



**mineral resources**

Department:  
Mineral Resources  
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: XAKWA COAL (Pty) Ltd

REFERENCE NUMBER: NC 30/5/1/3/2/10393

## **ENVIRONMENTAL MANAGEMENT PLAN**

**SUBMITTED  
IN TERMS OF SECTION 39 AND OF  
REGULATION 52 OF THE MINERAL AND  
PETROLEUM RESOURCES DEVELOPMENT  
ACT, 2002,  
(ACT NO. 28 OF 2002) (the Act)**

## **STANDARD DIRECTIVE**

Applicants for prospecting rights or mining permits, are herewith, in terms of the provisions of Section 29 (a) and in terms of section 39 (5) of the Mineral and Petroleum Resources Development Act, directed to submit an Environmental Management Plan strictly in accordance with the subject headings herein, and to compile the content according to all the sub items to the said subject headings referred to in the guideline published on the Departments website, within 60 days of notification by the Regional Manager of the acceptance of such application. This document comprises the standard format provided by the Department in terms of Regulation 52 (2), and the standard environmental management plan which was in use prior to the year 2011, will no longer be accepted.

**IDENTIFICATION OF THE APPLICATION IN RESPECT OF WHICH  
THE ENVIRONMENTAL MANAGEMENT PLAN IS SUBMITTED.**

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**1 REGULATION 52 (2): Description of the environment likely to be affected by the proposed prospecting or mining operation**

- 1.1 The environment on site relative to the environment in the surrounding area.

The application area is situated on a potential area with potential limestone and dolomite. The surrounding environment is naturally flat and featureless with the open surface water bodies in the form of non-perennial streams and water holes (Wind pumps)

Vegetation of the area is characteristic of the Dry Sandy Highveld Grassland Biome with a few Sweet Thorn (*Acacia karroo*) trees occurring along water courses. Characteristic grasses include the Lehmann's Lovegrass (*Eragrostis lehmanniana*), Small Buffalograss (*Panicum lolratum*), *Eragrostis obtuse* and *Stipagrostis uniplumis*, with other prominent species such as Redgrass (*Themeda triandra*), Weeping Lovegrass (*Eragrostis curvula*) and Hairy Lovegrass (*Eragrostis trichophora*). The shrub layer is poorly developed with

scattered species of Bitterkaroo (*Pentzia globosa*), Poison Apple (*Solanum panduriforme*) and Tummy Bitterroot (*Dicoma anomala*).

## 1.2 Applicable Environmental Legislation

- 1.2.1 Chapter 2 of the Constitution of South Africa read with section 7 and section 24
- 1.2.2 National Environment Management Act 107 of 1998 (NEMA) which gives the effect of section 24 of the constitution
- 1.2.3 The MPRD Act 28 of 2002
- 1.2.4 Mineral and Petroleum Resources Regulations as per Regulation 107(1) which outlays procedures to be followed for mining ,permits prospecting rights application or renewals
- 1.2.5 The National Heritage Resources Act (Act 25 of 1999. Which created Agencies like SAHRA
- 1.2.6 National Water Act( Act 36 of 1998
- 1.2.7 National Forest Act (Act 84 of 1998)

## 1.3 The specific environmental features on the site applied for which may require protection, remediation, management or avoidance.

There are no environmental features on the area of interest that may require protection, remediation, management or avoidance.

## 1.4 Map showing the spatial locality of all environmental, cultural/heritage and current land use features identified on site.

- 1.5.1 The description of the environment has been compiled by trained personnel of XAKWA COAL (Pty) Ltd and not with the participation of any interested and/or affected parties as the results of public participation was outstanding during the completion of this document.

- 1.5.2 We have consulted with the landowner and lawyers representing the affecting people, communication was obtained. We have attached letters and responses as annexures.

