



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: WEDBERG COMMUNAL PROPERTY ASSOCIATION

REFERENCE NUMBER: NC 01/2012

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)**

District	BARKLY WEST
Farm	RIETPUTS FARM NO 15, PORTION 3,5 AND 9
Minerals	DIAMONDS (KIMBERLITE AND ALLUVIAL), CLAY, SAND AND TAILING DUMPS

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.

EIA	An Environmental Impact Assessment as contemplated in Section 38 (1) (b) of the Act.
EMP	an Environmental Management Plan as contemplated in Section 39 of the Act
Fauna	all living biological creatures, usually capable of motion, including insects and predominantly of protein-based consistency.
Flora	All living plants, grasses, shrubs, trees, etc., usually incapable of easy natural motion and capable of photosynthesis.
Fence	A physical barrier in the form of posts and barded wire and/or “Silex” or any other concrete construction, (“palisade” – type fencing included), constructed with the purpose of keeping humans and animals within or out of defined boundaries.
House	any residential dwelling of any type, style or description that is used as a residence by any human
NDA	National Department of Agriculture
NWA	National Water Act, Act 36 of 1998
Pit	any open excavation
“Porrel”	The term used for the sludge created at alluvial diamond diggings where the alluvial gravels are washed and the diamonds separated in a water and sand medium
Topsoil	The layer of soil covering the earth which – <ul style="list-style-type: none"> (a) Provides a suitable environment for the germination of seed; (b) Allows the penetration of water; (c) In a source of micro-organisms, plant nutrients and in some cases seed; and (d) Is not of a depth of more than 0.5 metres or such depth as the Minister may prescribe for a specific prospecting or exploration area or mining area.
Trench	a type of excavation usually made by digging in a line towards a mechanical excavator and not providing the boom – a large, U-shaped hole in the ground, with vertical sides and about 6-8 metres in length. Also a prospecting trench.
Vegetation	any and all forms of plants see also Fauna.
DWAF	The Department of Water Affairs and Forestry, which are provided across the country on the basis of, water catchment areas.
MPRDA	The Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002)
EMPlan	An Environmental Management Plan as contemplated in Regulation 52 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) – this document.

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

ITEM	COMPANY CONTACT DETAILS
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ITEM	CONSULTANT CONTACT DETAILS (If applicable)
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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.

