etc) e.g: Mining- excavations, blasting, stockpiles, discard dump or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines, conveyors, etc.)	**POTENTIAL IMPACT** (including the potential impacts of cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air etc)	**ASPECTS AFFECTED**	**PHASE**	**MITIGATION TYPE** (modify, remedy, control, stop) (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities etc) E.g. Modify through alternative methods. Control through noise control through management and monitoring though rehabilitation	**STANDARD TO BE ACHIEVED**
				• Drilling sites are to be rehabilitated in line with closure objectives and in consultation with landowners.	

5. FINANCIAL PROVISION

Financial provision will be attached as **Appendix 5** of this report

5.1 Determination of the amount of Financial Provision

The financial provision will be assessed and calculated as required in terms of the requirements of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) as amended General Notice Regulation (GNR) 1147 “Regulations pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations” (GNR1147 and proposed GNR 667).

The financial provision will be made available to the DMRE by Bonizenzo Holdings (Pty) Ltd in the form of a guarantee from a financial institution to ensure that adequate rehabilitation will be undertaken following the LoM for the proposed Project. The financial provision will be calculated according to Regulation 6 of the Financial Provision Regulations (2015) which prescribe the minimum content requirements.

The financial provision estimate will be calculated based on the Financial Provision Regulations (GNR. 1147 and proposed GN R 667).

5.2 Determine the closure objective and the extent to which they have been aligned to the baseline environment described under the regulation.

Intended closure objectives:

The main closure objectives associated with this project is to:

- Ensure that the shareholder value is preserved.
- Ensure that stakeholders’ needs, concerns and aspirations are taken into account when considering closure.
- Comply with relevant or applicable legislative requirements;
- Ensure the health, safety and welfare of all humans and animals are safeguarded from hazards resulting from drilling related activities such as this development.
- Limit or mitigate adverse environmental effects to an extent that it is acceptable by all parties.

- Ensure boreholes are rehabilitated to, as far as is practicable to its natural state, or to a predetermined and agreed standard or land use which conforms with the concept of sustainable development.

5.3 Confirm specifically that the environmental objective in relation to the closure have been consulted with landowners and interested and affected parties

The closure requirements to be met as part of this application will be in line with issues raised by the Interested and Affected Parties.

5.4 Provide a rehabilitation plan that describes and show the scale and aerial extent of the main mining activity, include anticipated mining area at the time of closure.

A detailed site rehabilitation plan will be compiled at decommissioning phase.

The following will be undertaken as part of the rehabilitation activities of the areas that will be impacted by the prospecting and associated infrastructure:

- Seal all exploration boreholes;
- Ensure that no erosion as result of drilling;
- Ensure that all contaminated areas a cleaned and soil is deposited as per the EMP; and
- Ensure that all compacted areas as result of prospecting are ripped and allow for revegetation.

5.5 Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objective

Rehabilitation activities will ensure that the no further impacts are expected as result of the prospecting activities on the study area.

5.6 Calculate the state and quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guidelines.

Refer to **Appendix 5** for the closure cost assessment and financial provision done by the Bonizenzo.

Table 4: Bonizenzo DMRE Units Rates, as at March 2022

Bonizenzo Holdings (Pty) Ltd Prospecting right with Bulk Sampling DMRE Unit Rates, as at March 2022						
Item	**Description**	**Unit**	**Rates**	**Quantity**	**Weighting Factor**	**Amount (Rands)**
1	Dismantling of processing plant and related structures (including overland conveyors and power lines)	m^3	R17,00	0	1	R0,00
2(A)	Demolition of steel buildings and structures	m^2	R236,79	0	1	R0,00
2(B)	Demolition of reinforced concrete buildings and structures	m^2	R348,96	24	1	R8 375,04
3	Rehabilitation of access roads	m^2	R22,10	2400	1	R53 040,00
4(A)	Demolition and rehabilitation of electrified railway lines	m	R411,27	0	1	R0,00
4(B)	Demolition and rehabilitation of non-electrified railway lines	m	R224,33	0	1	R0,00
5	Demolition of housing and/or administration facilities	m^2	R473,58	0	1	R0,00
6	Opencast rehabilitation including final voids and ramps	ha	R116 040,00	0,5	1	R58 020,00
7	Sealing of shafts, adits and inclines	m^3	R127,12	0	1	R0,00
8(A)	Rehabilitation of overburden and spoils	ha	R79 680,00	2,5	1	R199 200,00
8(B)	Rehab of processing waste deposits & evaporation ponds (basic)	ha	R206 132,84	0	1	R0,00
8(C)	Rehab of processing waste deposits and evaporation ponds (acidic)	ha	R598 707,46	0	1	R0,00
9	Rehabilitation of subsided areas	ha	R138 585,07	0	1	R0,00