**2 REGULATION 52 (2) (b): Assessment of the potential impacts of the proposed prospecting or mining operation on the environment, socio- economic conditions and cultural heritage.**

- 2.1 Description of the proposed prospecting or mining operation.**

- 2.1.1 The main prospecting activities (e.g. access roads, topsoil storage sites and any other basic prospecting design features)

- 2.1.2 Reclamation of Dumps
- 2.1.3 Utilization of Existing Road
- 2.1.4 Chemical Toilets
- 2.1.5 Site Establishment

### 2.1.6 Fuel Storage

### 2.1.7 Waste Management on Site

- I. Access roads: The existing roads will be used as far as possible for access roads and maintained
- II. Mine roads: Mine roads will be limited to existing farm roads and the minimal extra roads will be made should it be deemed necessary. Roads constructed will be done by scraping and no foreign materials will be used for this purpose.
- III. Mining of fissure: Mining will take place within the existing shaft. The material extracted will be crushed and transported to the recovery plant where all possible diamonds can be recovered. All waste materials, topsoil and overburden will be stored at appropriate sites till rehabilitation can be initiated.
- IV. Topsoil, waste dumps, and stockpiles: No topsoil or overburden will be disturbed during the mining activities as limestone material will be done through underground mining. Waste dumps will be stored as the different sites were generated, but used for backfilling once mining ceased. Stockpiles are stored near the processing plant for cost effective mining purposes.
- V. Dumping trucks transporting the materials will not run 'empty', meaning that when dumping the stock gravel they will be filled with waste material for backfilling purposes.
- VI. Storage, maintenance and office sites: All storage, maintenance and office sites will comply with the necessary regulations and specific mitigation measures will also be implemented to minimize environmental risks.
- VII. Such facilities may include: Chemical storage, scrap yard, diesel bays, vehicle parking/storage lot, vehicle maintenance yard, chemical toilet facilities and offices.

- VIII. Processing plant: The processing plant include a crusher, vibrating screen, 10ft rotating pan, sorting plant and dewatering screens. At this site the major mineral processing activities will occur and the limestone recoveries.
- IX. Water usage: The main water supply will be from the evaporation dam, but water from the old shaft will also be used during the mineral processing activities. All waste water, after dewatering, will be stored within the evaporation dam for recycling purposes or drainage into the water system.
- X. Coffey/Evaporation dam: The main purpose of the evaporation dam is for water storage during the mining activities for water recycling. The water from the processing plant will be stored here until final rehabilitation at mine closure.

### **2.1.2 Plan of the main activities with dimensions**

Main mining activities will be conducted in such a way that minimal environmental damage is ensured.

- Access roads: The existing roads will be used as far as possible for access roads and maintained.
- Mine roads: Mine roads will be limited to existing farm roads and the minimal extra roads will be made should it be deemed necessary. Roads constructed will be done by scraping and no foreign materials will be used for this purpose.
- Mining of fissure: Mining will take place within the existing shaft. The material extracted will be crushed and transported to the recovery plant where all possible diamonds can be recovered. All waste materials, topsoil and overburden will be stored at appropriate sites till rehabilitation can be initiated.
- After mining activities ceased shall the excavation be backfilled with waste, roughs, overburden and the topsoil, in this order, and rehabilitated as close as possible to its original environmental state.
- Equipment to be used during the prospecting operations includes:
  - 10ft Rotating pan
  - 1 x Crusher
  - 1 x Excavator
  - 1x Front end loaders
  - 1x Dumper trucks
  - 1 x Dewatering screen
  - 1 x Sorting plant
  - Possible DMS and Flow sort machinery
- Topsoil, waste dumps and stockpiles: No topsoil or overburden will be disturbed during the mining activities as kimberlitic material will be done through underground mining. Waste dumps will be stored at the different sites where generated. Stockpiles are stored near the processing plant for cost effective prospecting purposes.

- Dumping trucks transporting the materials will not run 'empty', meaning that when dumping the stock gravel they will be filled with waste material for backfilling purposes.
- Storage, maintenance and office sites: All storage, maintenance and office sites will comply with the necessary regulations and specific mitigation measures will also be implemented to minimise environmental risks.
- These facilities will be shared with the kimberlitic pipe operations and thus none of the mentioned facilities will be erected on site.

- Processing plant: The processing plant include a crusher, vibrating screen, 10ft rotating pan, sorting plant and dewatering screens. At this site the major mineral processing activities will occur and the diamonds recovered.
- Again the processing plant will be shared with the kimberlitic pipe operations and thus will not be erected on site.
- Water usage: The main water supply will be from the evaporation dam, but water from the old shaft will also be used during the mineral processing activities. All waste water, after dewatering, will be stored within the evaporation dam for recycling purposes or drainage into the water system.
- Cofferdam/Evaporation dam: The main purpose of the evaporation dam is for water storage during the mining activities for water recycling. The waste water from the processing plant will be stored here until final rehabilitation at mine closure. Shared usage of the dams at the kimberlitic pipe operations will be used.