1.1.1 Climate:

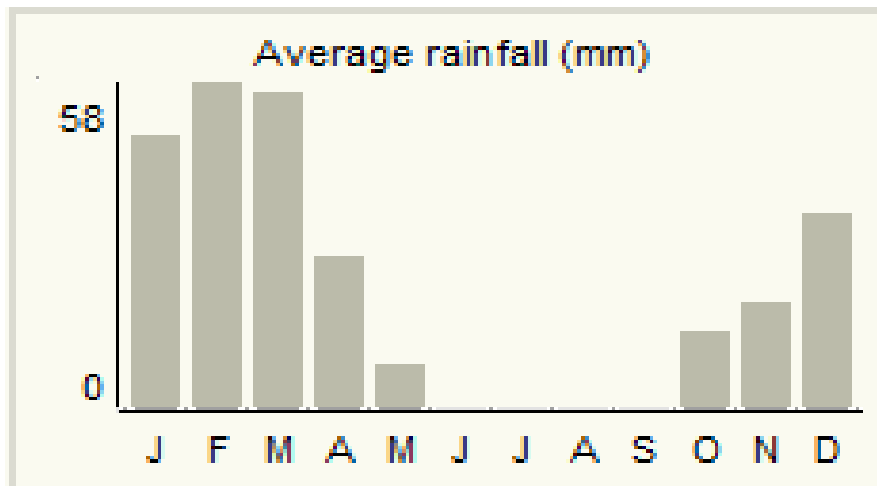


Figure 1: Average rainfall

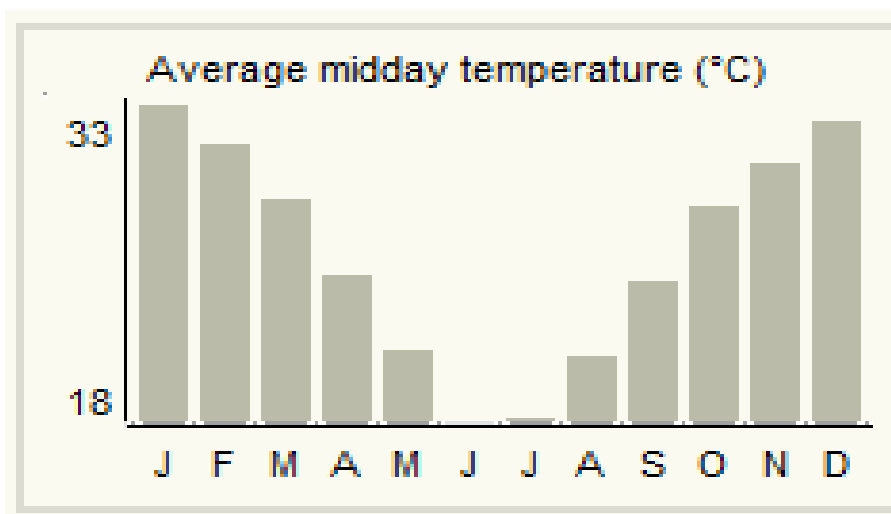


Figure 2: Average midday temperature

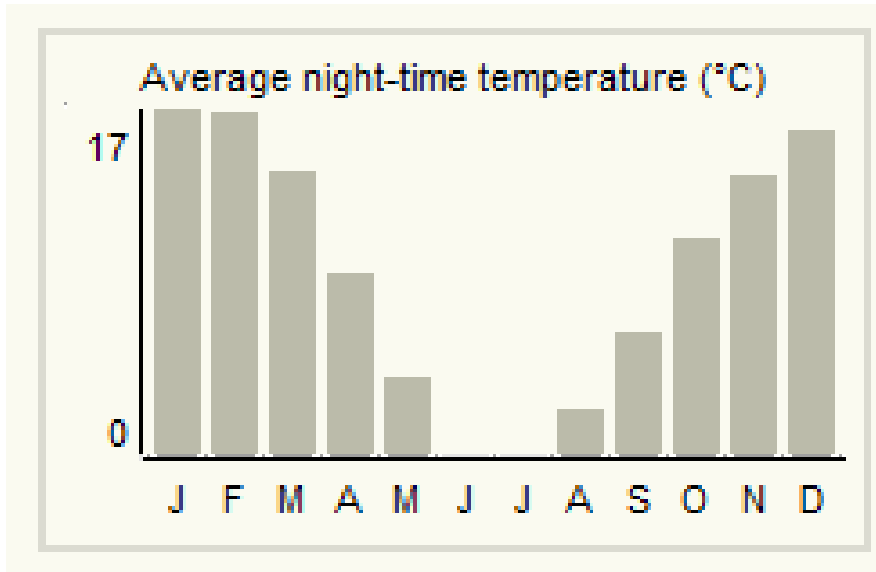


Figure 3: Average night-time temperature

Area of interest normally receives about 266mm of rain per year, with most rainfall occurring mainly during summer. The chart below (lower left) shows the average rainfall values for Windsorton per month. It receives the lowest rainfall (0mm) in June and the highest (58mm) in February. The monthly distribution of average daily maximum temperatures (centre chart below) shows that the average midday temperatures for Windsorton range from 17.5°C in June to 32.6°C in January. The region is the coldest during June when the mercury drops to 0°C on average during the night. Consult the chart below (lower right) for an indication of the monthly variation of average minimum daily temperatures.

1.1.2 Topography

The regional topography is open veldt.

1.1.3 Soil:

The soil in the area is high in arenosols, soils with sandy or loamy sand texture. This soil is reddish brown. The land in Rietputs farm is capable for grazing, wilderness and irrigation.

1.1.4. Vegetation

See vegetation map hereby attached as Figure 1.

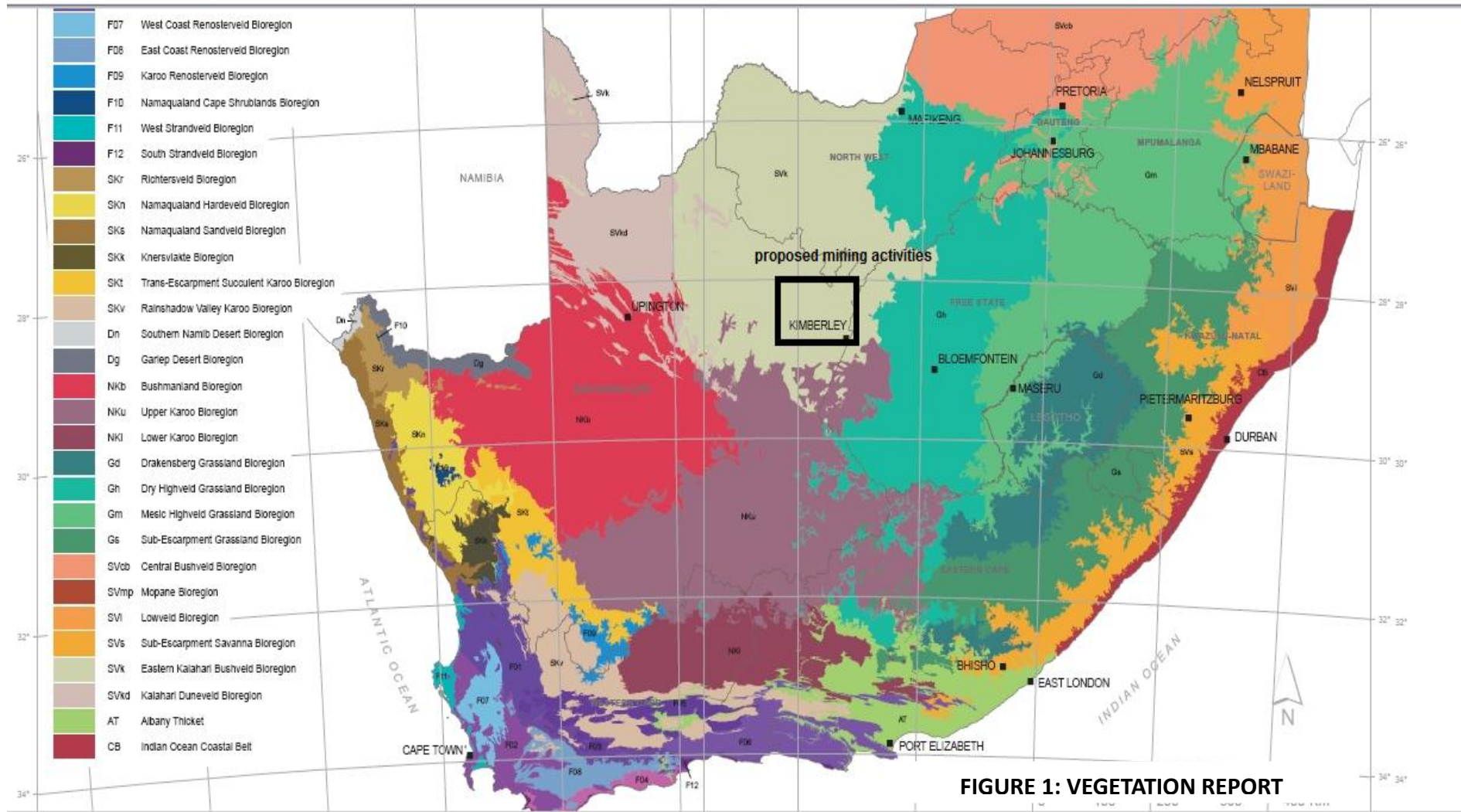


FIGURE 1: VEGETATION REPORT

It is clear that the vegetation types are classified as Least Threatened and the scale of prospecting proposed in terms of this application represent absolutely no threat to the natural vegetation biomes on both the regional and local scale.

We have made use of the vegetation classification as sourced from conservation Services

1.1.5 **Animal Life:**

The Savannah Biome is world renowned for the large herds of ungulates it supports, especially prior to the 1900's. Due to the high disturbance of the area that will occur, no indigenous mammals can be sustained in the area. After rehabilitation some small mammals might migrate back to the area.

