

**NAME OF APPLICANT: Coppersun Twelve (Pty) Ltd (98/19702/07)**

**REFERENCE NUMBER: NC 30/5/1/2/2/10000 MR**

# **ENVIRONMENTAL IMPACT ASSESSMENT AND ENVIRONMENTAL MANAGEMENT PROGRAMME**

**SUBMITTED FOR AN APPLICATION  
FOR A MINING RIGHT  
IN TERMS OF SECTION 39 AND OF REGULATIONS  
50 AND 51 OF THE MINERAL AND PETROLEUM  
RESOURCES DEVELOPMENT ACT, 2002,  
(ACT NO. 28 OF 2002) (the Act)**



**mineral resources**

Department:  
Mineral Resources  
**REPUBLIC OF SOUTH AFRICA**

## **STANDARD DIRECTIVE**

All applicants for mining rights 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 Impact Assessment, and an Environmental Management Programme 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 30 days of notification by the Regional Manager of the acceptance of such application.

## **SECTION 1**

### **ENVIRONMENTAL IMPACT ASSESSMENT**

#### **REGULATION 50 (a).**

#### **1. Description of the baseline environment**

- 1.1. Concise description of the environment on site relative to the environment in the surrounding area.

**The farm Fourteen Streams is characterized as generally flat red sandy very rocky soil, grazing land with a slow downfall towards the south western side which consists of a darker clay soil. The lower area opposite the Vaal River consists of grass and "Swarthaak" trees with willow and blue gum trees sparsely on the river bank.**

**Surrounding farms look similar to Fourteen Streams, signs of current as well as historical mining activities are visible. In most cases rehabilitation was satisfactory completed.**

- 1.2. Concise description of each of the existing environmental aspects both on the site applied for and in the surrounding area which may require protection or remediation.

**On the farm Fourteen Streams some historical rehabilitation needs to be addressed.**

**On surrounding farms, small portions of unrehabilitated historical mining excavations need to be addressed. Mining activities occur on these farms, the following aspects need to be attended to:**

- (a) Air Quality**
- (b) Noise**
- (c) Topography**

- 1.3. Concise description of the specific land uses, cultural and heritage aspects and infrastructure on the site and neighbouring properties/farms in respect of which the potential exists for the socio-economic conditions of other parties to be affected by the proposed mining operation.

**The farm Fourteen Streams can mainly be used as grazing land for cattle or goat or for the mining of alluvial diamonds.**

The portion of land is currently in use for agricultural purposes, grazing land for cattle or goat and a small portion for the mining of alluvial diamonds.

Neighbouring properties are also in use for the same purpose. Infrastructure on these properties are only limited to farming or mining. The application for mining will not have any effect on the land use, cultural or heritage aspects or the infrastructure currently on it.

- 1.4. Annotated map showing the spatial locality and aerial extent of all environmental, cultural/heritage, infrastructure and land use features identified on site and on the neighbouring properties and farms.

The map including the spatial locality and environmental, cultural / heritage, infrastructure and land use features identified on site and on the neighboring properties and farms is hereto attached in annexure "M".

- 1.5. Confirmation that supporting documents in the form of specialist studies are attached as appendices.

**Attached hereto the following documentation:  
Baseline Risk Assessment (Annexure "B").**

## **2. The proposed mining operation.**

- 2.1. The mineral to be mined.

### **Alluvial Diamonds**

- 2.2. The mining method to be employed at the level of opencast, underground, stoping, stooping, total extraction, bord and pillar, block caving, shrinking, dredging, pumping, monitoring, etc. and provide a concise description of the intended magnitude thereof, in terms of volumes, depth and aerial extent.

The applicant intends to mine alluvial diamond bearing gravel on the property. The opencast and strip-mining method will be used to mine for diamonds. The diamondiferous gravels will be exposed and excavated from under the topsoil and growth medium after both have been stockpiled for rehabilitation purposes. Use will be made of the following mining equipment:

- 2x Excavator;
- 3x Front End Loader;
- 2x Dumper;
- 4x 14 feet washing machines;
- 2x Power plant;
- 1x Bulldozer;
- Screen;
- 3x Scrubbers and

**- Waterbowser.**

**The equipment will be moved to the site where the mining activities are planned. The washing machine will be set up next to a open excavation for the porrel and the rest of the facilities will be set up close to the washing machine.**

- 2.3. List of the main mining actions, activities, or processes, such as, but not limited to, access roads, shafts, pits, workshops and stores, processing plant, residue deposition sites, topsoil storage sites, stockpiles, waste dumps, access roads dams, and any other basic mine design features.