#### **2.1.8 Description of construction, operational, and decommissioning phases.**

- Construction: during construction will the shaft equipment be checked and serviced. No other construction will occur as processing operation equipment will be shared with the kimberlitic pipe mining operations.
- Operational: during the operation phase will the kimberlite material be removed from underground, transported to surface and the diamondiferous material processed to remove all possible diamonds. The following methodological process will be implemented to ensure cost effective mining as well as successful rehabilitation.
- Material recovered from underground is crushed and screened to remove the rough boulder material from the finer gravels. The latter is then transported to the processing plant while the rough material is stored for backfilling.
- At the processing plant is the gravel is washed in a rotating pan to obtain a concentrate of heavy material. The lighter material is discarded with the puddle, which is a by-product of diamond recovery processes and treated with a dewatering screen. The 'dry mud' will be stored a coffer dam to be used with the boulder material for initial backfilling while the excess water is recycled and stored within the mentioned evaporation dam.
- The concentrate obtained for the washing plant is now being treated at the sorting/recovery plant where all diamonds are

recovered and the surplus stored on a waste dump to be used for further back filling purposes.

- After mining ceased backfilling into the shaft will start till all waste dump material has been backfilled.
- Decommissioning: Once the mining activities have been completed the mine will start with the decommissioning and closure phase. During such will all the compacted ground will be ripped and rehabilitated. Also will all the mine roads and trampled areas be ripped, rehabilitated and inspected for vegetation re-growth.

#### **2.1.9 Listed activities (in terms of the NEMA EIA regulations)**

- Dust and noise generation – hauling activities.
- Water use – water usage and management during the mineral processing activities.
- Rehabilitation – the rehabilitation of affected areas and the recovery thereof.

## **2.2 Identification of potential impacts**

### **2.2.1 Potential impacts per activity and listed activities.**

- Mining
- Noise disturbance – during hauling and mineral processing activities is noise generated by the machinery. The noise will be much localized and should have no impact on the surrounding environment.
- Air quality loss – dust will be generated during the hauling activities. The dust generated may have an impact on the air quality, but with localized effects and should not have an effect on the surrounding environment. For this the impact can be regarded as low.
- Soil pollution – chemical soil pollution is always a possibility during mechanical mining operations. Working machinery and storage facilities bears a risk for chemical spillage and the impact thereof may be very severe.
- Soil compaction – heavy vehicles driving off-road bears a great risk to the trampling of vegetation and the compaction of the soil. If not rehabilitated vegetation re-growth is unforeseen and poses a medium risk to the environment.
- Littering pollution – littering during the mining activities can happen and may have a low to medium impact on the

environment depending on the type of littering and the remediation thereof.

- Water pollution – chemical contaminated water from the mineral processing plant and storage facilities bears a risk to the environment. This impact should always be regarded as high and proper mitigation and/or remediation measures should be in place.
- Rehabilitation – as seen from the previous mining activities of the pipe improper and/or lack of rehabilitation can permanently damage the environment and its surrounding. Rehabilitation should be correctly done to ensure a healthy and prosperous environment. Thus can the impact be regarded and medium to high no and/or improper rehabilitation occurs.

### **2.2.2 Potential cumulative impacts.**

- Soil erosion may occur when vegetation loss is severe and not re-established within a relatively short period of time. The main impact that may lead to soil erosion is the loss of vegetation, soil pollution and soil compaction.
- Ground water contamination may occur during the raining season when runoff water enters nearby open surface water bodies. When this runoff water comes in contact with chemically polluted soil the chance for water contamination is high.

### **2.2.3 Potential impact on heritage resources**

The impacts on any heritage resources could not be identified nor verified as the Archaeological Report on the First Phase Heritage Impact Assessment is still outstanding during the compilation of this report and this can only be done once the mentioned study is conducted and the report thereof received.

It is currently on foreseen that any impact may occur as this is a previously mined area and if any objects of heritage significant existed it they were probably destroyed during the previous mining activities.

### **2.2.4 Potential impacts on communities, individuals or competing land uses in close proximity.**

(If no such impacts are identified this must be specifically stated together with a clear explanation why this is not the case.)

It is not foreseen that any individuals and/or competing land uses may be directly influenced or impacted by the prospecting operations. Most of the identified impacts are much localized and present mining activities occur on neighbouring farms.