1.1.6 **On site and surrounding land use:**

On site Land use:

Cattle farming and mining

Surround land use:

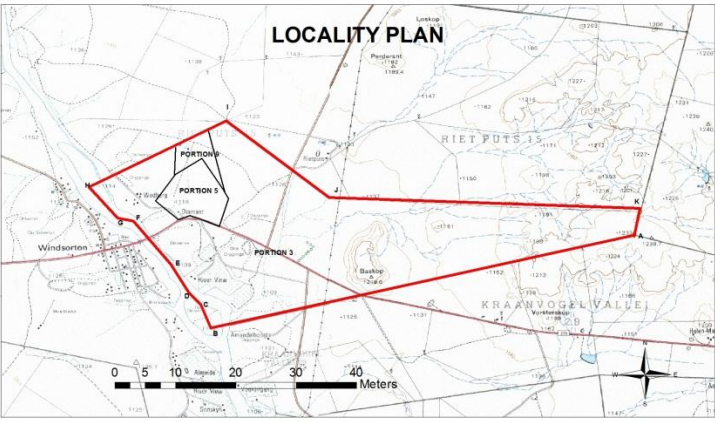
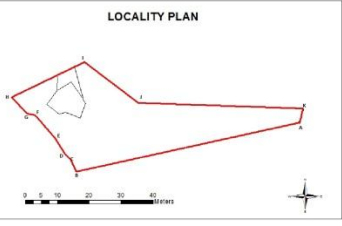
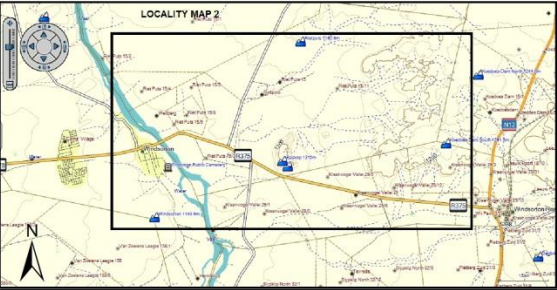
Cattle Farming and mining

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

There is currently no environmental feature that may require protection, remediation, management or avoidance

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

Figure 2 and 3.

<p>APPLICANT: WEDBERG CPA</p> <p>PLAN PREPARED IN ACCORDANCE WITH REGULATION 42 OF THE REGULATIONS PUBLISHED UNDER THE MINING TITLES REGISTRATION ACT (ACT 18 OF 1987)</p> <p>SKETCH PLAN FOR A MINING RIGHT OVER THE AREA LETTERED A, B, C, D, E, F, G, H, I, J, K IN EXTENT 140.9 HA SITUATED ON RIET PUTS FARM NO 15 KIMBERLEY PROVINCE: NORTHERN CAPE</p>	 <p style="text-align: center;">LOCALITY PLAN</p>																																				
<p>SURVEY SYSTEM WGS 84 CO-ORDINATES: WG 25</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Name</th> <th>E</th> <th>S</th> </tr> </thead> <tbody> <tr><td>A</td><td>28.800086</td><td>28.328594</td></tr> <tr><td>B</td><td>28.729951</td><td>28.343771</td></tr> <tr><td>C</td><td>28.729294</td><td>28.339912</td></tr> <tr><td>D</td><td>28.726342</td><td>28.337942</td></tr> <tr><td>E</td><td>28.723355</td><td>28.335949</td></tr> <tr><td>F</td><td>28.716982</td><td>28.326204</td></tr> <tr><td>G</td><td>28.714538</td><td>28.324606</td></tr> <tr><td>H</td><td>28.709906</td><td>28.320570</td></tr> <tr><td>I</td><td>28.722193</td><td>28.309764</td></tr> <tr><td>J</td><td>28.748727</td><td>28.322721</td></tr> <tr><td>K</td><td>28.800779</td><td>28.320073</td></tr> </tbody> </table>	Name	E	S	A	28.800086	28.328594	B	28.729951	28.343771	C	28.729294	28.339912	D	28.726342	28.337942	E	28.723355	28.335949	F	28.716982	28.326204	G	28.714538	28.324606	H	28.709906	28.320570	I	28.722193	28.309764	J	28.748727	28.322721	K	28.800779	28.320073	<p style="text-align: center;">BREEZE COURT INVESTMENTS 47 (PTY) LTD GEOLOGIST & MINING CONSULTANTS</p> <p style="font-size: small;">100% SOUTH AFRICAN OWNED AND CONTROLLED REGISTRATION NO. 2010/0000000/07 100% SOUTH AFRICAN OWNED AND CONTROLLED REGISTRATION NO. 2010/0000000/07 100% SOUTH AFRICAN OWNED AND CONTROLLED REGISTRATION NO. 2010/0000000/07</p>
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<p>PLAN APPROVED:</p> <p>REGIONAL MANAGER NORTHERN CAPE DATE:</p> <p>NAME OF APPLICANT:</p> <p>SIGNATURE: DATE:</p> <p>DRAWN BY: RAKHARU MUNIWA COMPILED BY: RAKHARU MUNIWA QUALIFICATION: BENGEG (Bachelor of Earth Science in Mining and Environmental Geology, Unswen) COMPANY NAME: BREEZE COURT INVESTMENT PTY LTD MINING AND GEOLOGIST CONSULTANTS</p> <p>SIGNATURE: DATE:</p>	<p style="text-align: center;">LOCALITY PLAN</p> 																																				
	 <p style="text-align: center;">LOCALITY MAP 2</p>																																				

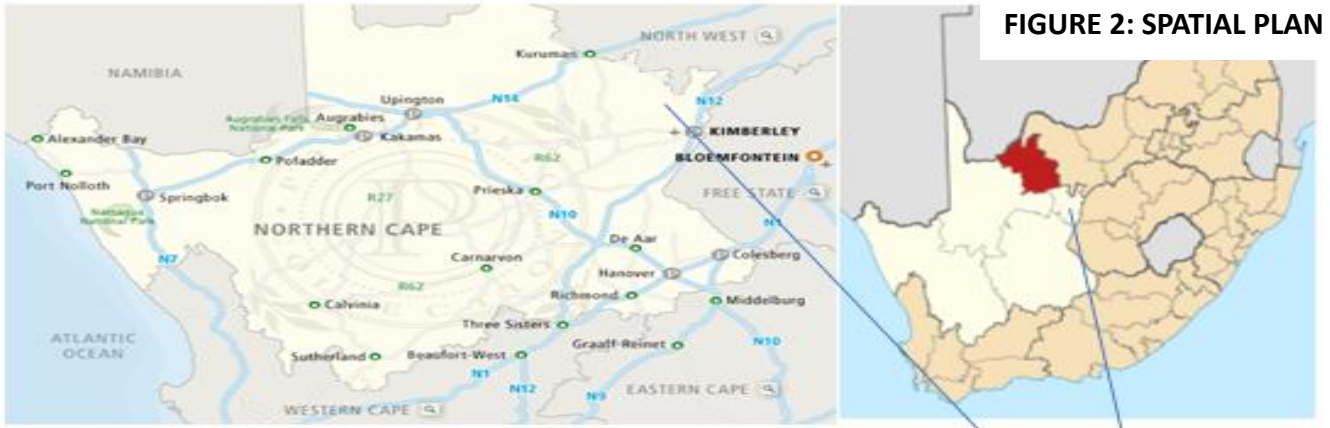


FIGURE 2: SPATIAL PLAN



FIGURE 3: LOCALITY 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,

The applicant is the landowner of the farm and letters were sent to all interested and affected parties per registered post and per hand. See the proof thereof attached as **annexure A**