**(a) Main mining actions and activities**

**Open excavation by removal of topsoil. Store topsoil separate.  
Recover gravel from excavation and store on stockpile.  
Deposit gravel from stockpile within the pan.  
Recover rough material from washing pan into open excavations as part of rehabilitation process.  
Wash puddle back into excavations.  
Replace topsoil on top of excavations.  
If excavations are in the grazing land, grasses must be cultivated.**

**(b) Facilities needed for mining operation**

**Site office  
Mine road from access to mining site.  
Processing pan plant consists of conveyers and pans.  
Maintenance yard.  
Container for the storage of equipment and lubricants.  
Container with facilities for cook and eat for employees.  
Power plant  
Water pump  
Excavation in use as a water resevoir, equiped with a water pump.  
Toilet facilities**

- 2.4. Plan showing the location and aerial extent of the aforesaid main mining actions, activities, or processes as required to calculate the financial provision in accordance with the Department's published guideline. (Reg. 51 (b) (v)).

**Attached hereto in annexure "D" the layout plan.**

- 2.5. Listed activities (in terms of the NEMA EIA regulations) which will be occurring within the proposed project.

**Activity description:**

**Application for a Mining Right in terms of Appendix 1 of the National Environmental Management Act, Regulations activity 19 and 20.**

**Identification of competent authority:**

**The competent authority in respect of the activities is the Minister of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002). Section 16, 18 and 22.**

- 2.6. Indication of the phases (construction, operational, decommissioning) and estimated time frames in relation to the implementation of these actions, activities or processes and infrastructure.

**(a) Construction:**

**Phase: One**

**Construction and Implementation: The establishment and the erection of the site and the plant.**

**Time: 3 months from approval of the Right.**

**(b) Operational:**

**Phase: One**

**Construction and Implementation: The excavation of trenches and pits.**

**Time: For the duration of the mining right.**

**(c) Decommissioning:**

**Phase: One**

**Construction and Implementation: Full production.**

**Time: For the duration of the mining right.**

- 2.7. Confirmation if any other relevant information is attached as appendices.

**N/A**

**3. The potential impacts**

- 3.1. List of the potential impacts, on environmental aspects separately in respect of **each** of the aforesaid main mining actions, activities, processes, and activities listed in the NEMA EIA regulations.( include all the items to be included in the list referred to in the concomitant section of the guideline posted on the official website of the Department)

**Geology**

**The impact on the geology will be permanent. There will be removal of mineral and geological material during the mining process. The geology will be disturbed. Proper rehabilitation will not minimize this, as certain elements will have been removed permanently.**

## **Climate**

The operations will not have any impact on the climate. We understand that climate is the average weather condition in a region or place while temperature is the degree of heat. Evaporation is when a liquid converts into a damp form and is the main reason for rain. This industry has a limited effect if any on the above mentioned parameters seeing that it is only small scale alluvial diamond mining. (" Veldgids Tot Die Weer In Suider-Afrika", John Earle, 2004)

## **Topography**

The impact on the topography will be significant. Proper rehabilitation can ensure that the topography is returned near to its pre-mining state.

## **Soil**

There will be a dramatic impact on the topsoil if it is not removed and stored separately. The topsoil differs in depth between 0,5m to 1m which simplifies the rehabilitation process. The soil is followed by up to 2m gravel.

## **Land Capability**

The land capability should not be affected by the mining operations. After rehabilitation it should still be classified as a class 3, grazing land as before mining operation started.

## **Ground Water**

Ground water resources are found on the property. The impact will be moderate taking into consideration that Fourteen Streams has two boreholes with a rich water supply. There are windmills supplying a concrete dam with water on a permanent basis for farming purposes.

## **Air Quality**

The impact on the air quality will be short term and minor. In a rural context the degrading of air quality will be insignificant, and the only impact will be due to vehicle emissions, surrounding agricultural and mining activities and dust from mining and raw material handling. The impact will take place below detectable levels. The degrading of air quality will be minimized by using dust masks, protective glasses and a water cart to dampen the soil.

## **Noise**

Existing noise levels in the area are mainly generated from surrounding agricultural and mining activities. Similar noise levels from conventional farming equipment operating in the district can be

heard. The workers will be issued with earplugs for their protection if the noise levels are unacceptable.