#### **2.2.5 Confirmation that the list of potential impacts has been compiled with the participation of the landowner and interested and affected parties,**

The list of impacts has not been consulted with the participation of the landowner and/or any interested and/or affected parties. This is due to the outstanding public participation process and the report on such.

All impacts have been solely identified by trained personnel of XAKWA COAL (Pty) Ltd.

#### **2.2.6 Confirmation of specialist report appended.**

(Refer to guideline)

No specialist report is appended to this document as the required specialist study on the possible heritage resources is still outstanding

### **3 REGULATION 52 (2) (c): Summary of the assessment of the significance of the potential impacts and the proposed mitigation measures to minimise adverse impacts.**

#### **3.1 Assessment of the significance of the potential impacts**

##### **3.1.1 Criteria of assigning significance to potential impacts**

The environmental evaluation is done with the assumption that all mitigatory measures and rehabilitation plans have been adhered to (Hacking, 1999).

The preceding list of identified impacts is evaluated hereunder in terms of the following criteria:

SEVERITY	<ul style="list-style-type: none"> <li>- Low negative impact</li> <li>- Medium negative impact</li> <li>- High negative impact</li> </ul>
DURATION	<ul style="list-style-type: none"> <li>- Short-term</li> <li>- Medium-term</li> <li>- Long-term</li> </ul>

SPATIAL SCALE	<ul style="list-style-type: none"><li>- Localised</li><li>- Fairly widespread</li><li>- Long-term</li></ul>
CONSEQUENCE	<ul style="list-style-type: none"><li>- Low consequence</li><li>- Medium consequence</li><li>- High consequence 14</li></ul>

SIGNIFICANCE      - Low overall significance  
    - Medium overall significance  
    - High overall significance

Evaluations are done in terms of the impacts being managed to reduce environmental damage.

#### LEGEND FOR TABLE

Se = Severity	L = Low negative impact
D = Duration	M = Medium negative impact
SP= Spatial scale	H = High negative impact
C = Consequence	pos = Positive impact
P = Probability	

### **3.1.2 Potential impact of each main activity in each phase, and corresponding significance assessment**

*See attached document.*

### **3.1.3 Assessment of potential cumulative impacts.**

All potential cumulative impacts can be regarded as medium to low in significance

## **3.2 Proposed mitigation measures to minimise adverse impacts.**

### **3.2.1 List of actions, activities, or processes that have sufficiently significant impacts to require mitigation.**

Although there are significant activities that pose a greater risk to the significance of impacts on the environment the entire invasive operation must be monitored and mitigation measures implemented to prevent any environmental degradation.

The above mentioned significant activities include:

- Hauling process
- Maintenance procedures and activities
- Water usage

### **3.2.2 Concomitant list of appropriate technical or management options**

(Chosen to modify, remedy, control or stop any action, activity, or process which will cause significant impacts on the environment, socio-economic conditions and historical and cultural aspects as identified. Attach detail of each technical or management option as appendices)

Mitigation measures are to avoid pollution or degradation of the environment. As all mining operations or factors relating to mining operations pose a risk/thread to the environment, several mitigation measures should be implemented to minimize the risk thereof.

- Operational procedures
  - Roads and the amount of roads will be planned and constructed with the minimal impact on the environment.
  - All vehicular traffic is restricted to the roads and to a speed of 20 km/h for heavy vehicles and 40 km/h for light weight vehicles.
  - Suppression of dust on the roads will occur by the spraying of chemical bounded/fresh/recycled water from the plant site.

- Littering of any product, including cigarette buds, at any operational site shall be seen as an offence, and will not be tolerated.
- The mine shall be responsible for any clean up resulting from the failure by his employees or suppliers.
- The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document.
- No vehicle repairs and maintenance will occur within the operational area and are restricted to the workshop.
- All related chemicals must be handled to minimize spillage and if any occur, it must be dealt with according the relevant remediation measures.
- Washing of equipment shall be restricted to urgent maintenance requirements only.
- The mine shall restrict all operations that result in undue noise disturbance to local communities to day light hours on week days
- The mine shall warn all local communities and/or residents that could be disturbed by noise generating activities well in advance and shall keep such activities to a minimum
- The mine shall be responsible for compliance with the relevant legislation with respect to noise
- Top soils, stock and wastes
  - Stock pile dumps will be places near the plant site for hauling.
  - The dump will not exceed the prescribed height, which is height of the surrounding trees.
  - Exposed soil and material stock piles shall be protected against wind erosion and the location of the stockpiles shall be taken into consideration the prevailing wind direction and locations of sensitive receptors.
- \_Rehabilitation
 

Continuous rehabilitation is as important to the environment as that of closure rehabilitation

  - All chemical spills will be rehabilitated immediately

- Rip and rehabilitate all unused roads and access ways
- Any erosion channels developed during the project period shall be back-filled and compacted and the areas restored to a proper condition.