Bonizenzo Holdings (Pty) Ltd Prospecting right with Bulk Sampling DMRE Unit Rates, as at March 2022						
Item	**Description**	**Unit**	**Rates**	**Quantity**	**Weighting Factor**	**Amount (Rands)**
10	General surface rehabilitation	ha	R131 107,46	0,06	1	R7 866,45
10	General surface rehabilitation - sealing of boreholes	ha	R131 107,46	0,035	1	R4 588,76
11	River diversions	ha	R131 107,46	0	1	R0,00
12	Fencing	m	R149,55	100	1	R14 955,00
13	Water management	ha	R49 850,75	0	1	R0,00
14	2 to 3 years of maintenance and aftercare	ha	R1 744,78	10,005	1	R17 456,52
15A	Specialist study	Sum	R0,00	0	1	R0,00
15B	Specialist study	Sum	R0,00	0	1	R0,00
	Sub-total 1 *(Multiply Sum * of 1 – 15 by Weighting factor 2)*					**R363 501,77**
16	Preliminary and General @ 6%				6%	R21 810,11
17	Contingency @ 10%				10%	R36 350,18
	Sub-total 2 *(Subtotal 1 plus sum of management and contingency)*					**R421 662,06**
VAT 15%						R63 249,31
Grand Total (Subtotal 3 including VAT)						**R484 911,36**

5.7 Confirm that the financial provision will be provided as determined

Bonizenzo confirmed that the financial provision detailed on **Appendix 5** will be provided by the Bonizenzo as part of its overall mine provision for the rehabilitation of disturbed areas.

6. MECHANISMS FOR COMPLIANCE AND THE PERFORMANCE ASSESSMENT AGAINST THE ENVIRONMENTAL MANAGEMENT PROGRAMME AND REPORTING THEREON

Table 5: Mechanism for Compliance and the Performance Assessment

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Environmental permits and authorisations	Not applicable (relevant authorisations, registrations and permits are underway)	• To ensure that all relevant authorisations and permits have been obtained and are located on site at all times. • Ensure that a copy of the BA and EMPr are kept on-site and communicated to site personnel.	Environmental Officer.	Prior to site establishment
Site establishment	• Loss of natural vegetation • Soil erosion • Loss of land capability • Visual impacts and	• To ensure the no-go areas are identified communicated and demarcated. • Vegetation clearing must be limited to the demarcated area.	Environmental Officer.	Daily monitoring by the applicant designated Environmental Officer. and monthly inspected by the Environmental Control Officer.

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
	• Introduction of weeds and alien invasive plants • Dust emissions • Noise • Heritage	• Ensure dust suppression schedule and measures are in place in areas prone to dust generation. • Ensure alien plants and weeds are managed at all times, to prevent a seed bank from establishing through drawing up an alien plants monitoring and clearing schedule. • After each rain event, check for erosion. • All plant and vehicles are to be checked on a daily basis using a daily checklist to identify any problems with equipment. • While clearing an area, the area is to be monitored for the		

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
		presence of heritage artefacts or unmarked graves.		
Diamond and Directional Drilling	• Soil erosion • Loss of land capability • Visual impacts and • Introduction of weeds and alien invasive plants • Dust emissions • Noise	• To ensure the no-go areas are identified communicated and demarcated. • Vegetation clearing must be limited to the demarcated area. • Ensure dust suppression schedule and measures are in place in areas prone to dust generation. • Ensure alien plants and weeds are managed at all times, to prevent a seed bank from establishing through drawing up an alien plants monitoring and clearing schedule.	Environmental Officer.	Ensure weekly monitoring by the applicants designated Environmental Officer.

