mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: *B&E INTERNATIONAL (PTY) LTD*

REFERENCE NUMBER: *EC30/5/1/3/2/10014MP*

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.

LAND USE:

Portion 3 & 5 of the farm Zeekoe Gat 87 is situated in an agricultural setting. The land use on the farm and surrounding areas are mainly for agricultural purposes. The R56 passes the proposed mining site to the east. The proposed mining area will be established in an existing quarry that still needs to be rehabilitated.

GEOLOGY:

The underlying geological formation of the surrounding area consists of volcanic soils of the Stormberg Plateau and doleritic peat soils with some sandstone. The soils of the area are known to be shallow and often rocky. The applicant intent to use the dolerite removed from the site for the upgrading of roads.

VEGETATION:

The proposed mining area is situated in the Nama Karoo biome. The vegetation type of the area is classified as Eastern Mixed Nama Karoo (Veld type 52, Low & Rebelo, 1998). The vegetation type is classified as a complex mix of grass- and shrub-dominated vegetation types. Common shrubs include Bitterkaroo *Pentzia incana*, Kapokbush *Eriocephalus ericoides*, Thornkapok *E. spinescens* and *Hermannia* spp. Grasses found in this vegetation type are *Aristida* spp., *Eragrostis* spp. and Redgrass *Themeda triandra*. The vegetation within the proposed mining area has previously been disturbed by former mining activities. The proposed mining activities will have no impact on any vegetation as the mining activities will take place within the existing quarry. No protected or endangered plant species were identified in the vegetation surrounding the site at the time of the site inspection.

FAUNA:

The fauna at the site will not be impacted by the proposed mining activities as they will be able to move away or through the site, without being harmed. Workers are instructed and managed to ensure that no fauna at the site is harmed. No animals were spotted during the site investigation.

AIR QUALITY AND NOISE:

The surrounding areas are characterised by an agricultural setting in which equipment such as tractors operate. The noise from the gravel mine operation will not exceed the noise limits permitted by law.

Limited amounts of dust may be generated by the operation, but will be localised within the confines of the existing quarry. Dust suppression measures will be implemented to prevent excessive dust on site.

ARCHAEOLOGICAL AND CULTURAL INTEREST:

A first phase archaeological and heritage investigation of the proposed area was conducted by an archaeologist. It was recommended that the proposed development and planning of the mining project may proceed as the development will not cause an impact to any cultural or archaeological material in the area.

SURFACE AND GROUND WATER

A small stream is present approximately 50m from the existing quarry area. The proposed mining activities will not have any impact on the stream. Vehicles will cross the stream by means of an existing bridge to navigate between the quarry and the mobile infrastructure/stockpile area. It is proposed that the applicant conduct bi-annual water analysis on the water in the stream to enable early identification of possible contamination.

VISUAL EXPOSURE:

The topography of the area is characterised as undulating with low hills that will assist in the screening of the mining area. The proposed mining area will be established in an existing quarry that has been established in the nineteen sixties. The new mining activities will be contained within this area. The mining activity will therefore not have a negative visual impact on the surrounding environment.

SOCIO-ECONOMIC:

Approximately 12 workers will be appointed. These workers will consist of 3 women and 9 men. Workers will be sourced from the local community.

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

As the proposed mining area will be operated in an existing quarry that has been established in the nineteen sixties, very little natural environmental features are present at the site.

The monitoring of the stream is deemed an important aspect of the project, and management measures as proposed under section 1.1 Surface and Ground water needs to be implemented by the applicant upon receipt of the mining permit.

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

See Appendix A for the requested map.

1.4 Confirmation that the description of the environment has been compiled with the participation of the community, the landowner and interested and affected parties,

During the planning phase and public participation process the community, in particularly the landowner, were contacted to obtain information about the site and the surrounding environment. This information was incorporated into the EMP. The information in the EMP was also confirmed during a site inspection conducted by Enviroworks and the applicant.

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 mining activities (e.g. access roads, topsoil storage sites and any other basic mining design features)

The proposed mining site is situated in an area that was formerly mined. GPS Coordinates for the proposed site is:

- 31.330608ºS 25.767346ºE
- 31.329499ºS 25.768511ºE

- 31.329835ºS 25.770412ºE
- 31.330862ºS 25.771772ºE
- 31.331367ºS 25.771791ºE
- 31.332332ºS 25.770073ºE

B&E International (Pty) Ltd intents to loosen the material by blasting, upon which it will be mechanically recovered with drilling-, excavating- and earth-moving equipment. A crushing and screening plant will also be present at the mining area. The gravel that is recovered will be loaded on a tipper truck from where it will be transported to the crusher plant, screened and stockpiled. Transportation of the final product will be from the stockpile area to the client by means of trucks. All equipment will be placed within the previously mined area.

Blasting will occur once every two to three weeks. The noise caused by blasting will be instantaneous and of short duration.

The proposed mining area is 1.5ha in extent and the mine-able material occurs at an average depth of 6 - 10 metres. The total reserve is approximately 300 000m³.

The mining activities will consist of the following:

- Stripping and stockpiling of topsoil
- Blasting
- Excavating
- Crushing
- Stockpiling and transporting
- Sloping and landscaping
- Replacing the topsoil and vegetating the disturbed area

The mining site will not have any accommodation infrastructure or power lines at the site. All diesel storage will be below the threshold as mentioned in the EIA regulations of the National Environmental Management Act, 1998 (Act No 107 of 1998) as amended June 2010.

2.1.2 Plan of the main activities with dimensions

See requested plan attached as Appendix B.

2.1.3 Description of construction, operational, and decommissioning phases.

CONSTRUCTION PHASE:

The construction phase for this project will entail the site establishment of the mine. This will entail the removal and stockpiling of the topsoil, the placement of the portable office, introduction of the mining equipment and the fencing of the site.

OPERATIONAL PHASE:

During the operational phase B&E International (Pty) Ltd intents to loosen the gravel material by blasting, upon which it will be mechanically recovered with drilling-, excavating- and earth-moving equipment. Only demarcated areas will be disturbed and must be rehabilitated as soon as possible. A crushing and screening plant will also be present at the mining area. The gravel that is recovered will be loaded on a tipper truck from where it will be transported to the crusher plant, screened and stockpiled. Transportation of the final product will be from the stockpile area to the client by means of trucks. All equipment will be placed within the previously mined area.

Blasting will occur once every two to three weeks. The noise caused by blasting will be instantaneous and of short duration.

Soil:

- If topsoil is present it will be removed before commencement of the mining activities and will be stored. The topsoil will be used to cover disturbed areas with a thin layer of topsoil to enhance the establishment of natural vegetation. The necessary measures will be put in place to limit erosion from the stockpiles and to divert storm water away from the topsoil stockpiles. Rehabilitation would be done is such a way to ensure the least impact on the geology and soil characteristics.

- If any soil is contaminated during the life of the mine or during closure, it will be removed together with the contaminant and placed in acceptable containers to be removed with the industrial waste to a recognized facility and by a recognized company. No contaminated soil will be treated on site.

- Vehicle movement will be confined to established roads (no braiding of roads will be allowed) as to prevent the unnecessary disturbance and compactions of soils.

- Runoff water will be diverted around the site with trenches and contour structures to prevent erosion from the work areas.
- Where the soil is compacted it will be ripped and levelled in order to re-establish a growth medium.

Vegetation:

- Management will take responsibility to control declared invader or exotic species on the rehabilitated areas. The following control methods will be used:
    - "The plants will be uprooted, felled or cut off and can be destroyed completely."
    - "The plants will be treated with an herbicide that is registered for use in connection therewith and in accordance with the directions for the use of such an herbicide."
- Vegetation on flat surfaces will be established using the dry lands technique requiring no irrigation.
- Mining operations will be audited on a monthly basis. If any incidents, impacts to the environment or non compliance are found it will be rectified immediately.
- Collection of wood for fire will not be allowed.
- The making of fires will not be allowed.

Topography:

- The worked out areas will be sloped to blend with the associated topography.

Land Use:

- Access roads to the mining area will be established in consultation with the landowner and existing roads will be used as far as practicable.
- All new roads will be selected as far as possible to avoid watercourses and steep gradients. Adequate drainage and erosion protection in the form of cut-off berms or trenches will be provided where necessary.

Sites of Archaeological and Cultural interest:

- If any artefacts of archaeological or cultural interest are found, the area will be marked and all activities in that vicinity would cease with immediate effect.

Dust:

- Roads will be sprayed with water or an environmentally friendly dust-allaying agent that contains no PCB's (e.g. DAS products) if dust is generated above acceptable limits.

Fauna:

- Any form of poaching by workers on the mine will result in the maximum form of punishment as allowed for by common law. Any form of snares or traps will be removed.

Surface water:

- A system consisting of trenches will be put in place that will be able to divert run-off from the peak precipitation event of 1:100 years recurrence interval around the mining areas.
- Any vehicle repairs will only take place within the service bay area and all waste products will be disposed of in a 200 litre container/bin found inside the emergency service area.
- All refuelling will only take place in the service bay area. If this is found not to be feasible drip pans will be used whenever refuelling takes place.
- All infrastructures will be properly designed to allow for proper drainage and run-off without resulting in erosion features.
- Water management structures like trenches and embankments will be inspected and evaluated at monthly intervals and after a storm event. These structures will be maintained through regular silt removal and the removal of aquatic weeds and reeds.
- It is proposed that the applicant conduct bi-annual water analysis on the water in the stream bordering the site to enable early identification of possible contamination.

The mine area:

- The mining area will be clearly demarcated by means of beacons at its corners, and along its boundaries if there is no visibility between the corner beacons.
- Permanent beacons will be firmly erected and maintained in their correct position throughout the life of the operation.
- Mining and resultant operations shall only take place within this demarcated area.

Access roads:

- The existing access road to the site will be used.
- Should a portion of the access road be newly constructed the following will be adhered to:
    - The route will be selected that a minimum number of bushes or trees are felled and existing fence lines will be followed as far as possible.
    - Watercourses and steep gradients will be avoided.
    - Adequate drainage and erosion protection in the form of cut-off berms or trenches will be provided where necessary.

Toilet facilities, waste water & refuse disposal:

- A chemical toilet will be put on site for employees and proper hygiene measures will be established.
- Any effluents containing oil, grease or other industrial substances will be collected in a suitable receptacle and removed from the site, either for resale or for appropriate disposal at a recognised facility.
- Spills would be cleaned up immediately to the satisfaction of the Regional Manager by removing the spillage together with the polluted soil and by disposing of them at a recognised facility.
- Non-biodegradable refuse such as glass bottles, plastic bags, metal scrap, etc., will be stored in a container at a collecting point and collected on a regular basis and

disposed of at a recognised landfill site. Specific precautions shall be taken to prevent refuse from being dumped on or in the vicinity of the mine area.