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

2.1 Description of the proposed prospecting or mining operation.

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

The proposed prospecting activities will be undertaken in three main phases; as described below:

Phase 1: Non Invasive Prospecting

Phase 1 work is designed to establish a complete understanding of the geology and the potential size of the Alluvial and Kimberlite deposits and will comprise of:

(i) Geological Mapping

Detailed geological mapping of the total application area using enlarged black and white aerial photographs. The mapping will be focused on defining areas underlain by Alluvial and Kimberlites.

Geological Field Mapping will also be undertaken in order to get to know the lithology that occur in the area under study and to come up with the stratigraphy of the area and geological map

(ii) Geophysical Survey

Test Geophysical surveys may be undertaken if required to assist with the geological interpretation on the surface mapping. Methods that may be tested are one or more of the following techniques: magnetic method, seismic, ground penetrating radar and various electrical methods. It will be important to select the technique that is most appropriate to the geological nature of the deposit.

(iii) **Description of planned invasive activities:**

(These activities result in land disturbance e.g. sampling, drilling, bulk sampling, etc.)

Phase 2 - Drilling Invasive Prospecting

This phase of the investigation will comprise percussion drilling to determine whether potential target areas defined in phase 1 contained Alluvial and Kimberlite and to follow up with grid drilling of known Alluvial and Kimberlite deposits. Drilling will be done on sites at **100m intervals** along drill sections 100m apart in order to accurately delineate the Alluvial and Kimberlite resource.

It is estimated that the area to be drilled measure about **101.6467 hectares**. A total of **82 boreholes** will be drilled. Average depth of the boreholes is expected to be **± 5 -100m**.

All borehole chips will geologically and localities will be accurately surveyed to determine co-ordinate and elevation for each borehole.

- (i) Borehole localities
- (ii) Alluvial extent and Kimberlite thickness
- (iii) Overburden thickness
- (iv) Stripping ratios
- (v) Bedrock elevation
- (vi) Bedrock geology

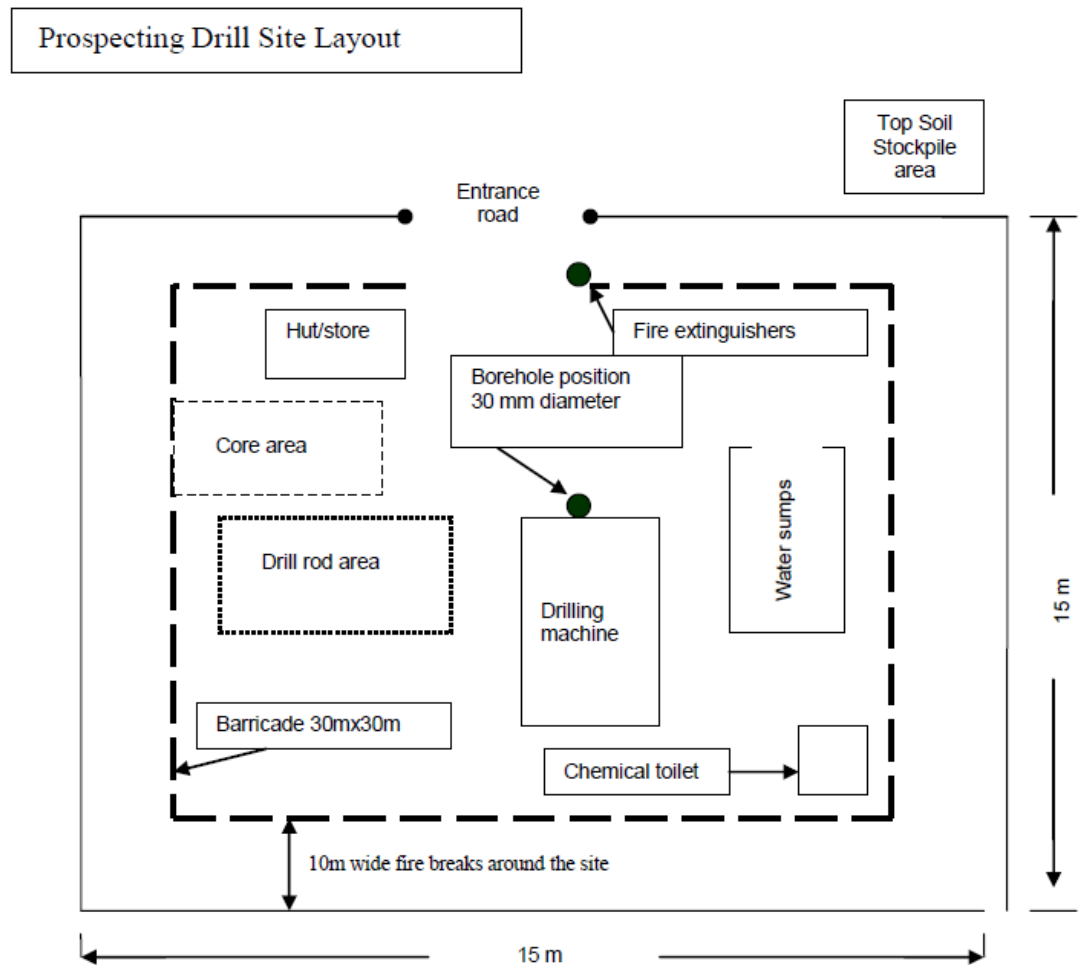
Information obtained in phase 1 and 2 will then be used to compile a comprehensive feasibility report including recommendations whether the investigation should continue into bulk sampling phase.