· \_Safety

- Vehicles will be equipped with a red flag on a long enough rod to be easily observed by the heavy vehicle drivers, yellow light at night and a roll bar.
- Hard hats, ear plugs, safety glasses, dust masks, gloves hard point boots, reflector vests and overalls will be supplied and is compulsory before entering the mine area.
- The mine entrance will be clearly marked with all regulatory signs, to indicate a potential dangerous zone.
- Personnel need to be trained on Health and Safety matters in line with the Health and Safety act for mining and in handling and the remediation of chemical spills.

- A specific group of a number of volunteers will be trained in the 1<sup>st</sup> two basic levels of first aid as well as fire fighting to handle the following situations, till professional help arrives at site:

- Fire outbreaks
- Accidental injury
- Injury incurred from animal attacks
- Chemical burns
- Sudden illnesses e.g. heart attack.

#### · Remediation measures on accidental pollution

Accidental pollution is the accidental spillage of chemicals, oil, fuel or leakage of the storage tanks.

- Chemicals, oil and fuel spillages will be treated with a neutralizing agent.
- Chemical contaminated soil will be removed and appropriately stored till the removal thereof. Stored top soil will be evenly spread to cover the area.
- In the outbreak of a fire, the site will be evacuated. A special group of people, who is trained in this regard, will put the fire out and secure the area.
- The mine shall be responsible for any clean up resulting from the failure by his employees or suppliers

#### · Waste management

Waste management is very crucial to a successful mine with Health and Environmental awareness in the front line.

- Domestic waste
  - The mine shall ensure that all facilities are maintained in a neat and tidy condition and the site shall be kept free of litter
  - Containers will be installed and clearly marked for this purpose.
  - Waste storage containers shall be covered, tip-proof, weatherproof and scavenger-proof.
  - The waste storage area shall be fenced off to prevent wind-blowing litter.

- It is preferable that people is aware of the splitting of waste into their different categories, i.e. glass, plastic, paper, tin and other waste.
- No burning, on site burring or dumping of waste shall occur.
- Contracts with the local municipality/agencies will be signed for the removal of these containers on the appropriate schedule of once a week, but if found necessary twice a week.

### **3.2.3 Review the significance of the identified impacts**

(After bringing the proposed mitigation measures into consideration).

After brining all mitigation measures into consideration, the significance of the identified impacts can be seen as low to medium, but only when all mitigation measures are adhered

## **4 REGULATION 52 (2) (d): Financial provision.**The applicant is required to-

### **4.1 Plans for quantum calculation purposes.**

(Show the location and aerial extent of the aforesaid main mining actions, activities, or processes, for each of the construction operational and closure phases of the operation).

### **4.2 Alignment of rehabilitation with the closure objectives**

(Describe and ensure that the rehabilitation plan is compatible with the closure objectives determined in accordance with the baseline study as prescribed).

The closure objectives are to create a post-mining environment as close as possible to the pre-mining state of the environment. This can be accomplished by the correctness of rehabilitation and proper after-care activities.

All waste dump materials shall be backfilled, in their correct order, into the excavation.

Unnecessary roads and plant site will be cleared of foreign materials and ripped to loosen the ground for vegetation re-growth. After final rehabilitation is completed, a 2 to 3 year after-care plan in initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of the indigenous vegetation.

All of this can be accomplished by regular field visits for the watering of the areas as well as for the removal on any invader/pioneer species.

### **4.3 Quantum calculations.**

(Provide a calculation of the quantum of the financial provision required to manage and rehabilitate the environment, in accordance with the guideline

prescribed in terms of regulation<sup>54</sup> (1) in respect of each of the phases referred to).

## **SEE ATTACHED DOCUMENT**

### **4.4 Undertaking to provide financial provision**

(Indicate that the required amount will be provided should the right be granted).

The applicant, XAKWA COAL (Pty) Ltd undertake to provide the financial provision for the amount of R34.485.00 in the form of a Bank Guarantee should the Right be granted.