- Biodegradable refuse generated will be handled as indicated above.

Vehicle maintenance yard & storage areas:

- The area chosen for these purposes will be the minimum reasonably required and involve the least disturbance to tree and plant life. Topsoil will be handled as described above.
- Fuel and oil will be stored in a secured area.
- The maintenance of vehicles and equipment used for any purpose during the mining operation will take place only in the maintenance yard area.
- Equipment used in the mining process will be adequately maintained so that during operations it does not spill oil, diesel, fuel, or hydraulic fluid.
- Machinery or equipment used on the mining area will not constitute a pollution hazard in respect of the above substances. The Regional Manager may order such equipment to be repaired or withdrawn from use if he or she considers the equipment or machinery to be polluting and irreparable.

DECOMMISSIONING PHASE:

The decommissioning phase will entail the rehabilitation of the site. After cessation of the mine the area will be fully rehabilitated. Slopes will be stabilized with vegetation to prevent erosion. The topsoil with as much as possible organic material will be replaced. The applicant will comply with the minimum closure objectives as prescribed by DMR and stated below.

Rehabilitation of the excavated area:

- Rocks and coarse material removed from the excavation must be dumped into the excavation.
- No waste will be permitted to be deposited in the excavations.

- Once excavations have been refilled with overburden, rocks and coarse natural materials and profiled with acceptable contours and erosion control measures, the topsoil previously stored shall be returned to its original depth over the area.
- The area shall be fertilized if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local or adapted indigenous seed mix in order to propagate the locally or regionally occurring flora.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analyzed and any deleterious effects on the soil arising from the mining operation be corrected and the area be seeded with a vegetation seed mix to his or her specification.

Rehabilitation of plant, office and service areas:

- Coarse natural material used for the construction of ramps must be removed and dumped into the excavations.
- Stockpiles will be removed during the decommissioning phase, the area ripped and the topsoil returned to its original depth to provide a growth medium.
- On completion of operations, all structures or objects shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002):
    - Where sites have been rendered devoid of vegetation/grass or where soils have been compacted owing to traffic, the surface shall be scarified or ripped.
    - Areas containing French drains shall be compacted and covered with a final layer of topsoil to a height of 10cm above the surrounding ground surface.
    - The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.
- Photographs of the camp and office sites, before and during the mining operation and after rehabilitation, shall be taken at selected fixed points and kept on record for the information of the Regional Manager.

- On completion of mining operations, the surface of these areas, if compacted due to hauling and dumping operations, shall be scarified to a depth of at least 300mm and graded to an even surface condition and the previously stored topsoil will be returned to its original depth over the area.
- Prior to replacing the topsoil the material that was removed from these areas will be replaced in the same order as it originally occurred.
- The area shall then be fertilized if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local, adapted indigenous seed mix.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analyzed and any deleterious effects on the soil arising from the mining operation be corrected and the area be seeded with a seed mix to his or her specification.

Final rehabilitation:

- Rehabilitation of the surface area shall entail landscaping, leveling, top dressing, land preparation, seeding (if required) and maintenance, and weed / alien clearing.
- All infrastructure, equipment, plant, temporary housing and other items used during the mining period will be removed from the site (section 44 of the MPRDA)
- Waste material of any description, including receptacles, scrap, rubble and tyres, will be removed entirely from the mining area and disposed of at a recognized landfill facility. It will not be permitted to be buried or burned on the site.
- Weed / Alien clearing will be done in a sporadic manner during the life of the mining activities. Species regarded as Category 1 weeds according to CARA (Conservation of Agricultural Recourses Act, 1983 – Act 43; Regulations 15 & 16 (as amended in March 2001) need to be eradicated from the site on final closure.
- Final rehabilitation shall be completed within a period specified by the Regional Manager.

2.1.4 Listed activities (in terms of the NEMA EIA regulations)

As the proposed mining area will form part of an already disturbed area it does not trigger listed activities in terms of the NEMA EIA regulations. A site inspection was conducted with officials from the Department of Economic Development, Environmental Affairs and Tourism in November 2011 to confirm whether any NEMA EIA Regulations maybe triggered by the proposed activity. The department responded that no regulations are triggered and no EIA application is needed.

2.2 Identification of potential impacts

(Refer to the guideline)

2.2.1 Potential impacts per activity and listed activities.

Stripping and stockpiling of topsoil:

- Dust nuisance caused by the disturbance of the soil
- Noise nuisance caused by machinery stripping and stockpiling the topsoil
- Infestation of the topsoil heaps by weeds or invader plants
- Loss of topsoil due to incorrect storm water management
- Contamination of area with hydrocarbons or hazardous waste materials

Blasting:

- Health and safety risk posed by blasting activities
- Dust nuisance caused by blasting activities
- Noise nuisance caused by blasting activities

Excavations:

- Dust nuisance due to excavation activities
- Noise nuisance generated by excavation equipment
- Contamination of surface or groundwater due to effluent runoff from excavation area
- Unsafe working conditions for employees

- Negative impact on the fauna and flora of the area
- Potential damage to cultural or heritage aspects
- Contamination of area with hydrocarbons or hazardous waste materials

Crushing:

- Dust nuisance due to the crushing activities
- Noise nuisance generated by the crushing activities
- Contamination of area with hydrocarbons or hazardous waste materials

Stockpiling and Transporting:

- Loss of topsoil due to ineffective stormwater handling
- Weed and invader plant infestation of the area due to the disturbance of the soil
- Dust nuisance from stockpiled material and vehicles transporting the material
- Degradation of access roads
- Noise nuisance caused by vehicles
- Contamination of area with hydrocarbons or hazardous waste materials

Sloping and Landscaping:

- Soil erosion
- Health and safety risk posed by un-sloped areas
- Dust nuisance caused during sloping and landscaping activities
- Noise nuisance caused by machinery
- Contamination of area with hydrocarbons or hazardous waste materials

Replacing the Topsoil and Vegetating of the Area:

- Loss of reinstated topsoil due to the absence of vegetation
- Infestation of the area by weed and invader plants

2.2.2 Potential cumulative impacts.

The proposed mining area is situated in an area that were previously used for mining purposes and therefore the cumulative impact caused by the proposed mining activity will be low as the disturbance of the natural areas are contained in one area. No other mining activities are currently taking place at the farm.

A possible cumulative impact is the contamination of the stream bordering the site due to effluent runoff from the mining area.

2.2.3 Potential impact on heritage resources

A first phase archaeological and heritage investigation of the proposed area was conducted by an archaeologist. It was recommended that the proposed development and planning of the mining project may proceed as the development will not cause an impact to any cultural or archaeological material in the area.

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.)

As the proposed mining area is anticipated to be part of an existing quarry the negative impacts on the surrounding environment and community is deemed to be very low.

The operation of the mine will however have a number of positive impacts such as job creation for approximately eight workers from the local community. The gravel to be removed from the quarry will be used for the upgrading of the roads in the vicinity of the mine. The proposed quarry will therefore contribute to the upgrading/maintenance of infrastructure in and around Steynsburg.

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 management of the potential impacts such as dust suppression, noise control and waste handling were included in the notification letter send to the I&AP's and stakeholders informing them of the proposed mining activity. The I&AP's and stakeholders were requested to submit any additional comments. To date no additional comments were received.

2.2.6 Confirmation of specialist report appended.
(Refer to guideline)

A first phase archaeological and heritage investigation of the proposed area was conducted and is appended as Appendix G.

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

Methodology for the assessment of the potential environmental, social and cultural impacts

DEFINITIONS AND CONCEPTS:

Environmental significance:

The concept of significance is at the core of impact identification, evaluation and decision-making. The concept remains largely undefined and there is no international consensus on a single definition. The following common elements are recognised from the various interpretations:

- Environmental significance is a value judgement
- The degree of environmental significance depends on the nature of the impact
- The importance is rated in terms of both biophysical and socio-economic values
- Determining significance involves the amount of change to the environment perceived to be acceptable to affected communities.

Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value placed on the change by different affected parties (i.e. level of acceptability) (DEAT (2002) Impact Significance, Integrated Environmental Management, Information Series 5).

The concept of risk has two dimensions, namely the consequence of an event or set of circumstances, and the likelihood of particular consequences being realised (Environment Australia (1999) Environmental Risk Management).

Impact

The positive or negative effects on human well-being and / or the environment.

Consequence

The intermediate or final outcome of an event or situation OR it is the result, on the environment, of an event.

Likelihood

A qualitative term covering both probability and frequency.

Frequency

The number of occurrences of a defined event in a given time or rate.

Probability

The likelihood of a specific outcome measured by the ratio of a specific outcome to the total number of possible outcomes.

Environment

Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation (ISO 14004, 1996).

Methodology that will be used

The environmental significance assessment methodology is based on the following determination:

Environmental Significance = Overall Consequence x Overall Likelihood

Determination of Overall Consequence

Consequence analysis is a mixture of quantitative and qualitative information and the outcome can be positive or negative. Several factors can be used to determine consequence. For the purpose of determining the environmental significance in terms of consequence, the following factors were chosen: ***Severity/Intensity, Duration and Extent/Spatial Scale***. Each factor is assigned a rating of 1 to 5, as described in the tables below.

Determination of Severity / Intensity

Severity relates to the nature of the event, aspect or impact to the environment and describes how severe the aspects impact on the biophysical and socio-economic environment.

Table 1 will be used to obtain an overall rating for severity, taking into consideration the various criteria.

Rating of Severity:

Type of criteria	Rating				
	1	2	3	4	5
Quantitative	0-20%	21-40%	41-60%	61-80%	81-100%
Qualitative	Insignifiant / Non-harmful	Small / Potentially harmful	Significant/ Harmful	Great/ Very harmful	Disastrous Extremely harmful
Social/ Community response	Acceptable / I&AP satisfied	Slightly tolerable / Possible objections	Intolerable/ Sporadic complaints	Unacceptable / Widespread complaints	Totally unacceptable / Possible legal action
Irreversibility	Very low cost to mitigate/ High potential to mitigate impacts to level of insignificance/ Easily reversible	Low cost to mitigate	Substantial cost to mitigate/ Potential to mitigate impacts/ Potential to reverse impact	High cost to mitigate	Prohibitive cost to mitigate/ Little or no mechanism to mitigate impact Irreversible
Biophysical (Air quality, water quantity and quality, waste production, fauna and flora)	Insignificant change / deterioration or disturbance	Moderate change / deterioration or disturbance	Significant change / deterioration or disturbance	Very significant change / deterioration or disturbance	Disastrous change / deterioration or disturbance

Determination of Duration

Duration refers to the amount of time that the environment will be affected by the event, risk or impact, if no intervention e.g. remedial action takes place.