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
		• Daily checks for erosion are to be done and repaired if identified. • All plant and vehicles are to be checked on a daily basis using a daily checklist to identify any problems with equipment.		
Construction of structures and/or facilities on site (storage, berms, fence, ablution facilities etc.)	• Soil erosion • Loss of land capability • Visual impacts and • Introduction of weeds and alien invasive plants • Dust emissions • Noise	• To ensure the no-go areas are identified communicated and demarcated. • Vegetation clearing must be limited to the demarcated area. • Daily checks that all gates are closed so that no livestock is being mixed to let out as a result of the activities • Ensure dust suppression schedule and measures are in	Environmental Officer.	Ensure weekly monitoring by the applicants designated Environmental Officer.

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
		place in areas prone to dust generation. • Ensure alien plants and weeds are managed at all times, to prevent a seed bank from establishing through drawing up an alien plants monitoring and clearing schedule. • Daily checks for erosion are to be done and repaired if identified. • All plant and vehicles are to be checked on a daily basis using a daily checklist to identify any problems with equipment.		
Construction of access roads	• Soil erosion • Noise pollution; • • Dust generation;	• To ensure the impacts is limited to the designated area. • Ensure the erosion control measures area in place such as	Environmental Officer.	Ensure weekly monitoring by the applicants designated Environmental Officer.

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
	• Traffic congestion.	soil berms, v drains and cut off drains. • Ensure all the traffic measures are in place to direct traffic during construction.		
Stockpiles of soil and inert material.	• Surface and ground water contamination; • Dust generation; • Noise pollution; • Visual impacts; • Disruption of services; and • Waste • Introduction of weeds and alien invasive plants	• To ensure no contaminated run-off from entering drainage lines • Ensure dust suppression measures are in place in areas prone to dust generation • To ensure compliance with local by-laws and regulations regarding the noise and hours of operation. • To ensure that drilling activities do not disrupt services or agricultural activities	Environmental Officer.	Ensure weekly monitoring by the applicants designated Environmental Officer.

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
		• Avoid damage to surrounding private property and infrastructure due to runaway fires by ensuring that the necessary fire prevention measures are in place. • No open fires are allowed on the site. • Ensure that general and hazardous waste is collected frequently on site. All general waste shall be further sorted to maximise its re-use and recycling. • All documentation relating to waste stipulated in the above sections is to be checked on a weekly basis.		

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
		• Ensure the surface water runoff is appropriately channelled through or around the stockpile areas to prevent erosion damage resulting from stormwater runoff. • Ensure alien plants and weeds are managed at all times, to prevent a seed bank from establishing. • Monitor the size of the stockpile that it does not exceed the designated height		

7. INDICATING THE FREQUENCY OF THE SUBMISSION OF THE PERFORMANCE ASSESSMENT/ ENVIRONMENTAL AUDIT REPORT

Based on the outcome of this assessment and the level of impacts that may be associated with the proposed project, it is recommended that the frequency of conducting and reporting on a performance assessment can be every two years.

This recommendation will be in line with Section 26(e) of the NEMA EIA Regulations of 2014, which states that:

The frequency of auditing of compliance with the conditions of the environmental authorisation and of compliance with the EMPr, and where applicable the closure plan, in order to determine whether such EMPr and closure plan continuously meet mitigation requirements and addresses environmental impacts, taking into account processes for such auditing prescribed in terms of these Regulations: provided that the frequency of the auditing of compliance with the conditions of the environmental authorisation and of compliance with the EMPr may not exceed intervals of five years; the frequency of the auditing of compliance with the conditions of the environmental authorisation and of compliance with the EMPr may not exceed intervals of five years.

8. ENVIRONMENTAL AWARENESS PLAN

8.1 Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work.

- **Environmental Induction Training**

The purpose of the induction training is to promote a general awareness of the sensitivity of the environment, the legal commitments and the aspirations of Applicant in terms of environmental management and the environmental consequences of individual actions. Induction is applicable to all employees, contractors and service providers that will be working within the mine.