## **5 REGULATION 52 (2) (e): Planned monitoring and performance assessment of the environmental management plan.**

### **5.1 List of identified impacts requiring monitoring programmes.**

All prospecting actions activities and processes should be monitored against the mitigation measures as stipulated above in Section 3.2.2 of this document on an annual basis.

Activities that should be carefully monitored are:

- Hauling process
- Water usage
- Rehabilitation

### **5.2 Functional requirements for monitoring programmes.**

Monitoring programmes and report should be conducted by independent environmental consultants for accurate and true statements. This should be done on an annual basis, but the mine itself is free to employ a person with environmental qualifications to oversee the execution of the Approved Environmental Report on a daily basis.

Specific time schedule for the following:

- Mining process – 6 monthly
- Hauling process – Annually
- Mineral processing process – Annually
- Maintenance procedures and activities – 6 monthly
- Refuelling of machinery – 6 monthly
- Water usage – Annually
- Rehabilitation – 6 monthly

### **5.3 Roles and responsibilities for the execution of monitoring programmes.**

It is the responsibility of the mine manager to see that monitoring programmes are kept updated and done timely to be submitted to the DMR. The independent environmental consultant has a sole responsibility toward the environment and to see that the execution of the Environmental Management Plan is done correctly and safely.

The findings of the consultant should be reported in a written document and copies submitted to the client, DMR and farm owner.

#### **5.4 Committed time frames for monitoring and reporting.**

Monitoring assessment should be done on a six monthly basis with recommendations give to the mine. A major survey shall be conducted on an annual basis and the report thereof submitted to the relevant Department of Mineral Resources.

### **6 REGULATION 52 (2) (f): Closure and environmental objectives.**

#### **6.1 Rehabilitation plan**

(Show the areas and aerial extent of the main prospecting activities, including the anticipated prospected area at the time of closure).

The end-land use after final rehabilitation would be probably continuation of farming activities, but is dependable on the decision of the land owner.

- Rehabilitation will be done after the mining operations stopped.
- Backfilling of the shaft will start once all the gravels are removed.
- The roughs from the screening plant will be discarded back into the mine.
- Unnecessary roads and the plant site will be cleared or foreign materials and ripped to loosen the ground for vegetation re-growth.
- After final rehabilitation is completed a 1 to 2 year after-care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetatio

#### **6.2 Closure objectives and their extent of alignment to the pre-mining environment.**

The closure objectives are to create a post-mining state as close as possible to the pre-mining state of the environment. The area will be fully rehabilitated according the procedures stipulated in Section 6.1 of this document and to the satisfaction of the Department Mineral Resources and the landowner.

This can be accomplished by the correctness of rehabilitation and proper after-care activities.

### **6.3 Confirmation of consultation**

(Confirm specifically that the environmental objectives in relation to closure have been consulted with landowner and interested and affected parties).

The closure objectives in regard to the environment have not been consulted with the landowner and/or any other interested and/or affected parties. Such consultations still need to be conducted and should be done in the near future in the form of a public meeting

## **7 REGULATION 52 (2) (g): Record of the public participation and the results thereof.**

### **7.1 Identification of interested and affected parties.**

(Provide the information referred to in the guideline)

- i. No communities are residing nearby and thus have not been identified as interested and/or affected parties.

#### **ii. Specifically state whether or not the Community is also the landowner.**

The farm in question is privately owned and not by any community.

#### **iii. State whether or not the Department of Land Affairs been identified as an interested and affected party.**

The Department of Land Affairs was not identified nor consulted as an interested and/or affected party.

#### **iv. State specifically whether or not a land claim is involved.**

It is not known whether or not a land claim is involved affecting the interested area as the Department of Land Affaires was not consulted.

#### **v. Name the Traditional Authority identified.**

No traditional authorities have been identified during the consultation process.

#### **vi. List the landowners identified by the applicant.**

(Traditional and Title Deed owners)

The farm is per title deed privately owned by Marthinus Johannes Van Der Spuy

#### **vii. List the lawful occupiers of the land concerned.**

The lawful occupier of the land concerned Marthinus Johannes Van Der Spuy, who is also the farm owner.

#### **viii. Explain whether or not other persons' (including on adjacent and non-adjacent properties) socio-economic**

**conditions will be directly affected by the proposed prospecting or mining operation and if not, explain why not.**

It is currently not foreseen that any other person's (adjacent or non-adjacent) socio-economic conditions will be directly affected by the intended mining operations.