Rating of Duration:

Rating	Description
1	Up to ONE MONTH
2	ONE MONTH to THREE MONTHS (QUARTER)
3	THREE MONTHS to ONE YEAR
4	ONE to TEN YEARS
5	Beyond TEN YEARS

Determination of Extent/Spatial Scale

Extent or spatial scale is the area affected by the event, aspect or impact.

Rating of Extent / Spatial Scale:

Rating	Description
1	Immediate, fully contained area
2	Surrounding area
3	Within Business Unit area of responsibility
4	Within the farm/neighboring farm area
5	Regional, National, International

Determination of Overall Consequence

Overall consequence is determined by adding the factors determined above and summarized below, and then dividing the sum by 3.

Example of calculating Overall Consequence

Consequence	Rating
Severity	Example 4
Duration	Example 2
Extent	Example 4
SUBTOTAL	**10**
TOTAL CONSEQUENCE: (Subtotal divided by 3)	**3.3**

Determination of Likelihood:

The determination of likelihood is a combination of Frequency and Probability. Each factor is assigned a rating of 1 to 5, as described below and in tables 6 and 7.

Determination of Frequency

Frequency refers to how often the specific activity, related to the event, aspect or impact, is undertaken.

Rating of Frequency:

Rating	Description
1	Once a year or once/more during operation
2	Once/more in 6 Months
3	Once/more a Month
4	Once/more a Week
5	Daily

Determination of Probability

Probability refers to how often the activity or aspect has an impact on the environment.

Rating of Probability

Rating	Description
1	Almost never / almost impossible
2	Very seldom / highly unlikely
3	Infrequent / unlikely / seldom
4	Often / regularly / likely / possible
5	Daily / highly likely / definitely

Overall Likelihood

Overall likelihood is calculated by adding the factors determined above and summarised below, and then dividing the sum by 2.

Example of calculating Overall Likelihood

Consequence	Rating
Frequency	Example 4
Probability	Example 2
SUBTOTAL	**6**
TOTAL LIKELIHOOD (Subtotal divided by 2)	**3**

Determination of Overall Environmental Significance:

The multiplication of overall consequence with overall likelihood will provide the environmental significance, which is a number that will then fall into a range of **LOW**, **LOW-MEDIUM**, **MEDIUM**, **MEDIUM-HIGH** or **HIGH**, as shown in the table below.

Determination of Overall Environmental Significance

Significance or Risk	Low	Low-Medium	Medium	Medium-High	High
Overall Consequence X Overall Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25

Qualitative description or magnitude of Environmental Significance

This description is qualitative and is an indication of the nature or magnitude of the Environmental Significance. It also guides the prioritisations and decision making process associated with this event, aspect or impact.

Description of Environmental Significance and related action required

Significance	Low	Low-Medium	Medium	Medium-High	High
Impact Magnitude	Impact is of very low order and therefore likely to have very little real effect. Acceptable.	Impact is of low order and therefore likely to have little real effect. Acceptable.	Impact is real, and potentially substantial in relation to other impacts. Can pose a risk to company	Impact is real and substantial in relation to other impacts. Pose a risk to the company. Unacceptable	Impact is of the highest order possible. Unacceptable. Fatal flaw.
Action Required	Maintain current management measures.	Maintain current management measures.	Implement monitoring. Investigate mitigation	Improve management measures to reduce risk.	Implement significant mitigation measures or

	Where possible improve.	Implement monitoring and evaluate to determine potential increase in risk. Where possible improve	measures and improve management measures to reduce risk, where possible.		implement alternatives.

Based on the above, the significance rating scale has been determined as follows:

High	Of the highest order possible within the bounds of impacts which could occur. In the case of negative impacts, there would be no possible mitigation and / or remedial activity to offset the impact at the spatial or time scale for which it was predicted. In the case of positive impacts, there is no real alternative to achieving the benefit.
Medium-High	Impacts of a substantial order. In the case of negative impacts, mitigation and / or remedial activity would be feasible but difficult, expensive, time-consuming or some combination of these. In the case of positive impacts, other means of achieving this benefit would be feasible, but these would be more difficult, expensive, time-consuming or some combination of these.
Medium	Impact would be real but not substantial within the bounds of those, which could occur. In the case of negative impacts, mitigation and / or remedial activity would be both feasible and fairly easily possible, In case of positive impacts; other means of achieving these benefits would be about equal in time, cost and effort.
Low	Impact would be of a low order and with little real effect. In the case of negative impacts, mitigation and / or remedial activity would be either easily achieved of little would be required, or both. In case of positive impacts alternative means for achieving this benefit would likely be easier, cheaper, more effective, less time-consuming, or some combination of these.
Low-Medium	Impact would be negligible. In the case of negative impacts, almost no mitigation and or remedial activity would be needed, and any minor

steps, which might be needed, would be easy, cheap and simple. In the case of positive impacts, alternative means would almost all likely be better, in one or a number of ways, than this means of achieving the benefit

Low — There would be a no impact at all – not even a very low impact on the system or any of its parts.

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

Stripping and stockpiling of topsoil:

Dust nuisance caused by the disturbance of the soil.

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
1	1	1	1	2	2	2	**2**

Noise nuisance caused by machinery stripping and stockpiling the topsoil.

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
1	1	1	1	2	2	2	**2**

Infestation of the topsoil heaps by weeds or invader plants

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	3	1	2	**2.6**

Loss of topsoil due to incorrect storm water management

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Contamination of area with hydrocarbons or hazardous waste materials

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Blasting:

Health and safety risk posed by blasting activities

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
3	2	1	2	1	1	1	**2**

Dust nuisance caused by blasting activities

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	4	3	3.5	**4.6**

Noise nuisance caused by blasting activities

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	2	1.6	2	3	2.5	**4**

Excavations:

Dust nuisance due to excavation activities

Rating: Low - Medium

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	2	2	1	1.5	**3**

Noise nuisance generated by excavation equipment

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	3	3	3	**3.9**

Contamination of surface or groundwater due to effluent runoff from excavation area

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	2	1.6	1	1	1	**1.6**

Unsafe working conditions for employees

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
3	1	1	1.6	2	1	1.5	**1.95**

Negative impact on the fauna and flora of the area

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Potential damage to cultural or heritage aspects

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
3	1	1	1.6	1	1	1	**1.6**

Contamination of area with hydrocarbons or hazardous waste materials

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Crushing:

Dust nuisance due to the crushing activities

Rating: Low – Medium

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	2	4	5	4.5	**9**

Noise nuisance generated by the crushing activities

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
1	1	1	1	2	1	1.5	**1.5**

Contamination of area with hydrocarbons or hazardous waste materials

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Stockpiling and Transporting:

Loss of material due to ineffective stormwater handling

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Weed and invader plant infestation of the area due to the disturbance of the soil

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Dust nuisance from stockpiled material and vehicles transporting the material

Rating: Low – Medium

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	2	4	5	4.5	**9**

Degradation of access roads

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Noise nuisance caused by vehicles

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	2	2	**2.6**

Contamination of area with hydrocarbons or hazardous waste materials

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Sloping and Landscaping:

Soil erosion

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Health and safety risk posed by un-sloped areas

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
3	4	1	2.6	2	1	1.5	**3.9**

Dust nuisance caused during sloping and landscaping activities

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Noise nuisance caused by machinery

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Contamination of area with hydrocarbons or hazardous waste materials

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

Replacing the Topsoil:

Loss of reinstated topsoil due to the absence of vegetation

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	3	1	2	2	1	1.5	**3**

Infestation of the area by weed and invader plants

Rating: Low

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
2	1	1	1.3	2	1	1.5	**1.95**

3.1.3 Assessment of potential cumulative impacts.

Contamination of the stream bordering the site due to effluent runoff from the mining area

			Consequence			Likelihood	**Significance**
Severity	Duration	Extend		Probability	Frequency		
3	1	2	2	2	1	1.5	**3**

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.

Stripping and stockpiling of topsoil:

- Dust nuisance caused by the disturbance of the soil
- Noise nuisance caused by machinery stripping and stockpiling the topsoil
- Infestation of the topsoil heaps by weed or invader plants
- Loss of topsoil due to incorrect storm water management

Blasting:

- Health and safety risk posed by blasting activities
- Dust nuisance caused by blasting activities
- Noise nuisance caused by blasting activities

Excavations:

- Dust nuisance due to excavation activities
- Noise nuisance generated by excavation equipment
- Contamination of the area with hydrocarbons or hazardous waste materials

Crushing

- Dust nuisance due to the crushing activities
- Contamination of the area with hydrocarbons or hazardous waste materials

Stockpiling and transporting

- Weed and invader plant infestation of the area due to the disturbance of the soil
- Dust nuisance from the stockpiled material and vehicles transporting the material
- Degradation of access roads

- Noise nuisance caused by vehicles
- Contamination of area with hydrocarbons or hazardous waste materials

Sloping and landscaping

- Soil erosion
- Health and safety risk posed by un-sloped areas

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)

Dust Handling:

- The liberation of dust into the surrounding environment will be effectively controlled by the use of, inter alia, water spraying and/or other dust-allaying agents,
- Speed on the access roads will be limited to 30km/h to prevent the generation of excess dust,
- Roads will be sprayed with water or an environmentally friendly dust-allaying agent that contains no PCB's (e.g. DAS products) if dust is generated above acceptable limits,
- All disturbed or exposed areas will be re-vegetated as soon as possible during mining to prevent any dust source from being created,
- All stockpiles should be thoroughly soaked to ensure dust suppression on the site.

Noise Handling:

- The applicant should ensure that employees and staff conduct themselves in an acceptable manner while on site, both during work hours and after hours,
- All mining vehicles will be equipped with silencers and maintained in a road worthy condition in terms of the Road Transport Act,

- Blasting noise will be instantaneous and of short duration. This will only occur once every two to three weeks,
- The type, duration and timing of the blasting procedures will be planned with due cognisance of other land users and structures in the vicinity. Surrounding land owners will be notified in writing prior blasting occasions,
- Noise mufflers and/or soft explosives will be used during blasting.

Management of weed or invader plants:

- A weed and invader plant control management plan should be implemented at the site to ensure eradication of all listed invader plants in terms of Conservation of Agricultural Act (Act No 43 1983),
- Management will take responsibility to control declared invader or exotic species on the rehabilitated areas. The following control methods will be used:
    - "The plants will be uprooted, felled or cut off and can be destroyed completely."
    - "The plants will be treated with an herbicide that is registered for use in connection therewith and in accordance with the directions for the use of such an herbicide."
- The temporary topsoil stockpiles needs to be kept free of weeds.

Stormwater Handling:

- Stormwater should be diverted around the topsoil heaps, stockpile areas and access roads to prevent erosion and loss of material,
- Runoff water should also be diverted around the stockpile areas with trenches and contour structures to prevent erosion of the work areas,
- Mining will be conducted only in accordance with the Best Practice Guideline for small scale mining that relates to stormwater management, erosion and sediment control and waste management, developed by the Department of Water Affairs (DWA), and any other conditions which that Department may impose.