- **Environmental Induction for Employees and Service Providers/Visitors**

The induction training for employees, contractors and service providers and on-site visitors is to take the form of a site information conditions which will include:

  - A description of environmental sensitivities in the study area environment.

- A description of broad-based objectives of environmental management for this project.
- A discussion of how individual actions can impact on the environment.
- A discussion of how individual actions can assist in the successful implementation of the environmental authorisation and the EMPr.
- Other relevant generic environmental and corporate requirements.

Requirements

- Environmental induction material (posters, power point presentations etc.);
- Code of Conduct;
- Register of inducted employees, service providers and contractors.

9. ENVIRONMENTAL AWARENESS PROGRAMME

The purpose of the general environmental awareness programme is to promote ongoing environmental awareness amongst the workforce. All members of the project workforce and contractors are to be incorporated into the general environmental awareness programme.

Monthly Environmental Topics

A monthly environmental awareness topic is to be chosen based on the outcomes of internal audits as well as topics of general environmental interest. The topic is to be communicated to the workforce through:

- Discussions at all SHE meetings.
- Posters on notice boards.

Monthly environmental topics could include:

- General and environmental topics
- Reporting environmental incidents
- Environmental impacts associated with water, waste, soil, groundwater, fauna, flora, etc
- Environmental emergency training

- Preventing and cleaning up spills
- Reduce, reuse and recycle
- General versus hazardous waste
- Alien vegetation control
- Saving water
- Saving energy
- Heritage sites

Requirements

- Environmental topics to be included on the agenda of relevant environmental related meetings.
- Environmental awareness material to be produced and posted.

9.1 Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work.

- **Specific Environmental Awareness Training**

The purpose of the job specific environmental awareness training is to ensure that employees within the specific management units are equipped to implement the actions committed to in the environmental authorisation and the EMPr. All members of the workforce are to be subject to job specific environmental training. This training is to be undertaken by the managers of each of the management units. Supervisors will be trained to assist with the implementation and training of the work force.

10. ENVIRONMENTAL RISK IDENTIFICATION

The environmental risks associated with each management area are to be identified by the by the site personnel. The risks are to be documented and actions to reduce these risks should be developed. The actions are to ensure overall compliance with the commitments of the environmental authorisation and the EMPr. The findings of the performance assessment audits and EMPr compliance monitoring will also assist in identifying risks.

- **Training**

All members of the workforce are to be subject to job specific training. This may include but not be limited to:

  - Preventing pollution
  - Spill prevention and clean-up procedures
  - The location and purpose of material safety data sheets (MSDSs)
  - Managing waste
  - No-go areas
  - Incident reporting

The aspects to be covered however are dependent on the findings of the individual risk assessments. This is to be undertaken for each management area initially. Thereafter all new members of the workforce are to undergo environmental training as part of the training required to do their particular job.

- **Corrective Action**
  - Any actions undertaken by a worker that pose a risk to the environment are to be stopped immediately.
  - The worker is to be instructed in how to correct the action.

Non-compliance is to be incorporated into the standard disciplinary procedure applicable to the project.

<u>Requirements</u>

  - Risk assessment and action plan for each of the project areas.
  - Training of the workforce within each management area.
  - Training of new members of the workforce.
  - Records of appropriate training conducted.

10.1 Manner in which risk will be dealt with in order to avoid pollution or the degradation of the environment.

Refer on the items above with specific to each of the requirements to be met.

11. SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

Currently none specified.

12. UNDERTAKING

The EAP herein confirms

a) The correctness of information provided in this report | X

b) The inclusion of comments and inputs from stakeholders and I&APs | X

c) The inputs and recommendation from specialist reports where relevant | X

d) That the information provided by the EAP to the I&APs and any response by the EAP to the comments and input made by the I&APs are correctly reflected herein | X

Signature of the Environmental Assessment practitioner

LICEBO ENVIRONMENTAL AND MINING (PTY) LTD

Company Name

[29 March 2022]

Date

-END-