The area under application is an old un-rehabilitated kimberlitic pipe mine. On adjacent other mining activities does occur and therefor the abovementioned is not foreseen.

**ix. Name the Local Municipality.**

Barkly West Local Municipality

**x. Name the relevant Government Departments, agencies and institutions responsible for the various aspects of the environment and for infrastructure which may be affected by the proposed project.**

No relevant Government Departments has been identified by the applicant during the public participation process.

**xi. Submit evidence that the landowner or lawful occupier of the land in question, and any other interested and affected parties including all those listed above, were notified.**

Please find attached proof on notification to the identified interested and/or affected parties.

## **7.2 The details of the engagement process.**

**7.2.1 Description of the information provided to the community, landowners, and interested and affected parties.**

The information provided to the interested and/or affected parties explained the intention for applying for a Mining permit.

**7.2.2 List of which parties identified in 7.1 above that were in fact consulted, and which were not consulted.**

- Marthinus Johannes Van Der Spuy

**7.2.3 List of views raised by consulted parties regarding the existing cultural, socio-economic or biophysical environment.**

*Find the attached Letter,*

**7.2.4 List of views raised by consulted parties on how their existing cultural, socio-economic or biophysical environment potentially will be impacted on by the proposed prospecting or mining operation.**

- No views were raised by the above consulted parties in regard to how their existing cultural, socio-economic or biophysical environment will be affected by the mining operation.

#### **7.2.5 Other concerns raised by the aforesaid parties.**

- No other concerns were raised by the aforesaid parties.

#### **7.2.6 Confirmation that minutes and records of the consultations are appended.**

Please find attached the applicable minutes and records of meeting held by the applicant.

#### **7.2.7 Information regarding objections received.**

No objections have been received from the aforesaid parties in regard to the proposed mining operations.

#### **7.3 The manner in which the issues raised were addressed.**

No views were raised by the above consulted parties in regard to the proposed operations, but if issues arise it will be addressed to accommodate both the affected party and the mine.

### **8 SECTION 39 (3) (c ) of the Act: Environmental awareness plan.**

#### **8.1 Employee communication process**

(Describe how the applicant intends to inform his or her employees of any environmental risk which may result from their work).

Initial employee training will be done on employment of personnel, handling all issues related to General and Conservation Environmental Awareness. Follow up training workshops will be held on an annual basis and when expansion and/or implementation of new equipment are introduced to the mine.

Motivation:

- Inspections will be held on a regular basis against do's and don'ts listed within this document. Immediate penalties can be given to offenders.
- On the discretion of the mine, motivation can be implemented by an all-expense paid, braai/function at the end of unbroken fixed environmental contamination free hours.

#### **8.2 Description of solutions to risks**

(Describe the manner in which the risk must be dealt with in order to avoid pollution or degradation of the environment).

Everyday awareness

- Littering

As wild animal species still roam the area from time to time, the accidental ingestion of litter is a possibility and highly dangerous as it can and will kill the animal involved. Even when not ingested small mammals are always at risk in getting tangled with plastics rubber etc., this can ensure numerous suffering and eventually death of the animal.

Plastics, rubber some types of paper and glass are not biodegradable and release poisons into the environment when exposed to harsh weather conditions. Even when buried, they tend to resist weathering. These poisons released into the environment can be harmful to our plant species, but even if it is not harmful to the plant itself the plant tend to store all absorbed substances in their fruit, roots and root tuber and the last mentioned may be utilized by humans or animals leading to the consuming of harmful chemicals that may pose illness or even death.

No glass, paper, plastics and cigarette buds are to be littered during the duration of the mining operations. Garbage containers will be installed and maintained to prevent litter pollution.

- Open fires

It is by law prohibited to start open fires ((Section 25, Government Gazette Volume 401 Number 19515 of 27 November 1998, regarding the National Veld and Forest Fire Act 1998 (Act no. 101 of 1998)).

Due to the hot and dry conditions the region is very susceptible for runaway fires. No open fires will be tolerated during the mining period and as this is regarded by law as a criminal offence related penalties can be issued. The littering of self-ignitable substances/objects (e.g. matches) are also not allowed as it will always pose a danger regarding field fires, and if such happen he person responsible for the littering will be charged with arson and related penalties can be issued.