Management of Health and Safety Risks:

- The type, duration and timing of the blasting procedures should be planned with due cognisance of other land users and structures in the vicinity,
- The surrounding landowners and communities will be informed ahead of any blasting event,
- Noise mufflers and/or soft explosives will be used during blasting,
- Measures to limit flyrock will be taken,
- Audible warning of a pending blast will be given at least 3 minutes in advance of the blast,
- All flyrock (of diameter 150mm and larger) which falls beyond the working area, together with the rock spill will be collected and removed,
- Workers should have access to the correct personal protection equipment (PPE) as required by law.

Waste Management:

- Any vehicle repairs will only take place within the service bay area and all waste products will be disposed of in a 200 litre closed container/bin found inside the emergency service area,
- Any effluents containing oil, grease or other industrial substances will be collected in a suitable receptacle and removed from the site, either for resale or for appropriate disposal at a recognised facility,
- Spills would be cleaned up immediately to the satisfaction of the Regional Manager by removing the spillage together with the polluted soil and by disposing of them at a recognised facility,
- Suitable covered receptacles will be available at all times and conveniently placed for the disposal of waste,

- All used oils, grease or hydraulic fluids will be placed therein and these receptacles will be removed from the site on a regular basis for disposal at a registered or licensed hazardous disposal facility,
- Non-biodegradable refuse such as glass bottles, plastic bags, metal scrap, etc., will be stored in a container with a closable lid at a collecting point and collected on a regular basis and disposed of at the recognised landfill site at Steynsburg. Specific precautions shall be taken to prevent refuse from being dumped on or in the vicinity of the mine area,
- Biodegradable refuse generated will be handled as indicated above.

Management of Access Roads:

- Newly constructed access roads will be adequately maintained so as to minimise dust, erosion or undue surface damage,
- Storm water is diverted around the access roads to prevent erosion,
- Erosion of access road: Vehicular movement will be restricted to existing access routes to prevent crisscrossing of tracks through undisturbed areas.

Topsoil Handling:

- Where applicable the first 300mm of topsoil will be removed in strips and stored at the stockpile area. Stockpiling of topsoil will be done to protect it from erosion, mixing with overburden or other material. The topsoil will be used to cover the rehabilitated area and improve the establishment of natural vegetation,
- The temporary topsoil stockpiles of each removed strip will be kept free of weeds,
- Topsoil stockpiles will be placed on a levelled area and measures will be implemented to safeguard the piles from being washed away in the event of heavy rains/storm water,
- Topsoil heaps should not exceed 2m in order to preserve micro-organisms within the topsoil, which can be lost due to compaction and lack of oxygen,
- As far as possible, topsoil will not be stored longer than 3 months,

- Storm- and runoff water should be diverted around the stockpile area and access roads to prevent erosion.

Monitoring of the stream bordering the site:

- It is proposed that the applicant conduct bi-annual water analysis on the water in the stream bordering the site to enable early identification of possible contamination.

3.2.3 Review the significance of the identified impacts
(After bringing the proposed mitigation measures into consideration).

All impacts are deemed to be of low significance due to the establishment of the proposed mining area in an established quarry. The above mentioned mitigation measures will however be implemented to ensure that the activity is managed to have the lowest possible impact on the surrounding environment.

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).

See requested plan attached as Appendix B.

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).

MINIMUM CLOSURE OBJECTIVES THAT WILL BE ADHERED TO

Rehabilitation of access roads:

- Whenever a mining permit is suspended, cancelled or abandoned or if it lapses and the holder does not wish to renew the permit or right, any access road or portions thereof, constructed by the holder and which will no longer be required by the landowner/tenant, shall be removed and/or rehabilitated to the satisfaction of the Regional Manager.

- Any gate or fence erected by the holder which is not required by the landowner/tenant, shall be removed and the situation restored to the pre mining situation.

- Roads shall be ripped or ploughed, and if necessary, appropriately fertilized (based on a soil analysis) to ensure the re-growth of vegetation. Imported road construction materials which may hamper re-growth of vegetation must be removed and disposed of in an approved manner prior to rehabilitation.

- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analyzed and any deleterious effects on the soil arising from the mining operation, be corrected and the area be seeded with a seed mix to the Regional Manager's specification.

Rehabilitation of the office/ campsite:

- On completion of operations, all buildings, structures or objects on the camp/office site shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002):

- Where office/camp sites have been rendered devoid of vegetation/grass or where soils have been compacted owing to traffic, the surface shall be scarified or ripped.

- Areas containing French drains shall be compacted and covered with a final layer of topsoil to a height of 10cm above the surrounding ground surface.

- The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.

- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analyzed and any deleterious effects on the soil arising from the mining operation be corrected and the area be seeded with a vegetation seed mix to his or her specification.

- Photographs of the camp and office sites, before and during the mining operation and after rehabilitation, shall be taken at selected fixed points and kept on record for the information of the Regional Manager.

Rehabilitation of vehicle maintenance yard and secured storage areas:

- On completion of mining operations, the above areas shall be cleared of any contaminated soil.

- All buildings, structures or objects on the vehicle maintenance yard and secured storage areas shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act, 2002.
- The surface shall then be ripped or ploughed to a depth of at least 300mm and the topsoil previously stored adjacent the site, shall be spread evenly to its original depth over the whole area. The area shall then be fertilized if necessary (based on a soil analysis).
- The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analyzed and any deleterious effects on the soil arising from the mining operation be corrected and the area be seeded with a seed mix to his or her specification.

Rehabilitation of excavated areas

- The excavated area must serve as a final depositing area for the placement of tailings during processing.
- Rocks and coarse material removed from the excavation must be dumped into the excavation simultaneously with the tailings.
- No waste will be permitted to be deposited in the excavations.
- Once excavations have been refilled with overburden, rocks and coarse natural materials and profiled with acceptable contours and erosion control measures, the topsoil previously stored, shall be returned to its original depth over the area.
- The area shall be fertilized if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local or adapted indigenous seed mix in order to propagate the locally or regionally occurring flora.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analyzed and any deleterious effects on the soil arising from the mining operation be corrected and the area be seeded with a vegetation seed mix to his or her specification.

Rehabilitation of processing areas

- Coarse natural material used for the construction of ramps must be removed and dumped into the excavations.
- On completion of mining operations, the surface of the processing areas especially if compacted due to hauling and dumping operations shall be scarified to a depth of at least 300mm and graded to an even surface condition and the previously stored topsoil will be returned to its original depth over the area.
- Prior to replacing the topsoil the material that was removed from the processing area will be replaced in the same order as it originally occurred.
- The area shall then be fertilized if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local, adapted indigenous seed mix.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analyzed and any deleterious effects on the soil arising from the mining operation be corrected and the area be seeded with a seed mix to his or her specification.

Final rehabilitation

- All infrastructure, equipment, plant, temporary housing and other items used during the mining period will be removed from the site (section 44 of the MPRDA)
- Waste material of any description, including receptacles, scrap, rubble and tyres, will be removed entirely from the mining area and disposed of at a recognized landfill facility. It will not be permitted to be buried or burned on the site.
- Final rehabilitation shall be completed within a period specified by the Regional Manager.

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 regulation54 (1) in respect of each of the phases referred to).

The calculation of the quantum for financial provision was according to Section B of the working manual.

Mine type and saleable mineral by-product

According to Tables B.12, B.13 and B.14

Mine type	Gravel
Saleable mineral by-product	None

Risk ranking

According to Tables B.12, B.13 and B.14

Primary risk ranking (either Table B.12 or B.13	C (Low risk).
Revised risk ranking (B.14)	N/A

Environmental sensitivity of the mine area

According to Table B.4

Environmental sensitivity of the mine area	Low

Level of information

According to Step 4.2:

Level of information available	Limited

Identify closure components

According to Table B.5 and site-specific conditions

Component No.	Main description	Applicability of closure components (Circle Yes or No)	
1	Dismantling of processing plant and related structures (including overland conveyors and power lines)		No
2(A)	Demolition of steel buildings and structures		No
2(B)	Demolition of reinforced concrete buildings and structures		No
3	Rehabilitation of access roads		No
4(A)	Demolition and rehabilitation of electrified railway lines		No
4(B)	Demolition and rehabilitation of non-electrified railway lines		No
5	Demolition of housing and facilities		No
6	Opencast rehabilitation including final voids and ramps	Yes	
7	Sealing of shafts, adits and inclines		No
8(A)	Rehabilitation of overburden and spoils	Yes	
8(B)	Rehabilitation of processing waste deposits and evaporation ponds (basic, salt-producing)		No
8(C)	Rehabilitation of processing waste deposits and evaporation ponds (acidic, metal-rich)		No
9	Rehabilitation of subsided areas		No
10	General surface rehabilitation, including grassing of all denuded areas	Yes	
11	River diversions		No
12	Fencing	Yes	
13	Water management (Separating clean and dirty water, managing polluted water and managing the impact on groundwater)		No
14	2 to 3 years of maintenance and aftercare		No

Unit rates for closure components

According to Table B.6 master rates and multiplication factors for applicable closure components.

Component No.	Main description	Master rate	Multiplication factor
1	Dismantling of **processing plant and related structures** (including overland conveyors and powerlines)		
2(A)	Demolition of **steel buildings and structures**		
2(B)	Demolition of **reinforced concrete buildings and structures**		
3	Rehabilitation of **access roads**		
4(A)	Demolition and rehabilitation of **electrified railway lines**		
4(B)	Demolition and rehabilitation of **non-electrified railway lines**		
5	Demolition of **housing and facilities**		
6	**Opencast rehabilitation** including final voids and ramps	96 700	0.04
7	Sealing of **shafts, adits and inclines**		
8(A)	Rehabilitation of **overburden and spoils**	66 400	1
8(B)	Rehabilitation of **processing waste deposits and evaporation ponds (basic, salt-producing)**		
8(C)	Rehabilitation of **processing waste deposits and evaporation ponds (acidic, metal-rich)**		
9	Rehabilitation of **subsided areas**		
10	**General surface rehabilitation**, including grassing of all denuded areas	52 600	1
11	**River diversions**		
12	**Fencing**	60 000	1
13	**Water management** (Separating clean and dirty water, managing polluted water and managing the impact on groundwater)		
14	2 to 3 years of **maintenance and aftercare**		

Determine weighting factors

According to Tables B.7 and B.8

Weighting factor 1: Nature of terrain/accessibility	1.1
Weighting factor 2: Proximity to urban area where goods and services are to be supplied	1.05

Calculation of closure costs

Table B.10 Template for Level 2: "Rules-based" assessment of the quantum for financial provision