Phase 3 – Bulk sampling (Invasive Prospecting)

All available topsoil from the position of the first trench will be removed and stored separately in a demarcated area. Topsoil will be stored in a manner that uses minimum run-off and erosion. The topsoil will be used for the final rehabilitation. Once topsoil has been removed, the exposed material will be loaded with an excavator and loaded onto a truck from where it will be transported to the central mineral processing plant.

At the plant material will be screened and crushed. Screened and crushed material will then be fed into a wet rotary screen and then directly into a 16 feet pan, from where it will be sorted on grease tables.

2.1.2 Plan of the main activities with dimensions:



Bulk Sampling

All topsoil with the average of 1 250 mm will be stripped separately with an excavator and stockpiled next to the pit. Two (2) trenches with 20x50x50 deep will be dug. The topsoil will be stored next to the proposed pit. The topsoil will be stored in a manner such that minimum runoff and erosion will emanate from it. The topsoil will be used for the final rehabilitation when prospecting has reached its end. Once the topsoil has been removed the overburden that can vary between 1 - 2 m is then stripped and placed on the site of the excavation. Once the overburden has been removed the exposed diamond various gravel or between 1 -2m which can be quite considerably but on average of 1m thick is stripped with an excavator and hauled into a dump truck from where it is transported to the central mineral process plan to be screened. At the plant the gravel is fed into the screen by the front-end loader whereby gravel is sorted by a grizzly screen grid. The oversize stones larger than 150mm are screened off and loaded into the dump truck with a front-end loader to be taken back to the pit as part of the back filling. The

screened gravel will be process to the 16ft diamond rotating pan. The total amount of water use for the process will be ± 35000 l a day. The waste tailing coming out of the pan will be screened into the size of 2.5mm and 1.6mm. The 2.5mm is pumped to a hydro cycle where the grid and paddle is separated. The paddle goes to a paddle tank from where it is again fed into the pans for recirculation for backfilling and rehabilitation of gravel. The coarse gravel sifted at the grizzly screen and the dry tailings from the dewatering screen will be transported back into the open pit for backfilling.

Dimension for mining sand, clay and tailing dumps

The proposed mining activities will be undertaken in two phases. This is because only front end loader will be used. No other machinery will be used or required since is mining of sand.

The first phase of the activities to be undertaken will be removal of vegetation and the second phase is operational phase which consists of taking out sand using front end loader.

No pit will be dug. The heap will be mined to the level of actual ground.

A third and final phase will be decommissioning phase which consists of removal of equipment and rehabilitation.

2.1.3 Description of construction, operational, and decommissioning phases.

Construction Phase:

Construction phase will consists of establishing the offices on-site and putting in place chemical toilet.

Operational Phase:

Phase 2 drilling phase is programmed to last a period of ± 6 - 12 months.

Bulk sampling will take ± 12 months, should there be any extra time required. Provision will be made to make the amendment to PWP and EMP under the following Section 102.

Decommissioning Phase:

Given the extremely limited nature of the operation, decommissioning rehabilitation merely consists of the removal of the equipment from site. That will be followed up by the Environmental Performance Assessment conducted by independent party to determine whether any additional measures need to be put in place.

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

Issue	Action
Air Quality Management and Control (Regulation 64)	There will be very minimal dust generated as the area to be prospected will be watered first and the dirt roads will be watered if need be, determined by the distance from the residential areas.
Fire Prevention (Regulation 65)	There will be an assembly point on site and fire extinguishers
Noise Control (Regulation 66)	Very minimal noise levels are foreseen, from the engines of trucks and the drilling machine. The closest is not less than 200m to the proposed operations, and the boreholes and drilling machines will be located not less than 100m away.
Blasting, vibration and shock (Regulation 67)	There will be no blasting
Disposal of waste Material (Regulation 69)	Waste bins will be provided on site and clearly marked for waste and once full will be discarded in the nearest registered landfill site.
Soil Pollution and erosion control (Regulation 70) - Handling of topsoil	Any top soil that is not contaminated will be used to refill the holes and vegetation that was removed will be replaced, and the soil that will be contaminated will be disposed by Waste bins will be provided on site and clearly marked for waste and once full will be discarded in the nearest registered landfill site.
- Handling of spills of oil grease, diesel, acid Fluid	Contaminated soil will be bagged and removed to be disposed off in a Municipality approved site
Storage facilities for oil, grease, diesel, acid fluid available on site.	Fluids will be stored in clearly marked drums
Health and Safety Issues	Provision of the relevant Protective clothing for all employees will be provided, and first aid kit on site as well as First Aider

2.2 Identification of potential impacts (Refer to the guideline)

2.2.1 Potential impacts per activity and listed activities.

The onsite activity which could potentially generate any impact is generated as a result of drilling, bulk sampling and mining of sand, clay and tailing dumps. So, the potential impacts in respect of drilling, bulk sampling and mining activities (sand, clay and tailing dumps) exercise are as follows:

Activity	Significant impacts on any element of the environment (Regulation 52(2)(c))
Site Establishment	-Potential soil pollution and nuisance -Potential dust nuisance as a result of prospecting and use of access roads. -Fire hazards -Potential clearing of vegetation
Transportation during Site Survey, Drilling and Bulk Sampling	Disturbance of vegetation
Demarcation	Potential scaring of ground
Logging and Essaying	Potential littering with drill bits – if uncontrolled
Sumping	Soil degradation
Fuel stock and filling of vehicles	Soil and water pollution through spills and leaks
Drilling and bulk sampling	-noise - dust - soil and water pollution through potential diesel and oil
Capping of boreholes	- Abandonment of cement scabs -Disposal of packaging material and general waste
Vehicle Maintenance (potential oil and grease spills if done on site)	Soil and water pollution
Transporting	-Ground compaction and vegetation destruction - Dust Nuisance and air pollution
De - establishment and rehabilitation	- A decrease in employment results in negative impacts on community structure -Degradation of land due to abundant material and uncapped holes

2.2.2 Potential cumulative impacts.

The impact in the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions.

There is no potential cumulative impact as a result of the proposed prospecting activities because the strict measures will be put in place. Provided the letters were sent to interested and affected parties per hand and registered post

2.2.3 Potential impact on heritage resources

Impact assessment on the heritage resources will be undertaken.