## ○ Sanitation and Personal Hygiene

Sanitation and personal hygiene is a very important subject for environmental and social health. Improper sanitation habits can lead to intestinal parasite infestations within humans and animals, endangering the overall health of the recipients. Unfortunately these infestations don't stay only within the host and will spread rapidly throughout a community or herd.

Human viruses like *Tubercle bacillus* (TB) and *Herpes simplex*, both are very contagious, spread vigorously throughout a community not handling good hygiene habits/practices.

- Proper sanitation/ablution blocks will be erected during the commissioning phase of the activities and strict use and cleanliness of these facilities will be enforced during the entire life of mine.
- Employees will further be advised and educated on the importance of consuming clean and fresh water. Several sites will be identified and colour coded water tanks will be erected for safe human water consumption.

## ○ Fauna

Wild animals roaming within the area is a common sight from time to time, but reptiles and smaller rodents permanently inhabit the area. Wild animals are and will always be very dangerous.

Mine employees will be advised to stay clear for any wild animal or reptile, not feeding them and not try to provoke them in any manner. They will further be educated on dangerous and poisonous reptiles and the actions to be taken when such reptiles are encountered.

## ○ Flora

The vegetation of the Northern Cape regions is very fragile and easily endangered by pioneer/invaser species invading the Northern Cape at an alarming rate and due to the slow growth rate of our indigenous species.

- No indigenous shrubs or trees will be unnecessarily uprooted and utilised for firewood, they would rather be advised to utilize pioneer/invaser species and be educated on which plant species are indigenous, endangered or pioneer.

- If any pioneer/invaser species are observed the reporting thereof to the rehabilitation site manager will be highly recommended.

- Penalties will be given to individuals that damage any endangered species e.g. cutting branches/bark from a Camel/Grey Camel tree.

## · Work related awareness

- Heavy vehicle operators

All heavy vehicles pose a threat to the environment in several ways. Some awareness must be initiated by the operators to minimize the threat to the environment.

The following must be implemented or enforced:-

- Daily checking for oil/diesel leakages before vehicle is operated
- Drip pans must be installed during “off-time”
- Immediate communication with the workshop when faults are observed.
- Strict adherence to the mine roads and no off-road driving to prevent trampling of vegetation
- Driving speed must be complied with. Beware of animals, workers and other vehicles.

- Machinery operators

Although the operational mining equipment does not pose any environmental risk, employees still need to adhere to some measurements to prevent spillage.

- Maintenance personnel

All maintenance personnel must receive basic training on work related environmental awareness to minimize/eliminate the possibility of environmental degradation.

Pointers that will be looked at:-

- Electricians may not leave any cables unprotected scattered on the site – animals may get tangled up.
- No metals may be left scattered as it pose the same threat as described directly above
- All personnel handling chemical relating products must follow handling procedures – any spillage contaminating the ground will pose risk to environmental degradation
- All chemical used must be put to storage afterwards – containers may leak and environmental contamination occurs.

### **8.3 Environmental awareness training.**

(Describe the general environmental awareness training and training on dealing with emergency situations and remediation measures for such emergencies).

All training will be handled by a Trained Environmental Consultants and proof thereof submitted. Reports on these training will be submitted on an annual basis to the Department Mineral Resources.

**9 SECTION 39 (4) (a) (iii) of the Act: Capacity to rehabilitate and manage negative impacts on the environment.**

**9.1 The annual amount required to manage and rehabilitate the environment.**

(Provide a detailed explanation as to how the amount was derived)

The annual amount required to manage and rehabilitate the environment is **R34.485.00** as calculated in Section 4.3 of this document.

**9.2 Confirmation that the stated amount correctly reflected in the Prospecting Work Programme as required.**

The stated amount does not reflect in the Prospecting Work Programme as only baseline rehabilitation cost were calculated before all other relevant cost were stipulated as within the Environmental Management Plan.

**10 REGULATION 52 (2) (h): Undertaking to execute the environmental management plan.**

<p>Herewith I, the person whose name and identity number is stated below, confirm that I am the person authorised to act as representative of the applicant in terms of the resolution submitted with the application, and confirm that the above report comprises EIA and EMP compiled in accordance with the guideline on the Departments official website and the directive in terms of sections 29 and 39 (5) in that regard, and the applicant undertakes to execute the Environmental management plan as proposed.</p>	
<p><b>Full Names and Surname</b></p>	<p>Mguzalala Walter Mongwe</p>
<p><b>Identity Number</b></p>	<p>7002285720081</p>

**-END-**