CALCULATION OF THE QUANTUM							
Mine:	**Portion 3 and 5 of the farm Zeekoe Gat 87**			**Location:**	**Steynsburg**		
Evaluators:	**S Smit**			**Date:**	**2011-11-13**		
No	**Description**	**Unit**	**A Quantity**	**B Master rate**	**C Multiplication factor**	**D Weighting factor 1**	**E=A *B*C*D Amount (rands)**
			Step 4.5	**Step 4.3**	**Step 4.3**	**Step 4.4**	
1	Dismantling of processing plant and related structures (including overland conveyors and power lines)	m^3	0	6.82	1	1.1	R 0.00
2(A)	Demolition of steel buildings and structures	m^2	0	95	1	1.1	R 0.00
2(B)	Demolition of reinforced concrete buildings and structures	m^2	0	140	1	1.1	R 0.00
3	Rehabilitation of access roads	m^2	0	17	1	1.1	R 0.00
4(A)	Demolition and rehabilitation of electrified railway lines	m	0	165	1	1.1	R 0.00
4(B)	Demolition and rehabilitations of non-electrified railway lines	m	0	90	1	1.1	R 0.00
5	Demolition of housing and/or administration facilities	m^2	0	190	1	1.1	R 0.00
6	Opencast rehabilitation including final voids and ramps	ha	1.3	96700	0.04	1.1	R5 531.24
7	Sealing of shaft, audits and inclines	m^3	0	51	1	1.1	R 0.00
8(A)	Rehabilitation of overburden and spoils	ha	0.2	66400	1	1.1	R14 608.00
8(B)	Rehabilitation of processing waste deposits and evaporation ponds (basic, salt-producing	ha	0	82700	1	1.1	R 0.00

	waste)						
8(C)	Rehabilitation of processing waste deposits and evaporation ponds (acidic, metal-rich waste)	ha	0	240200	0.51	1.1	R 0.00
9	Rehabilitation of subsided areas	ha	0	55600	1	1.1	R 0.00
10	General surface rehabilitation	ha	1.5	52600	1	1.1	R86 790.00
11	River diversions	ha	0	52600	1	1.1	R 0.00
12	Fencing	ha	1.5	60000	1	1.1	R99 000.00
13	Water Management	ha	0	20000	0.17	1.1	R 0.00
14	2 to 3 years of maintenance and aftercare	ha	0	7000	1	1.1	R 0.00
15(A)	Specialists study	Sum	0			1.1	R 0.00
15(B)	Specialists study	Sum	0				R 0.00
						Sum of items 1 to 15 above	R205 929.24
Multiply Sum of 1-15 by Weighting factor 2 (Step 4.4)		1.05		R205 929.24	**Sub Total 1**		R216 225.70

1	Preliminary and General	6% of Subtotal 1 if Subtotal 1 R100 000 000.00	-
		12% of Subtotal 1 if Subtotal 1 R100 000 000.00	-
2	Contingency	10.0% of Subtotal 1	R21 622.57
		Sub Total 2 (Subtotal 1 plus management and contingency)	R237 848.27
		Sub Total 3	R237 848.27
		Vat (14%)	R33 298.76
		GRAND TOTAL (Subtotal 3 plus VAT)	**R271 147.03**

The amount that will be necessary for the rehabilitation of damages caused by the operation, both sudden closures during the normal operation of the project and at final, planned closure gives a sum total of **R271 147.03**.

4.4 Undertaking to provide financial provision

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

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. I herewith confirm that the company will provide the amount that will be determined by the Regional Manager in accordance with the prescribed guidelines, which final amount is unlikely to be less than R10/m² of the area to be rehabilitated.

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

5.1 List of identified impacts requiring monitoring programmes.

- Dust Handling
- Noise Handling
- Management of weed or invader plants
- Stormwater Handling
- Management of Health and Safety Risks
- Waste Management
- Management of Access Roads
- Topsoil Handling
- Monitoring of the stream bordering the site

5.2 Functional requirements for monitoring programmes.

- Dust Handling:
    - Dust suppression equipment such as a water car and water dispenser. The applicant already has this equipment available.

- Noise Handling:
    - Vehicles to be equipped with silencers and maintained in a road worthy condition.
    - Noise mufflers and/p\or soft explosives for blasting events. This will be provided for during blast events.

- Management of weed or invader plants:
    - Removal of weeds will be manually or by the use of an approved herbicide.

- Stormwater Handling:
    - Trenches and contours will be made to direct storm- and runoff water around the stockpile areas.

- Management of Health and Safety Risks:
    - Workers will be provided with the required PPE while operating on site.
    - The necessary warning signs will be placed at the site to inform the public and workers of the mining activities.

- Waste Management:
    - Closed containers for the storage of general of hazardous waste until removed to the appropriate landfill site.
    - Hydrocarbon spill kits to enable sufficient clean-up of contaminated areas.

- Management of Access Roads:
    - Dust suppression equipment such as a water car and dispenser.
    - Trenches and contours will be made to direct storm- and runoff water around the access roads.

- Topsoil Handling
    - Excavating equipment to remove the first 300mm of topsoil from the proposed work areas. The applicant already has this equipment available.

- Trenches and contours will be made to direct storm- and runoff water around the stockpiled topsoil area.

- Monitoring of the stream bordering the site

  - Bi-annual water analysis of the water in the stream bordering the site should be done.

5.3 Roles and responsibilities for the execution of monitoring programmes.

Monitoring Aspect	Role	Responsibility
Dust Handling	Site Manager to ensure compliance with the guidelines as stipulated in the EMP. Compliance to be monitored by the Environmental Control Officer.	• Control the liberation of dust into the surrounding environment by the use of; inter alia, water spraying and/or other dust-allaying agents. • Limit speed on the access roads to 30km/h to prevent the generation of excess dust. • Spray roads with water or an environmentally friendly dust-allaying agent that contains no PCB's (e.g. DAS products) if dust is generated above acceptable limits. • Re-vegetate all disturbed or exposed areas as soon as possible to prevent any dust source from being created. • Thoroughly soak all stockpiles to ensure dust suppression on the site.
Noise Handling	Site Manager to ensure compliance with the guidelines as stipulated in the EMP. Compliance to be monitored by the Environmental Control Officer.	• Ensure that employees and staff conduct themselves in an acceptable manner while on site. • Ensure that all mining vehicles are equipped with silencers and maintained in a road worthy condition in terms of the Road Transport Act. • Plan the type, duration and timing of the blasting procedures with due cognisance of other land users and structures in the vicinity. • Notify surrounding land owners in writing prior blasting occasions. • Use noise mufflers and/or soft

Monitoring Aspect	Role	Responsibility
		explosives during blasting.
Management of weed/invader plants	Site Manager to ensure compliance with the guidelines as stipulated in the EMP. Compliance to be monitored by the Environmental Control Officer.	• Implement a weed and invader plant control management plan. • Control declared invader or exotic species on the rehabilitated areas. • Keep the temporary topsoil stockpiles free of weeds.
Stormwater Handling	Site Manager to ensure compliance with the guidelines as stipulated in the EMP. Compliance to be monitored by the Environmental Control Officer.	• Divert stormwater around the topsoil heaps, stockpile areas and access roads to prevent erosion and loss of material. • Divert runoff water around the stockpile areas with trenches and contour structures to prevent erosion of the work areas. • Conduct mining in accordance with the Best Practice Guideline for small scale mining that relates to stormwater management, erosion and sediment control and waste management, developed by the Department of Water Affairs (DWA), and any other conditions which that Department may impose.
Management of health and safety risks	Site Manager to ensure compliance with the guidelines as stipulated in the EMP. Compliance to be monitored by the Environmental Control Officer. Blasting contractor to comply with national blasting requirements.	• Plan the type, duration and timing of the blasting procedures with due cognisance of other land users and structures in the vicinity, • Inform the surrounding landowners and communities of any blasting event, • Use noise mufflers and/or soft explosives will be used during blasting, • Limit flyrock, • Give audible warning of a pending blast at least 3 minutes in advance of the blast, • Remove all flyrock (of diameter 150mm and larger) which falls beyond the working area, together with the rock spill. • Ensure that workers have access to the correct PPE as required by law.
Waste management	Site Manager to ensure compliance with the guidelines	• Ensure that vehicle repairs only take place within the service bay

Monitoring Aspect	Role	Responsibility
	as stipulated in the EMP. Compliance to be monitored by the Environmental Control Officer.	area and all waste products are disposed of in a 200 litre closed container/bin inside the emergency service area. • Collect any effluents containing oil, grease or other industrial substances in a suitable receptacle and removed from the site, either for resale or for appropriate disposal at a recognised facility. • Clean spills immediately to the satisfaction of the Regional Manager by removing the spillage together with the polluted soil and by disposing of them at a recognised facility. • Ensure the availability of suitable covered receptacles at all times and conveniently placed for the disposal of waste. • Place all used oils, grease or hydraulic fluids therein and remove these receptacles from the site on a regular basis for disposal at a registered or licensed hazardous disposal facility. • Store non-biodegradable refuse such as glass bottles, plastic bags, metal scrap, etc., in a container with a closable lid at a collecting point. Collection should take place on a regular basis and disposed of at the recognised landfill site at Steynsrus. Prevent refuse from being dumped on or in the vicinity of the mine area. • Biodegradable refuse to be handled as indicated above.
Management of access roads	Site Manager to ensure compliance with the guidelines as stipulated in the EMP. Compliance to be monitored by the Environmental Control Officer.	• Maintain newly constructed access roads so as to minimise dust, erosion or undue surface damage. • Divert storm water around the access roads to prevent erosion. • Erosion of access road: Restrict vehicular movement to existing access routes to prevent crisscrossing of tracks through undisturbed areas.

Monitoring Aspect	Role	Responsibility
Topsoil handling	Site Manager to ensure compliance with the guidelines as stipulated in the EMP. Compliance to be monitored by the Environmental Control Officer.	• Remove the first 300mm of topsoil in strips and store at the stockpile area. • Keep the temporary topsoil stockpiles free of weeds. • Place topsoil stockpiles on a levelled area and implement measures to safeguard the piles from being washed away in the event of heavy rains/storm water. • Topsoil heaps should not exceed 2m in order to preserve micro-organisms within the topsoil, which can be lost due to compaction and lack of oxygen. • Do not store topsoil longer than 3 months. • Divert storm- and runoff water around the stockpile area and access roads to prevent erosion.
Monitoring of the stream bordering the site	Site Manager to ensure compliance with the guidelines as stipulated in the EMP. Compliance to be monitored by the Environmental Control Officer.	• Conduct bi-annual water analysis on the water in the stream bordering the site to enable early identification of possible contamination.