#### **Archaeological and Cultural Interest**

Evidence of Archaeological & Cultural remains namely 4 graveyards are present on the property. Refer to the Archaeological Impact Assessment in annexure "T".

#### **Surface water**

Surface water may gather in and around the excavations due to rain. Operation will be stopped until the water is drained, and the soil is dried to such an extent that it's accessible for operation.

#### **Sensitive Landscapes**

The only sensitive landscapes present on Fourteen Streams on the area applied for is the Vaal River which forms the south western border of the property.

#### **Visual Aspects**

The site will be visible from the Warrenton / Christiana tar road. There will be no difference between a normal opencast operations visual impact and the visual impacts on Fourteen Streams.

No specialized studies will be needed because the mining activities will be outside the sensitive areas.

### **3.2. List of all potential cumulative environmental impacts.**

- **Land capability**

Rehabilitation activities will be critical to ensure a level 3, grazing land when mining closure is performed.

- **Ground water**

Borehole water use must be regulated to ensure a constant water reserve on Fourteen Streams.

- **Air quality**

The use of dust masks and water-carts can minimize any possible air quality issues.

- **Noise**

Noise can be limited for employees and site visitors when supplying earplugs.



- **Topography**

**Rehabilitation must be done strictly according to the Environmental Management Plan to ensure that the topography is acceptable.**

- **The way topsoil will be handled**

**Topsoil must be kept separately to avoid contamination with other soil. It should be replaced to its normal environment.**

- **Visual impacts**

**Overburden must be used to minimize visual impacts.**

- **Surface water**

**Surface water around the excavations must be kept out of the excavations if possible or a draining period must be allowed.**

- **Soil pollution**

**Soil pollution must be minimized by ensuring that all maintenance is done within the maintenance yard and the machinery is serviced on a regular basis.**

- 3.3. State specifically whether or not there is a risk of acid mine drainage or potential groundwater contamination associated with the mineral to be mined. (If such a risk is associated with the mineral to be mined provide a summary of the findings and recommendations of a specialist geo-hydrological report in that regard).

**No risk of acid mine drainage or potential ground water contamination.**

### **REGULATION 50 (b)**

#### **4. The alternative land use or developments that may be affected.**

- 4.1. Concise description of the alternative land use of the area in which the mine is proposed to operate.

**Neighbouring properties are also in use for the same purposes. Infrastructure on these properties are only limited to farming or mining purposes. The application for mining will not have any affect on the land uses, cultural or heritage aspects or the infrastructure currently on it.**

- 4.2. List and description of all the main features and infrastructure related to the alternative land uses or developments.

**a) Farming with cattle or goat**

**Infrastructure - electrical pump, cement dam as water reservoir and water trough for animal drinking purposes. The area was fenced off and divided.**

**The whole farm can be used for this purpose.**

**(c) Mining of alluvial diamond**

**Infrastructure erected for this purpose is only temporary and will be moved from time to time to be nearby activities.**

**Only 614 hectares of the farm contains a sustainable grade of gravel which will be mined. A small part of this portion will be mined at a time, that is for open excavations and areas in process of rehabilitation. The rest of the mining area can carry on with farming activities.**

- 4.3. Plan showing the location and aerial extent of the aforesaid main features of the alternative land use and infrastructure related to alternative land developments identified during scoping.

**Plan showing the divided areas are attached hereto as annexure "L".**

**5. The potential impacts of the alternative land use or development**

- 5.1. List of the potential impacts **of each** of the aforesaid main features and infrastructure related to the alternative land use or development and related listed activities.

**(a) Alluvial diamonds;**

**(b) Grazing land for goat, and or game.**

- 5.2. Description of all potential cumulative impacts of the main features and infrastructure related to the identified alternative land uses or developments.

**The land can either be used as grazing land for goat and cattle or for alluvial diamond mining. If the land is used for the farming of sheep it is estimated that 440 cattle can be farmed with on the farm. With a breed percentage of 80% and a reasonable selling price of R 5 000-00 a sheep it is estimated that a gross income of R 1 760 000-00 a year can be achieved. These activities will only provide 4 job opportunities and will the income generated never be sufficient to contribute to the social upliftment of the Warrenton community.**

It can be estimated that the net income from alluvial mining activities can be much more than that of the abovementioned farming activities. Mining activities will further create a lot more job opportunities and will also lead to the social and economic upliftment of community.