2.2.4 Potential impacts on communities, individuals or Competing land uses in close proximity.

The following are listed as potential theoretical impacts on surrounding communities/farmers:

1. Dust
2. Noise
3. Visual Impact (of heavy machinery at work)

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 landowner is the applicant of prospecting right and affected and interested parties were sent letters per registered post and per hand. See the proof thereof as **annexure A**

2.2.6 Confirmation of specialist report appended.

(Refer to guideline)

Letters will be sent to the following specialists to comment:

- SAHRA
- Department of Water Affairs,
- Department of Agriculture,
- Department of Economic Development, Environment and Tourism

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

3.1 Assessment of the significance of the potential impacts

3.1.1 Criteria of assigning significance to potential Impacts

The classification of all environmental impacts identified will be assessed in terms of: -

- their duration,
- their extent,
- their probability,
- their severity.

The above will be used to determine the significance impact without any mitigation, as well as with mitigation.

Environmental risk and impact assessment criteria

Duration		
Short term	0-3months	1
Construction	6months	2

Life of mining activities	5years	3
Post rehabilitation	Time for re-establishment of natural systems	4
Residual	Beyond mining activities	5

Extent		
Site specific	Site of proposed mining activities	1
Local	Farm and surrounding farms	2
District	Makgareng	3
Region	Frances Baard	4
Province	Northern cape	5
National	South Africa	6
International	Beyond RSA Borders	7

Probability		
Almost certain	100% probability of occurrence- is expected to occur	5
Likely	99%-60%probability of occurrence-will probably occur in most circumstances	4
Possible	59%-16% chance of occurrence-might occur at some time	3
Unlikely	15-6% probability of occurrence-could occur at some time	2
Rare	<10% probability of occurrence-may occur in exceptional circumstance	

Severity		
Catastrophic (critical)	Total change in area of direct impact, relocation not an option, death, toxic release off-site with detrimental effects, huge finance loss	5
Major (high)	> 50% change in area of direct impact, relocation required and possible, extensive injuries, long term loss in capabilities, off-site release with no detrimental effects, major financial implications	4
Moderate (medium)	20 – 49% change, medium term loss in capabilities, rehabilitation / restoration / treatment required, on-site release with outside assistance, high financial impact	3
Minor	10 – 19% change, short term impact that can be absorbed, on-site release, immediate contained, medium financial implications	2
Insignificant (low)	< 10 % change in the area of impact, low financial implications, localised impact, a small percentage of population	1

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

ACTIVITY Mark with X which activities are applicable	POTENTIAL IMPACT	SIGNIFICANCE RATING							
		D	E	P	S	LOW	MEDIUM	HIGH	
Drilling	X	Surface	3	1	4	3		X	

		Disturbance							
Excavations	X	Surface disturbance	3	1	4	3		X	
		Dust	3	2	4	3		X	
		Noise	3	2	4	3			
		Drainage	3	2	4	1		X	
Blasting	N/a	Fly Rock			4				
Stockpiles	X	Surface disturbance	3	1	4	2		X	
		Dust	3	2	4	3		X	
		Drainage	3	2	4	1		X	
Discard or dams		Surface Disturbance							
		Dust							
		Drainage							
Loading, hauling and transport	X	Noise	3	2	4	3	X		
		Dust	3	2	4	3	X		
Water supply dams and boreholes.	X	Surface disturbance	3	1	4	1	X		
Accommodation, offices, ablution, stores, workshops etc.	X	Surface disturbance	3	1	4	3	X		
		Drainage		1		2			
Processing Plant	X	Noise	3	2	4	3			
		Dust	3	2	4	3			
		Drainage	3	1	4	3			
		Surface disturbance	3	2	4	3			
OTHER (Specify)									

3.1.3 Assessment of potential cumulative impacts.

Noise Disturbance

There are activities such as mining and road transport (cars, trucks) and therefore the site is prone to current noise which will be cumulatively be more due to mining activities.

Dust disturbance

Currently there are nearby activities that contribute in dust emission and therefore the site is prone to current dust which will be cumulatively be more due to mining activities.

Cumulative impacts for both noise and dust impacts

Impact	Extent	Severity	Probability
Existing impacts	2	3	4
Additional impacts	2	3	4
Cumulative impacts	4	6	8
Residual after mitigation	2	3	4

3.2 Proposed mitigation measures to minimise adverse impacts.

ACTIVITY	MITIGATION
Dust Control	Dust masks will be provided for employees. Roads will be watered for road dust
Noise Control	Ear protection will be provided for employees. Noise threshold levels will be kept low.
Fire Prevention	No fire will be allowed on site.
Disposal of waste material	Domestic waste dumps at municipal terrain. Topsoil shall be backfilled into excavation areas.
Soil Pollution and Erosion control	In the event of spillage the area shall be cleaned and contained soil dumped in appropriate container. Fluids kept in safe demarcated storage facility.
Natural vegetation and Animal Life	No unnecessary access to natural vegetation permitted.
Surface Water / Ground Water Quantity & Quality	Unlikely to be affected
Socio-economic	Minor positive employment impact
Archaeology	Archaeological studies will be executed

3.2.1 List of actions, activities, or processes that have Sufficiently significant impacts to require mitigation (refer to table above):

Initial phase of prospecting:

- Involves walking traverses along pathways on the farm by note taking and field sketches
- Access is by motorized vehicle along existing roads and tracks and by foot in some areas.
- No vegetation or surface material is disturbed during the initial phase.
- Geophysical surveys employing non-destructive methods are used to define drill targets. The survey involved a small crew (geologist) using sensitive instrument walking the grid lines and making measurements. This phase is non-harmful to the environment and causing no permanent disturbance to the surface

Drilling Phase and bulk sampling

- The following measures will be undertaken to rehabilitate affected areas after prospecting work has undertaken.
- The environment will briefly look as follows after closure:

- Waste material of any description will be removed entirely from the prospecting area and disposed of at a recognised landfill facility. It will not have been buried or burned on site (with the exception of bio-degradable waste);
- All boreholes in loose formation will be backfilled and levelled;
- Deeper boreholes will be sealed off and covered with a layer of topsoil;
- Rehabilitation and the re-establishment of vegetation will endeavour to represent that which was present in the area prior to the disturbance of the land.
- Whenever any excavation is undertaken, topsoil shall be handled as described in the development plan, overburden rocks and coarse material shall be placed concurrently in the excavations or stored adjacent to the excavation, if practicable, to be used as backfill material once the ore or gravel has been excavated.
- Trenches shall be backfilled immediately if no ore or precious stone-bearing gravel can be located.