5.4 Committed time frames for monitoring and reporting.

Monitoring Aspect	Time Frames	Reporting
Dust Handling	Throughout Construction, Operational and Decommissioning Phase	• Daily compliance monitoring by site management. • Monthly compliance monitoring of site by an Environmental Control Officer.
Noise Handling	Throughout Construction, Operational and Decommissioning Phase	• Daily compliance monitoring by site management. • Monthly compliance monitoring of site by an Environmental Control Officer.
Management of weed/invader plants	Throughout Operational and Decommissioning Phase	• Daily compliance monitoring by site management. • Monthly compliance monitoring of site by an Environmental Control Officer.
Stormwater Handling	Throughout Operational and Decommissioning Phase	• Daily compliance monitoring by site management.

Monitoring Aspect	Time Frames	Reporting
		• Monthly compliance monitoring of site by an Environmental Control Officer.
Management of health and safety risks	Throughout Construction, Operational and Decommissioning Phase	• Daily compliance monitoring by site management. • Monthly compliance monitoring of site by an Environmental Control Officer.
Waste management	Throughout Construction, Operational and Decommissioning Phase	• Daily compliance monitoring by site management. • Monthly compliance monitoring of site by an Environmental Control Officer.
Management of access roads	Throughout Construction, Operational and Decommissioning Phase	• Daily compliance monitoring by site management. • Monthly compliance monitoring of site by an Environmental Control Officer.
Topsoil handling	Throughout Construction, Operational and Decommissioning Phase	• Daily compliance monitoring by site management. • Monthly compliance monitoring of site by an Environmental Control Officer.
Monitoring of the stream bordering the site	Throughout Construction, Operational and Decommissioning Phase	• Daily compliance monitoring by site management. • Monthly compliance monitoring of site by an Environmental Control Officer.

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 requested rehabilitation plan is attached as Appendix C.

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

Upon cessation of the mining activities the area will be fully rehabilitated. The slopes of the pit will be graded/shaped for closure to blend with the natural topography of the area. The slopes will be stabilized with vegetation to prevent erosion.

Compacted soil will be ripped and levelled in order to re-establish a growth medium. Stockpiles will be removed during the decommissioning phase, the area ripped and available topsoil that was removed will be spread over worked areas to enhance the establishment of vegetation. All waste materials will be removed from the site and dumped at recognised landfill sites. The mining area will be fenced to ensure controlled access to the area, and all infrastructures will be removed from the site.

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 management of the potential impacts such as dust suppression, noise control and waste handling were included in the notification letter send to the I&AP's and stakeholders informing them of the proposed mining activity. The I&AP's and stakeholders were requested to submit any additional comments. To date no additional comments were received.

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)

The property is owned by Mr. SJ du Plessis. The stakeholders and I&AP's were informed by means of letters and newspaper advertisements.

The Department of Land Affairs were contacted on the 5th of October 2011, and a land claim request was submitted. To date no response of any land claim on the proposed mining property has been received.

Mr. Du Plessis is the only lawful occupier of the land concerned.

The farm Zeekoe Gat 87 is surrounded by other farms. The land use on the farm and surrounding areas are mainly for agricultural purposes. Approximately 12 workers, 3 women and 9 men, will be appointed. The workers will be sourced from the local community.

The proposed mining activities will take place in an existing quarry that has been established in the nineteen sixties. As the new mining activities will be contained within an already disturbed area, no negative visual impact is expected on the surrounding environment. Gravel from the mining area will be used for the upgrading of roads in the vicinity of the site.

The activity will therefore have a positive impact on the surrounding environment as it will aid infrastructure development of the area.

The Gariep Local Municipality is the local authority within the vicinity of the farm. The following Government Departments were contacted with regard to the project:

- Department of Economic Development, Environmental Affairs and Tourism
- Department of Agriculture
- Department of Labour
- Department of Rural Development
- Department of Water Affairs
- Department of Rural and Land Reform
- Gariep Local Municipality
- Ukhallamba District Municipality (Joe Gqabi)

See attached as Appendix D proof that the I&AP's were contacted.

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.

As attached in Appendix D, the following information was provided to the I&AP's and stakeholders:

B&E International Pty Ltd has applied for a mining permit on Portion 3 and 5 of the Zeekoe Gat 87 District Steynsburg Eastern Cape (Reference:EC30/5/1/3/2/10014MP).

This letter is to inform you about the proposed activity and to determine if there are any concerns or objections from interested and affected parties that need to be considered.

The mining methods will make use of blasting by means of explosives in order to loosen the hard rock and the material will then be loaded and hauled out of the excavation and loaded onto a mobile crusher plant in the mining area. The aggregate will then be stockpiled and transported to clients via transporting trucks and trailers.

Please contact Sonette Smit at the contact details as presented in the letterhead through any means should you need more information, have concerns or comments that need to be considered or if you want to be registered as an interested and/or affected party on or before 15 October 2011.

Your feedback is valued and will be addressed appropriately.

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

All the stakeholders and I&AP's identified in 7.1 were informed of the proposed mining activity. To date no objections or comments has been received.

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

To date no objections or comments has been received.

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.

To date no objections or comments has been received.

7.2.5 Other concerns raised by the aforesaid parties.

To date no objections or comments has been received.

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

See attached as Appendix D proof that the stakeholders and I&AP's were contacted.

7.2.7 Information regarding objections received.

To date no objections or comments has been received.

7.3 The manner in which the issues raised were addressed.

To date no objections or comments has been received.

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).

Once mining of the proposed area starts a copy of the Environmental Management Plan will be handed to the site manager during the site establishment meeting. Issues such as topsoil handling, site clearance, fire principals and hazardous waste handling will be discussed.

An induction meeting will be held with all the site workers to inform them of the Basic Rules of Conduct with regard to the environment.

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).

The operations manager must ensure that he/she understands the EMP document and its requirement and commitments before any mining takes place. An Environmental Control Officer needs to check compliance of the mining activities to the management programmes described in the EMP.

The following list represents the basic Do's and Don'ts towards environmental awareness, which all participants in this project must consider whilst carrying out their tasks.

DO:

- Us the toilet facilities provided – report dirty or full facilities,
- Clear your work areas of litter at the end of each day – use the waste bins provided and ensure that litter does not blow away,
- Report all fuel or oil spills immediately and stop the spill continuing,
- Dispose of cigarettes and matches carefully, (Littering is an offence),
- Confine work and storage of equipment to within the immediate work area,
- Use all safety equipment make sure you comply with all safety procedures,
- Ensure a working fire extinguisher is immediately at hand if any "HOT WORK" is undertaken e.g. welding, grinding, gas cutting etc.

- Prevent excessive dust and noise.

DO NOT:

- Make any fires,
- Enter any fenced of or marked area,
- Allow cement spillage or cement bags to blow away,
- Allow litter, oil, waste or foreign material to flow/enter into the storm water channels,
- Litter or leave food laying around,
- Harm any mammal, reptile or bird that may enter the site or that may be found within the surrounding area.

8.3 Environmental awareness training.

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

The operations manager must ensure that he/she understands the EMP document and its requirement and commitment before any mining takes place.

Operators of earth moving equipment should be informed of the following requirements:

- Mining within demarcated areas;
- No-go areas;
- Establishment of access roads;
- Handling of hazardous waste and their storage facilities;
- Handling of biodegradable and non-degradable waste;
- Vehicle maintenance;
- Mining methods to be followed;
- Handling and storing of topsoil;
- Sloping of excavations;

- Speed control in order to reduce dust;
- Emergency procedure awareness.
- Labourers should be informed of the following during monthly “toolbox talks”:
- Reporting of unusual observations to management (e.g. fossils, graves, etc.);
- Reporting of spills to management;
- Felling or damaging trees for firewood not allowed;
- Making fires not allowed;
- Hunting and killing of animals not allowed;
- Demarcated areas for mining;
- Establishing of access roads and erection of gates in fence lines;
- Status of gates of farm owner;
- Toilet facilities and hygiene measures;
- Handling of waste;
- Vehicle maintenance and vehicle maintenance yard;
- Handling of topsoil;
- Emergency procedures awareness.

An induction meeting will be held with all the site workers to inform them of the Basic Rules of Conduct with regard to the environment.

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)

As forecast in the Financial and Technical report attached as Appendix E the annual Technical competence cost forecast for the proposed mining activity amounts to R5 088 000.

The annual amount required to manage and rehabilitate the environment was estimated to be ±R1 067 000. Please see the explanation as to how this amount was derived at attached as Appendix E.

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

The mining operation will be self-funded through income generated by sales of the gravel mined. Bridging finance will be supplied, where needed, by B&E International (Pty) Ltd.

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

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.	
Full Names and Surname	Sonette Smit
Identity Number	83 06 22 02 14 08 7

-END-

APPENDIX A

MAP INDICATING SPATIAL LOCALITY OF ENVIRONMENTAL, CULTURAL/HERITAGE AND CURRENT LAND USE FEATURES

APPENDIX B

PLAN OF MAIN ACTIVITIES

APPENDIX C

REHABILITATION PLAN

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APPENDIX D

PUBLIC PARTICIPATION PROCESS

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NOTIFICATION OF LAND OWNER

LANDOWNER	CONTACT DETAIL
Land owner	Mr. SJ Du Plessis Tel: 048 884 0563

INITIAL CORRESPONDENCE WITH LAND OWNER MR. SJ DU PLESSIS WAS HAND DELIVERED AS WELL AS POSTED ON 03 OCTOBER 2011

Invoice From:

Postnet Somerset Mall
Shop 13
Melcksloot Village
Somerset Mall, Somerset West
7130
Tel : 021-851-5378
Fax : 021-851-5357
E-Mail: somersetmall@postnet.co.za

POSTNET
CREATE · DUPLICATE · DELIVER

TAX INVOICE

Invoice To:

ENVIROWORKS ENVIRONMENTAL CONSULTANCY
Postnet Suite 116
Private Bag X01
Brandhof
9324
Tel :
Fax : 051 4360791
Customer VAT No :4610205579

Deliver to :

ENVIROWORKS ENVIRONMENTAL CONSULTANCY
Steynsburg
I & APS

Account No	Vat Reg No	Invoice Date	Order Number	Rep. No.	Invoice Number	Page No.
ENV001	4490218890	13/10/2011		1	INV13950	1

Item Code	Description	Quantity	Unit Price	Disc %	Vat	Line Total
23	POSTAL SERVICES Registered SJ Du Plessis (Steynsburg) RD 647 551 736 ZA	1.00	35.00		4.30	35.00

Received in Good Order

Received By : .....

Subtotal (Exclusive)	30.70
Vat	4.30
Invoice Total	35.00

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11 Oktober 2011

Po Box 316
Steynsburg
5920
Tel: 048 884 0563

Mnr. SJ Du Plessis

KENNISGEWING VAN 'N AANSOEK IN TERME VAN DIE "MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002(ACT 28 OF 2002 MPRDA)"

Hiermee wil ons u inlig rakende die aansoek van B&E International Pty Ltd wat aansoek gedoen het vir die ontginning van gruis op die plaas Zeekoe Gat 87 Gedeelte 3 & 5 Distrik Steynsburg Weg Oos Kaap(Verwysing:EC30/5/1/3/2/10014MP).