If the applicant wash 1 000 tons of gravel per day, finds 1 carat per 100 tons, and the average selling price for the diamonds is \$750 per carat at a exchange rate of R 14-50 per US dollar.

A total yearly income can be estimated at	R 26 317 500.00
With annual cost for salaries	R 4 320 000.00
Indirect job opportunities	R 3 600 000.00
An estimate of 50% of income were spend locally to purchase equipment, accessories and rations.	R 13 158 750.00

Estimated annual profit generated by the mine.	R 5 238 750.00
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It can thus be seen that the advantages of the proposed land use for mining activities outweighs the advantages if the land is used for the farming of goat and cattle.

Farming activity will still continue, on a large portion of the farm even when mining activities are taking place or rehabilitation is in process on a small part of the farm.

## **REGULATION 50 (c)**

### **6. Identification of potential social and cultural impacts.**

- 6.1. List of potential impacts of the proposed mining operation on the socio-economic conditions of other parties' land use activities. .( include all the items to be included in the list referred to in the concomitant section of the guideline posted on the official website of the Department)

**Dust**  
**Noise**  
**Waste**  
**Pollution and Erosion**  
**Soil and Geology**  
**Natural vegetation**  
**Water**  
**Loss of agricultural land**

- 6.2. Description of the cultural aspect that will potentially be affected, and describe the potential impact on such cultural aspect. .(In cases where such features are not applicable the applicant must still include the item in the list and describe it as not applicable).

**Four graveyards were identified on the farm. Refer to the Archaeological Impact Assessment attached hereto in annexure "T".**

- 6.3. Description of heritage features and the potential impact on such heritage feature. . (In cases where such features are not applicable the applicant must still include the item in the list and describe it as not applicable).

**No sign of any heritage feature was identified on the farm.**

- 6.4. Quantification of the impact on the socio-economic conditions of directly affected persons, as determined by the findings and recommendations of a specialist report in that regard.

- 6.4.1.** The amount of the quantified potential impact on property or infrastructural assets.

**The farm was formerly only used for grazing by goat and cattle and prospecting for alluvial diamonds. To use the farm for mining of alluvial diamonds, will increase the income on the property, the value will be unchanged with proper rehabilitation.**

- 6.4.2.** State the amount of the quantified potential impact on commercial, economic or business activity which will be impacted upon as a result of the mining activity.

**The proposed mining will have a positive impact on commercial, economic and business activity.**

**The mine will create at least 200 indirect job opportunities in the community as equipment, accessories and rations will be bought locally.**

**As employees are all local people, salaries and income generated from the mine will be spend locally.**

**6.4.3.** The sum of the amounts, referred to in paragraphs 6.6.1 and 6.6.2 above.

- **6.4.1 - Potential impact on property - none**  
**Potential impact on short term**  
**Income generated by mining activities (Refer to**  
**paragraph 5.2)** **R 26 317 500-00 pa**
- **6.4.2 Creation of 60 job opportunities** **R 4 320 000-00 pa**  
**Creation of 200 indirect job opportunities** **R 3 600 000-00 pa**  
**Expenses to purchase equipment, accessories and rations**  
**locally.** **R 13 158 750.00 pa**  
**Estimated annual profit** **R 5 238 750.00 pa**

## **7. Assessment and evaluation of potential impacts.**

- 7.1. List of each potential impact identified in paragraphs 3 and 6 above. (Include all the items to be included in the list referred to in the concomitant section of the guideline posted on the official website of the Department)

### **Geology**

**The impact on the geology will be permanent. There will be a removal of mineral and geological material during the mining process. The geology will be disturbed. Proper rehabilitation will minimize this, as certain elements will have been removed permanently.**

### **Climate**

**The operations will not have any impact on the climate. We understand that climate is the average weather condition in a region or place while temperature is the degree of heat. Evaporation is when a liquid converts into a damp form and is the main reason for rain. This industry has a limited effect if any on the above mentioned parameters seeing that it is only small scale alluvial diamond mining. (" Veldgids Tot Die Weer In Suider-Afrika", John Earle, 2004)**

### **Topography**

**The impact on the topography will be significant. Proper rehabilitation can ensure that the topography is returned to near its pre-mining state.**

### **Soil**

**There will be a dramatic impact on the topsoil if it is not removed and stored seperately. The topsoil differs in depth between 0,5m to 1m which simplifies the rehabilitation process. The soil is followed by up**

to 2m gravel in the Rooikoppie area and 4m where the river gravel is present.