3.2.2 Concomitant list of appropriate technical or management options

Area	Activity
Drill sites	Rehabilitation of camp/drill sites Remove all foreign material from the site.
Access Roads	Renovate all hardened surfaces and vegetate
Boreholes	Plug all prospecting boreholes with a concrete plug 0,5 meters below the natural ground level.
Sumps	Backfill all prospecting drill sumps and boreholes with topsoil and vegetate
General infrastructure	Remove all drill infrastructure and rehabilitate footprints
Trenches	Whenever any excavation is undertaken, topsoil shall be handled as described in the development plan, overburden rocks and coarse material shall be placed concurrently in the excavations or stored adjacent to the excavation, if practicable, to be used as backfill material once the ore or gravel has been excavated. Trenches shall be backfilled immediately if no ore or precious stone-bearing gravel can be located.

3.2.3 Review the significance of the identified impacts

(After bringing the proposed mitigation measures into consideration).

ACTIVITY Mark with X which activities are applicable		POTENTIAL IMPACT	SIGNIFICANCE RATING		
			LOW	MEDIUM	HIGH
Drilling and Excavations	X	Surface disturbance	X		
		Dust	X		
		Noise	X		
		Drainage	X		
Blasting	N/a	Fly Rock			
Stockpiles	X	Surface disturbance	X		
		Dust	X		
		Drainage	X		
Discard or dams		Surface Disturbance			
		Dust			
		Drainage			
Loading, hauling and transport	X	Noise	X		
		Dust	X		
Water supply dams and boreholes.	X	Surface disturbance			
Accommodation, offices, ablution, stores, workshops etc.	X	Surface disturbance	X		
		Drainage			
Processing Plant		Noise			
		Dust			
		Drainage			
		Surface disturbance			
OTHER (Specify)					

3.3.4 Disposal of waste material:

3.3.4.1 Domestics Waste

No waste will be disposed off on site. Local Municipality will be contacted to remove waste on the area on a continual basis. A temporary dust bin about 3m x1, 5m will be stored on site.

3.3.4.2 Industrial Waste

No industrial waste will be generated as a vehicle servicing and maintenance will be conducted at facilities off-site. Should emergency repairs be required then oil/fuel management procedures below will be employed.

Fuel receipt, storage and dispensing:

Mobile SABS approved sealed park container with a rubber seals will be used. The diesel tank will be built with a concrete slab underneath and rubber plastic for any leakages that might occur.

Vehicle / drill rig / excavator leaks:

Vehicles and equipment must be checked on a daily basis for oil/diesel/hydraulic fluid leaks. Drip trays must be available on site and should any oil/fuel/lubricant leak from the equipment, then such leaked fluid is to be collected via the drip trays into

drums for transport to Oilkol or similar depot for recycling.

Should such leaked oil contaminate the topsoil, then such topsoil and oil must be removed from site and spread on a concrete area where it can be treated with compost and chicken manure for a period of 3 months.

On-site repairs: No workshop will be required and all scheduled servicing will take place off site.

Emergency repairs on site:

If the (unlikely) event of a breakdown repair being required in the field, the staff should be instructed on use of drip trays and suitable funnels (not to drain oil into the sand) for filling and draining of lubricants and the staff shall be provided with such equipment to prevent oil contamination.

In addition:

- Used/replaced filters, hoses, belts, cloths, etc are to be placed in a bin for same day removal from site and disposal at a suitable facility. Used filters are not to be buried at the site of repair (nor discarded in adjacent bush).
- In the event of soil contamination, the contamination soils are to be removed and placed in suitable bags or drums for disposal at a licensed facility or depot.

All staff involved in mobile plant operation and maintenance is to be made aware of these oil and lubricant procedures. Staff will require instruction in the:

- Deleterious effects of oil/fuel on the environment
- Handling oil leaks onto soil

General Provisions

- All operators are to check their equipment for leaks and report such leaks on a daily basis (before and after morning start up, at lunch break and when parking the equipment for overnight shutdown).

3.2.5 Noise:

Physical prospecting activities will result in low noise levels associated mainly from vehicular activity on site:

- Vehicles on roads only
- Petrol/diesel driven small diameter auger

In total, noise generation will be much localised, temporary and negligible.

The only possible attenuation measures to be put in place include the following:

- Staff/operator awareness of possible noise impact through inducting training
- Noise generation will be restricted to the hours of 07h00 – 17h00
- Ensure that vehicle comply with regulatory traffic noise emission standards

3.2.6 Air Quality (Dust)

It is highly unlikely that dust will ever represent any impact larger than negligible given the very small scale of the operation, the short duration of invasive prospecting at any particular sit as well as the general isolation of the activities.

No attenuation measures are required; however the following measures should be implemented under extreme wind conditions:

- Staff Operator awareness of dust impact through induction training
- Cease operations under high summer wind conditions if required (but highly unlikely)

But on the mining activities of sand, clay and tailing dumps above mentioned measures must be implemented.

4 REGULATION 52 (2) (d): Financial provision.

4.1 Plans for quantum calculation purposes.

It is incumbent on the applicant nevertheless to supply a bank guarantee for any unforeseen issues or impacts.

The amount that is necessary or the rehabilitation of damage caused by the operation, both sudden closures during the normal operation of the project and at final, planned closure must be calculated based on the information supplied in this document.

This amount will reflect how much it will cost the department to rehabilitate the area disturbed in case of liquidation or abscondment.

4.2 Alignment of rehabilitation with the closure objectives

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

The closure objective is to return the site to its current land use and land capability. In this case the land capability rating is for grazing and other farming activities.

4.3 Quantum calculations.

(Provide a calculation of the quantum of the financial provision required to manage and rehabilitate the environment, in accordance with the guideline prescribed in terms of regulation 54 (1) in respect of each of the phases referred to).

See annexure Q attached thereof

4.4 Undertaking to provide financial provision

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

The required amount as calculated in financial quantum or alternate amount adjudicated by DMR will be provided by the applicant by way of Bank Guarantee.

The applicant commits to the provision of such guarantee through the lodging of this document.

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

The applicant will ensure the following activities / functions take place ensure implementation of this EMPlan's prescriptions:

- Copies of the EMPlan will be made available to the site manager.