As eienaar van die bogenoemde eiendom is u geïdentifiseer as 'n geïnteresseerde en geaffekteerde party wat moontlik kommentaar sou wou lewer op die aansoek.

Die goedkeuring van die myn magtiging is onderhewig aan die goedkeuring van 'n omgewings bestuursplan deur die Departement van Minerale en Energiesake en ander departemente. In die omgewingsbestuursplan word maatreëls gespesifiseer om alle potensiële omgewingsimpakte aan te spreek. Hierdie skrywe is om u die geleenheid te bied om kommentaar te lewer op die beplande aktiwiteit en seker te maak dat u nie negatief geraak sal word nie. Die herwinning van gruis sal gedoen word volgens die bepalings van die omgewings bestuursplan om moontlike impakte aan te spreek.

Gruis word meganies uit die groef gehaal met gronverskuiwings masjienerie en geberg van waar dit met vragmotors versprei sal word. Daar word geen permanente strukture gebou nie en werkers sal daagliks na die terrein gebring word. Alle verrigtinge sal gedurende werksure plaasvind. As oormatige stof gegenereer word tydens die proses sal stof beheermaatreels getref word wat die volgende sal insluit:

- die beheer van voertuigbeweging (spoed en toegewysde roetes),
- toediening van water of ander stofbeheerprodukte op hoe risiko areas.

Bogrond word vooraf verwyder en eenkant gestoor vir latere rehabilitasie. Die groef se walle sal afgeskuins word om in te pas met die plaaslike topografie en bogrond word teruggeplaas sodat die natuurlike plantegroei hervestig. Met sluiting sal die hele groef gerehabiliteer word in ooreenstemming met die omgewingsbestuursplan.

U word versoek om indien u enige addisionele inligting benodig, beswaar of kommentaar het rakende die voorgenome aansoek, dit voor of op die 15de Oktober 2011 onder die skrywer se aandag te bring by die bogenoemde adres of telefoon nommer.

Byvoorbaat dank

.....
Sonette Smit
Enviroworks

NOTIFICATION OF STAKEHOLDERS

ORGANIZATION	NAME
Department of Agriculture	Director Tel: 051 633 1700
Department of Economic Development & Environmental Tourism	Director Tel: 043 605 7000
Department of Labour	Director Tel: 043 701 3128
Department of Rural and Land Reform	Chief Director Tel: 043 700 7030
Department of Water Affairs	Ms N Mnukwa Tel: 043 604 5402
Gariep local municipality	Mr T Mawonga Tel: 051 653 1777

INITIAL CORRESPONDENCE WITH DEPARTMENT OF AGRICULTURE ON 7 OCTOBER 2011.

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07 October 2011

Department of Agriculture
Private Bag X1006
Aliwal North
9750

Tel: 051 633 1700
Fax: 051 653 2060

Attention:Director

NOTICE OF AN APPLICATION IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002(ACT 28 OF 2002 MPRDA).

B&E International Pty Ltd has applied for a mining permit on Zeekoe Gat 87 Portion 3 & 5 District Steynsburg Rd Eastern Cape (Reference:EC30/5/1/3/2/10014MP).

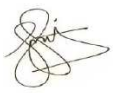
This letter is to inform you about the proposed activity and to determine if there are any concerns or objections from interested and affected parties that need to be considered.

The mining methods will make use of blasting by means of explosives in order to loosen the hard rock and the material will then be loaded and hauled out of the excavation and loaded onto a mobile crusher plant in the mining area. The aggregate will then be stockpiled and transported to clients via transporting trucks and trailers.

Please contact Sonette Smit at the contact details as presented in the letterhead through any means should you need more information, have concerns or comments that need to be considered or if you want to be registered as an interested and/or affected party on or before 15 October 2011.

Your feedback is valued and will be addressed appropriately.

Kind Regards



.....

Sonette Smit

Enviroworks

INITIAL CORRESPONDENCE WITH DEPARTMENT OF ECONOMIC DEVELOPMENT ENVIRONMENT AND AFFAIRS ON 7 OCTOBER 2011.

Today's Impact | Tomorrow's Legacy

07 October 2011

Department of Economic Development & Environmental Affairs
Private Bag X0054
Bisho
5605

Tel: 043 605 7000
Fax: 086 651 6106

Attention:Director

NOTICE OF AN APPLICATION IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002(ACT 28 OF 2002 MPRDA).

B&E International Pty Ltd has applied for a mining permit on Zeekoe Gat 87 Portion 3 & 5 District Steynsburg Rd Eastern Cape (Reference:EC30/5/1/3/2/10014MP).

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Your feedback is valued and will be addressed appropriately.

Kind Regards

.....

Sonette Smit

Enviroworks

INITIAL CORRESPONDENCE WITH DEPARTMENT OF LABOUR ON 07 OCTOBER 2011.

Today's Impact | Tomorrow's Legacy

07 October 2011

Department of Labour
Private Bag X9005
East London
5201

Tel: 043 701 3128
Fax: 043 722 1012

Attention:Director

NOTICE OF AN APPLICATION IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002(ACT 28 OF 2002 MPRDA).

B&E International Pty Ltd has applied for a mining permit on Zeekoe Gat 87 Portion 3 & 5 District Steynsburg Rd Eastern Cape (Reference:EC30/5/1/3/2/10014MP).

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Your feedback is valued and will be addressed appropriately.

Kind Regards

.....

Sonette Smit

Enviroworks

INITIAL CORRESPONDENCE WITH DEPARTMENT OF RURAL AND LAND REFORM ON 07 OCTOBER 2011.

Today's Impact | Tomorrow's Legacy

07 October 2011

Department of Rural and Land Reform
Chief Director
P.O BOX 1958,
EAST LONDON,
5200

Tel: 043 700 7030
Fax: 043 743 4786

Attention: Chief Director

NOTICE OF AN APPLICATION IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002(ACT 28 OF 2002 MPRDA).

B&E International Pty Ltd has applied for a mining permit on Zeekoe Gat 87 Portion 3 & 5 District Steynsburg Rd Eastern Cape (Reference:EC30/5/1/3/2/10014MP).

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Your feedback is valued and will be addressed appropriately.

Kind Regards

…….

Sonette Smit

Enviroworks

INITIAL CORRESPONDENCE WITH DEPARTMENT OF WATER AFFAIRS ON 07 OCTOBER 2011.

Today's Impact | Tomorrow's Legacy

07 October 2011

Department of Water Affairs
Ms N Mnukwa
Chief Director: Eastern Cape
Private Bag X7485
KING WILLIAM'S TOWN
5600

Tel: 043 604 5402
Fax: 043 604 5592

Attention: Ms N Mnukwa

NOTICE OF AN APPLICATION IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002(ACT 28 OF 2002 MPRDA).

B&E International Pty Ltd has applied for a mining permit on Zeekoe Gat 87 Portion 3 & 5 District Steynsburg Rd Eastern Cape (Reference:EC30/5/1/3/2/10014MP).

This letter is to inform you about the proposed activity and to determine if there are any concerns or objections from interested and affected parties that need to be considered.

The mining methods will make use of blasting by means of explosives in order to loosen the hard rock and the material will then be loaded and hauled out of the excavation and loaded onto a mobile crusher plant in the mining area. The aggregate will then be stockpiled and transported to clients via transporting trucks and trailers.

Please contact Sonette Smit at the contact details as presented in the letterhead through any means should you need more information, have concerns or comments that need to be considered or if you want to be registered as an interested and/or affected party on or before 15 October 2011.

Your feedback is valued and will be addressed appropriately.

Kind Regards

.....
Sonette Smit
Enviroworks

INITIAL CORRESPONDENCE WITH LOCAL MUNICIPALITY ON 07 OCTOBER 2011.

Today's Impact | Tomorrow's Legacy

07 October 2011

Local Municipality
Gariep Municipality
PO box 13
Burgersdorp
9744

Tel: 051 653 1777
Fax: 051 653 0056

Attention: Mr T Mawonga

NOTICE OF AN APPLICATION IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002(ACT 28 OF 2002 MPRDA).

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Your feedback is valued and will be addressed appropriately.

Kind Regards

…….

Sonette Smit

INITIAL CORRESPONDENCE WITH DISTRICT MUNICIPALITY ON 07 OCTOBER 2011.

Today's Impact | Tomorrow's Legacy

07 October 2011

(Joe Gqabi) Ukhallamba District Municipality
Private Bag X102
Barkley East
9786
Tel: 045 797 3000
Fax: 045 971 0251

Attention: Municipal Manager

NOTICE OF AN APPLICATION IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002(ACT 28 OF 2002 MPRDA).

B&E International Pty Ltd has applied for a mining permit on Zeekoe Gat 87 Portion 3 & 5 District Steynsburg Rd Eastern Cape (Reference:EC30/5/1/3/2/10014MP).

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Your feedback is valued and will be addressed appropriately.

Kind Regards

.....

Sonette Smit

Enviroworks

PROOF OF INITIAL NOTIFICATION

Invoice From:

Postnet Somerset Mall
Shop 13
Melcksloot Village
Somerset Mall, Somerset West
7130
Tel : 021-851-5378
Fax : 021-851-5357
E-Mail: somersetmall@postnet.co.za

POSTNET®
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TAX INVOICE

Invoice To:

ENVIROWORKS ENVIRONMENTAL CONSULTANCY
Postnet Suite 116
Private Bag X01
Brandhof
9324
Tel :
Fax : 051 4360791
Customer VAT No :4610205579

Deliver to :

ENVIROWORKS ENVIRONMENTAL CONSULTANCY
Steynsburg

Account No	Vat Reg No	Invoice Date	Order Number	Rep. No.	Invoice Number	Page No.
ENV001	4490218890	11/10/2011		1	INV13938	1

Item Code	Description	Quantity	Unit Price	Disc %	Vat	Line Total
23	RD573609649ZA - MS N MNUKWA	1.00	35.00		4.30	35.00
23	RD573609533ZA - DEPT OF AGRICULTURE	1.00	35.00		4.30	35.00
23	RD573609555ZA - DEPT OF LABOUR	1.00	35.00		4.30	35.00
23	RD573609578ZA - DEPT OF ECONOMIC DEVELOPMENT & ENVIRONMENTAL	1.00	35.00		4.30	35.00
23	RD573609547ZA - LOCAL MUNICIPALITY (GARIEP MUNICIPALITY)	1.00	35.00		4.30	35.00
23	RD573609564ZA - DEPT OF AGRICULTURE	1.00	35.00		4.30	35.00
23	RD573609581ZA - JOE GQABI	1.00	35.00		4.30	35.00
23	RD647551170ZA - DEPT OF RURAL & LAND REFORM	1.00	35.00		4.30	35.00