#### **Land Capability**

The land capability should not be affected by the mining operations. After rehabilitation it should still be classified as a class 3, grazing land.

#### **Ground Water**

Ground water resources are found on the property. The impact will be moderate, taking into consideration that Fourteen Streams has four boreholes with a rich water supply. There are windmills and electrical pumps supplying concrete dams with water on a permanent basis for farming purposes.

#### **Air Quality**

The impact on the air quality will be short term and minor. In a rural context the degrading of air quality will be insignificant, and the only impact will be due to vehicle emissions, surrounding agricultural and mining activities and dust from mining and raw material handling. The impact will take place below detectable levels. The degrading of air quality will be minimized by using dust masks, protective glasses and a water cart to dampen the soil.

#### **Noise**

Existing noise levels in the area are mainly generated from surrounding agricultural and mining activities. Similar noise levels than conventional farming equipment operating in the district will take place. The workers will be issued with earplugs for their protection if the noise levels are unacceptable.

#### **Archaeological and Cultural Interest**

Evidence of Archaeological & Cultural remains namely 4 graveyards were present on the property. Refer to the Archaeological Impact Assessment attached hereto in annexure "T".

The graveyards and cultural remains should be fenced off and protected at all times.

#### **Surface water**

Surface water may gather in and around the excavations due to rain. Operation will be stopped until the water is drained, and the soil is dried to such an extent that it's accessible for operation.

## **Sensitive Landscapes**

The only sensitive landscapes present at Fourteen Streams next to the Vaal River.

No activities will take place within 100m from the river or within the 100 year floodline.

## **Visual Aspects**

The site will be visible from the Christiana / Warrenton tar road. There will be no difference between a normal opencast operations visual impact and the visual impacts on Fourteen Streams.

No specialized studies will be needed because the mining activities will not be in any sensitive areas.

## **Social and cultural impacts**

The applicant has submitted a Social and Labour Plan as part of his application for a Mining Right.

- 7.2. Concomitant impact rating for each potential impact listed in paragraph 7.1 above in terms of its nature, extent, duration, probability and significance. (Provide a definition of the criteria used for each of the variables used for rating potential impacts and ensure that the potential impacts are rated specifically with the assumption that no mitigation measures are applied).

## **Geology**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Medium</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Medium term</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Medium</b>
<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Medium</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Medium</b>

## **Climate**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Low</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Short term</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Low</b>
<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Low</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Low</b>

## **Topography**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Low</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Medium</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Low</b>

<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Low</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Low</b>

#### **Soil**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Medium</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Short term</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Medium</b>
<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Medium</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Medium</b>

#### **Land Capability**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Medium</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Medium term</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Medium</b>
<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Medium</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Low</b>

#### **Ground and Surface Water**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Low</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Medium term</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Medium</b>
<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Medium</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Medium</b>

#### **Air Quality**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Medium</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Medium term</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Medium</b>
<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Medium</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Medium</b>

#### **Noise**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Medium</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Medium term</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Medium</b>
<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Medium</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Medium</b>

#### **Archaeological and Cultural Interest**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Low</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Short term</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Low</b>
<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Low</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Low</b>



### **Sensitive Landscapes**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Low</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Short term</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Low</b>
<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Low</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Low</b>

### **Visual Aspects**

<b>Extent</b>	<b>How far could impact extend?</b>	<b>Low</b>
<b>Duration</b>	<b>Lifetime of impact?</b>	<b>Medium term</b>
<b>Intensity</b>	<b>Detrimental effect of impact?</b>	<b>Low</b>
<b>Probability</b>	<b>Likelihood of impact?</b>	<b>Low</b>
<b>Significance</b>	<b>How big is the impact?</b>	<b>Low</b>

- 7.3. Indication of the phases (construction, operational, decommissioning) and estimated time frames in relation to the potential impacts rated.