- The applicant will ensure that the site manager/operator is fully aware with the prescription of this EMPlan.
- The site manager will be responsible for ensuring that labour /operators are aware of their environmental responsibilities related to their activities.
- The site manager will continuously (whilst on site) conduct monitoring of activities taking place on site ensuring that all activities.
- Any shortcomings must be remedied immediately and if required the site manager must explain the required actions and reasons for them to the applicable person.

In addition it is required that Environmental Performance Assessments (in terms of Regulation 55) must be conducted at the following milestones:

- After the first week of invasive prospecting, and
- Every 1 year after that.

5.1 List of identified impacts requiring monitoring programmes.

The only aspects of the operation that will require monitoring are as follows:

1. Oil/fuel leaks by drilling equipment and any vehicles which enter the site
2. Ensure that any disturbance is raked by hand-rake prior to leaving the site
3. Ensure that there is no disturbance of site once the prospecting/mining activities cease

5.2 Functional requirements for monitoring programmes.

Fortunately, this monitoring programme is a very simple operation and no specific further requirements are deemed necessary, however the final Environmental Performance Assessment must be conducted by independent party.

5.3 Roles and responsibilities for the execution of monitoring programmes.

The contractor manager will be responsible for carrying out the interim monitoring whilst the final Performance Assessment must be conducted by independent party.

5.4 Committed time frames for monitoring and reporting.

The drilling and bulk sampling contractor will be responsible for monitoring the rehabilitation of the site as soon as the drill moves to its next position.

The company will be responsible for monitoring the success of rehabilitation proposals as soon as the driller has drilled their last hole but before such driller leaves the site.

Independent compilation of the EPA will take place 1 month after the driller has left the site.

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 proposed drilling holes are to take place on an average 100m grid system.

Position of the proposed 2 trenches will be determined after the drilling has taken place.

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

Regulations 56 to 62 outline the entire process of mine closure, as a guide to applicants on the process to be followed for mine closure, and also to address the legal responsibility of the applicant with regard to the proper closure of this operation.

In terms of Section 37 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002). The holder of a right is liable for any and all environmental damage or degradation emanating from his/her operation, until a closure certificate is issued in terms of Section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

The closure objective is to return the site to its current land use and land capability rating. The site will be returned to its original status.

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 landowner is the applicant of the prospecting right and letters were sent to all interested and affected parties

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)

7.1.1 Name the community or communities identified, or explain why such community was identified.

Wedberg community was identified as the landowner of the property

7.1.2 Specifically state whether or not the Community is also the landowner.

The community is the landowner

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

Yes

7.1.4 State specifically whether or not a land claim is involved.

The land or property was claimed back by the community

7.1.5 Name the Traditional Authority identified.

None

7.1.6 List the landowners identified by the applicant.

Farm	Owner
Riet Puts no 15, portion 3, 5 and 9	Wedberg Communal Property Association (CPA)

7.1.7 List the lawful occupier of the land concerned.

Wedberg Communal Property Association (CPA)

7.1.8 Explain whether or not other persons' (including on adjacent and non-adjacent properties) socio-economic conditions will be directly affected by the proposed prospecting or mining operation and if not, explain why not.

The proposed prospecting operation will consist of drilling and bulk sampling on the properties identified. Socio-economic conditions will be directly affected because local people will get employment and this project will add value to the economy of the country.

7.1.9 Name of the Local Municipality identified by the applicant.

Makgareng Local Municipality

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

It is understood from the Department of Mineral Resources (DMR) that the DMR will contact relevant Government Departments. Government departments that will directly be contacted by the applicant and other agencies and institutions responsible for various aspects of the environment and infrastructure that have been identified by the applicant are as follows.

- The Department of Agriculture, Land Reform and Rural Development
- The Frances Baard District Municipality
- Makgareng Local Municipality
- Department of Water Affairs
- Department of Environmental Affairs and Tourism
- Mine Health and Safety, Free State
- Department of Arts and Culture (McGregor Museum)

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

- Formal letters per registered post were sent to all affected and interested parties identified by the DMR. See the proof of consultation thereof attached as annexure A

7.2 The details of the engagement process.

- **Description of the information provided to relevant governmental stakeholders, state institution, interested and affected parties.**

Already submitted to your Department

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

All the relevant parties were consulted. It is important to note that all parties were requested to put their comments / inputs in writing within 30 (thirty) days from the date of the advertisement. Late response from interested and affected parties will be submitted to the DMR.

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

The application was lodged for a prospecting right. The public participation for this prospecting right application will make use of the drill and bulk sampling method. There have been no conflicting views in terms of existing status of all aspects of the environment.

7.2.3 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.

We are still waiting for comments from interested and affected parties

7.2.4 Other concerns raised by the aforesaid parties.

We are still waiting for comments

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

We are still waiting for comments then meeting will be held if there is any objection from other stake holder or interested and affected parties

7.2.6 Information regarding objections received.

No objections so far.

7.3 The manner in which the issues raised were addressed.

No raised issues so far

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).

The actual physical prospecting will most likely be conducted by specialist contractors with their own staff. Part of the contract will be that the contractor staff must undergo a brief environmental induction training course.

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 company will ask the Geologist and environmentalist to conduct a session where the employees will be taken through the environmental impacts and the mitigation measures. (once every two months)

The full handling procedure is as contained in Paragraph 3.3.4.

8.3 Environmental awareness training.

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

- A professional and accredited trainee from the environmental SETA will be appointed to train the employees on environmental awareness and how to deal with emergency situations and remediation
- One or two of the employees on site will be charged with the responsibility of identifying the emergencies or to receive information on such emergencies from the staff and then action the remedy.
- A list of the Remedies will be displayed on site

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

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

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

The amount to conduct rehabilitation at each site will be absolutely minor and relates only to:

1. The raking of the affected area by hand rake should such disturbance actually be evident.
2. Handling of any fuel / oil contamination of the soil at any site (unlikely).

The amount for such rehabilitation has been calculated by way of guarantee for decommissioning rehabilitation as **R132 095.00** Assume that such amount is also the cost of operational rehabilitation.

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

Yes. The expected contractor rate in the PWP is in the order of R150/m. This is a fairly liberal estimate at this stage and will include (by way of contract) the rehabilitation that may be required.

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	Amos Jacob Davids
Identity Number	690626 5359 08 5

-END-