Received in Good Order

Received By : _____

Subtotal (Exclusive)	245.61
Vat	34.39
Invoice Total	280.00

Invoice From:

Postnet Somerset Mall
Shop 13
Melcksloot Village
Somerset Mall, Somerset West
7130
Tel : 021-851-5378
Fax : 021-851-5357
E-Mail: somersetmall@postnet.co.za

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Invoice To:

ENVIROWORKS ENVIRONMENTAL CONSULTANCY
Postnet Suite 116
Private Bag X01
Brandhof
9324
Tel :
Fax : 051 4360791
Customer VAT No :4610205579

Deliver to :

ENVIROWORKS ENVIRONMENTAL CONSULTANCY
Steynsburg
I&APS

Account No	Vat Reg No	Invoice Date	Order Number	Rep. No.	Invoice Number	Page No.
ENV001	4490218890	13/10/2011		1	INV13950	1

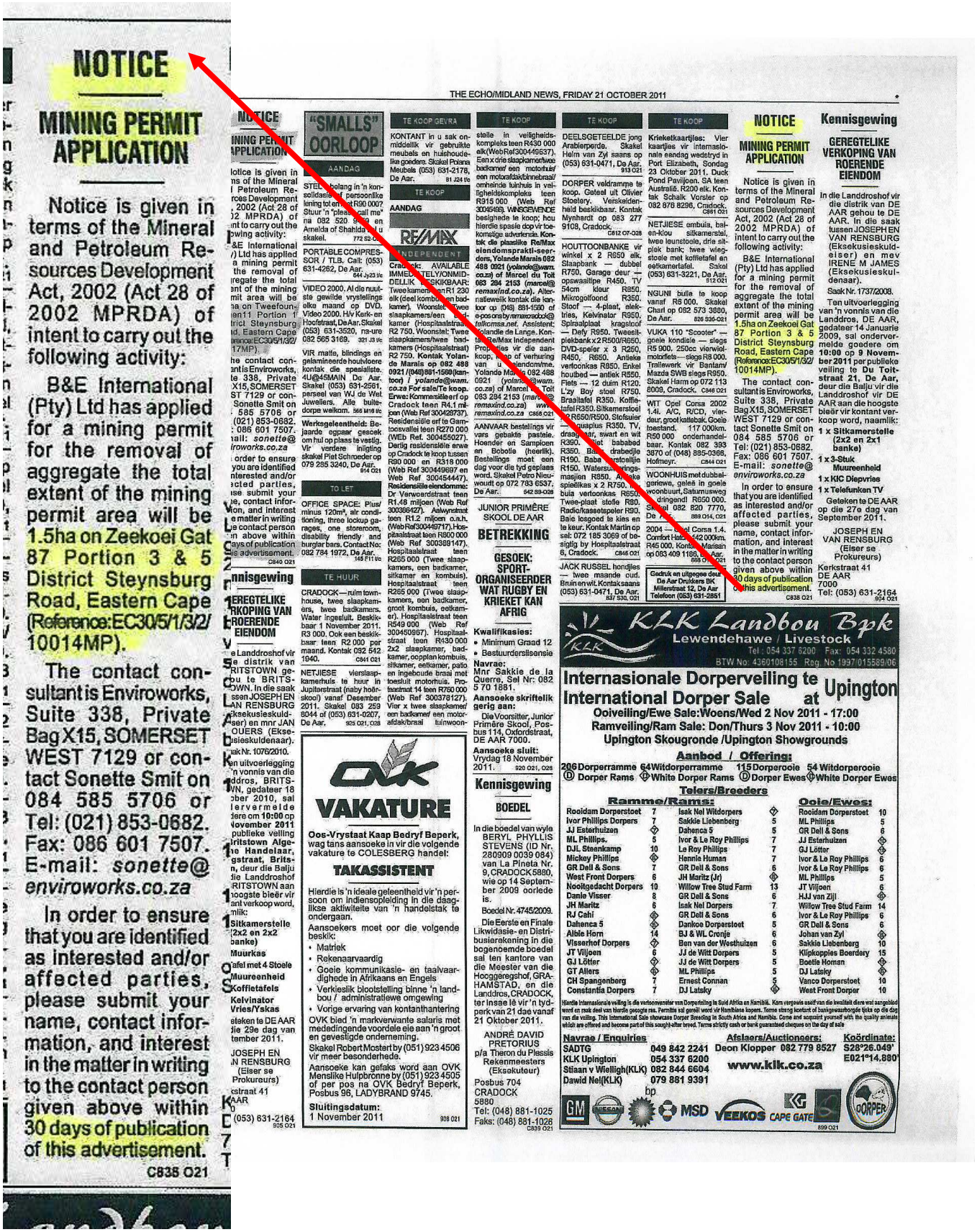
Item Code	Description	Quantity	Unit Price	Disc %	Vat	Line Total
23	POSTAL SERVICES Registered SJ Du Plessis (Steynsburg) RD 647 551 736 ZA	1.00	35.00		4.30	35.00

Received in Good Order

Subtotal (Exclusive)	30.70
Vat	4.30
Invoice Total	35.00

Received By : .....

ADVERT PLACED IN THE ECHO/MIDLAND NEWS ON 21 OF OCTOBER 2011



NOTICE

MINING PERMIT APPLICATION

Notice is given in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002 MPRDA) of intent to carry out the following activity:

B&E International (Pty) Ltd has applied for a mining permit for the removal of aggregate the total extent of the mining permit area will be 1.5ha on Zeekoei Gat 87 Portion 3 & 5 District Steynsburg Road, Eastern Cape (Reference:EC30/5/1/3/2/10014MP).

The contact consultant is Enviroworks, Suite 338, Private Bag X15, SOMERSET WEST 7129 or contact Sonette Smit on 084 585 5706 or Tel: (021) 853-0682. Fax: 086 601 7507. E-mail: *sonette@enviroworks.co.za*

In order to ensure that you are identified as interested and/or affected parties, please submit your name, contact information, and interest in the matter in writing to the contact person given above within 30 days of publication of this advertisement.

C838 O21

THE ECHO/MIDLAND NEWS, FRIDAY 21 OCTOBER 2011

NOTICE

MINING PERMIT APPLICATION

Notice is given in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002 MPRDA) of intent to carry out the following activity:

B&E International (Pty) Ltd has applied for a mining permit for the removal of aggregate the total extent of the mining permit area will be 1.5ha on Zeekoei Gat 87 Portion 3 & 5 District Steynsburg Road, Eastern Cape (Reference:EC30/5/1/3/2/10014MP).

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In order to ensure that you are identified as interested and/or affected parties, please submit your name, contact information, and interest in the matter in writing to the contact person given above within 30 days of publication of this advertisement.

C838 O21

Kennisgewing

GEREGTELIKE VERKOPING VAN ROERENDE EIENDOM

In die Landdroshof vir die distrik van DE AAR. In die saak tussen JOSEPH EN VAN RENSBURG (Eksekusieskuldeiser) en mev IRENE M JAMES (Eksekusieskuldenaar).

Saak Nr. 1737/2008.

Ten uitvoerlegging van 'n vonnis van die Landdros, DE AAR, gedateer 14 Januarie 2009, sal ondervermelde goedere om 10:00 op 9 November 2011 per publieke veiling te Du Toitstraat 21, De Aar, deur die Balju vir die Landdroshof vir DE AAR aan die hoogste bieër vir kontant verkoop word, naamlik:

1 x Sitkamerstelle (2x2 en 2x1 banke)
1 x 3-Stuk Muureenheid
1 x KIC Diepvries
1 x Telefunken TV

Geteken te DE AAR op die 27e dag van September 2011.

JOSEPH EN VAN RENSBURG (Eiser se Prokureurs)
Kerkstraat 41
DE AAR
7000
Tel: (053) 631-2164
904 021

TRANSMISSION REPORT

(Wed) 2011 OCT 5 12:51

Account	:	Doc.#	: 8001578-840
Destination	: 0437433687	Date/Time	: OCT 5 12:39
Telephone #	: 0437433687	TX Start date	: OCT 5 12:48
		Duration	: 3M.36sec
F-Code	:	Com. Mode	: ECM
Self-Tel	: +2721		
Pages	: 1Pages		
Result	: OK		

enviro works

Today's Impact | Tomorrow's Legacy

Date	05 October 2011
For attention	Department of Land Affairs – Eastern Cape
Tel Number	043 700 6000
Fax Number	043 743 3687
From	Murchellin Saal
Land Claim	Steynsburg

LAND CLAIM REQUEST WAS DONE ON THE 5TH OF OCTOBER 2011.

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Today's Impact | Tomorrow's Legacy

Date	05 October 2011
For attention	**Department of Land Affairs – Eastern Cape**
Tel Number	043 700 6000
Fax Number	043 743 3687
From	Murchellin Saal
Land Claim	Steynsburg

Good day

This is to enquire if the land of Steynsburg -
Ref: EC30/5/1/3/2/10014MP: Eastern Cape is under claim.

LPI code: C06800000000008700003

If you could please assist us with the information as required, in form of a letter, we would really appreciate it.

Kind Regards
Murchellin Saal

King's Landing Trading 507 CC trading as Enviroworks | CK 2002/095452/23 | Member: GE Bredenkamp
Suite 338 | Private Bag X15 | Somerset West | 7129 | Suite 204 | Hibernian Towers, Strand | 7140 | Tel 021 853 0682 | Fax 0866 017 507

APPENDIX E

FINANCIAL AND TECHNICAL COMPETENCE

APPENDIX F

PHOTOGRAPHS OF THE PROPOSED MINING AREA

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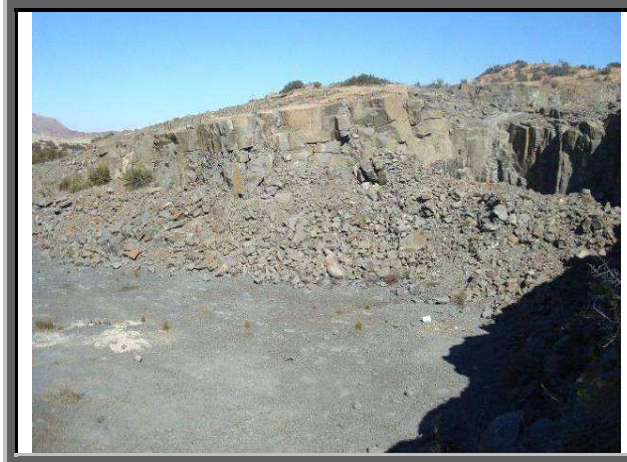
PHOTOGRAPHS OF THE PROPOSED MINING AREA ON PORTION 3 AND 5 OF THE FARM ZEEKOE GAT 87






APPENDIX G

FIRST PHASE ARCHAEOLOGICAL AND HERITAGE INVESTIGATION

Today's Impact | Tomorrow's Legacy