#### **(a) Construction**

**1 - 3 Months from approval of right.**

#### **(b) Operational**

**From time that construction is completed until closure of mine.**

#### **(c) Decommissioning**

**3 Months after closure of mining activities until all rehabilitation is completed and all infrastructure and equipment are mitigated.**

### **REGULATION 50 (d)**

8. Identification of the alternative land uses which will be impacted upon. (Include all the items to be included in the list referred to in the concomitant section of the guideline posted on the official website of the Department)

**Mining activities will only have a minimal negative influence on the other farming activities, as only minimal parts of the farm will be mined at a time. The rest of the farm will still be available for farming activities. As soon as mining and rehabilitation is completed on small parts of the farm it will be available for farming again.**

**The land use will be temporarily impeded from it's natural use, thereafter it will be re-instated to near it's original state.**

**The period when the land can't be used for grazing land, will be limited to short periods whereafter rehabilitation will be completed and it can be used for the same purpose again.**

9. Listed results of a specialist comparative land use assessment. (Refer to the concomitant section of the guideline posted on the official website of the Department and attach the specialist study as an appendix)

**(a) Air Quality**

**Attached herewith a Baseline Risk Assessment pertaining to Occupational Hygiene for a typical alluvial diamond mine, compiled by Envirofern.**

**(b) Impact on surface and ground water**

**As no chemicals were used for the mining process there were no impacts or pollution on surface or ground water. For the use of ground water a application will be submitted to the Department of Water Affairs and Forestry.**

**REGULATION 50 (e)**

10. List of all the significant impacts as identified in the assessment conducted in terms of Regulation 50 (c) (Include all the items to be included in the list referred to in the concomitant section of the guideline posted on the official website of the Department)

**Geology**

**The impact on the geology will be permanent. There will be a removal of mineral and geological material during the mining process. The geology will be disturbed. Proper rehabilitation will not minimize this, as certain elements will have been removed permanently.**

**Climate**

**The operations will not have any impact on the climate. We understand that climate is the average weather condition in a region or place while temperature is the degree of heat. Evaporation is when a liquid converts into a damp form and is the main reason for rain. This industry has a limited effect if any on the above mentioned parameters seeing that it is only small scale alluvial diamond mining. (" Veldgids Tot Die Weer In Suider-Afrika", John Earle, 2004)**

**Topography**

**The impact on the topography will be significant. Proper rehabilitation can ensure that the topography is returned to its pre-mining state.**

## **Soil**

There will be a dramatic impact on the topsoil if it is not removed and stored separately. The topsoil differs in depth between 0,5m to 1m which simplifies the rehabilitation process. The soil is followed by up to 2m gravel in the Rooikoppie area and 4m where river gravel is available.

## **Land Capability**

The land capability should not be affected by the mining operations. After rehabilitation it should still be classified as a class 3, grazing land.

## **Ground Water**

Ground water resources are found on the property. The impact will be moderate taking into consideration that Fourteen Streams has four boreholes with a rich water supply. There are wind mills and electric pumps supplying concrete dams with water on a permanent basis for farming purposes.

## **Air Quality**

The impact on the air quality will be short term and minor. In a rural context the degrading of air quality will be insignificant, and the only impact will be due to vehicle emissions, surrounding agricultural and mining activities and dust from mining and raw material handling. The impact will take place below detectable levels. The degrading of air quality will be minimized by using dust masks, protective glasses and a water cart to dampen the soil.

## **Noise**

Existing noise levels in the area are mainly generated from surrounding agricultural and mining activities. Similar noise levels from conventional farming equipment operating in the district can be heard. The workers will be issued with earplugs for their protection if the noise levels are unacceptable.

## **Archaeological and Cultural Interest**

Evidence of Archaeological & Cultural remains were present on the property. The graveyards identified on the property should be protected at all times. The graveyards and cultural remains should be fenced off and protected at all times.

## **Surface water**

Surface water may gather in and around the excavations due to rain. Operation will be stopped until the water is drained, and the soil is dried to such an extent that it's accessible for operation.

## **Sensitive Landscapes**

The only sensitive landscapes present on Fourteen Streams is the Vaal River which is the eastern border of the farm. No activities will take place within 100m for the river or within the 100 year floodline.

## **Visual Aspects**

The site will not be visible from the Christiana / Warrenton tar road. There will be no difference between a normal opencast operations visual impact and the visual impacts on Fourteen Streams.

No specialized studies will be needed because the mining activities will not be in any sensitive areas.

**Social and cultural impacts**

The applicant has submitted a Social and Labour Plan as part of his application for a Mining Right.

## **REGULATION 50 (f)**

11. **Identification of interested and affected parties.** (Including the community, and list as identified according to the scoping report guideline and identified in the scoping report)

**Department of Mineral Resources  
 Congregation of the Sisters of Nazareth Trust  
 Magareng Municipality  
 National Department of Agriculture  
 Barkly West Municipality  
 Moleko's Farm Communal Property Association  
 Swanvest 234  
 Transnet Ltd  
 Department of Water Affairs and Forestry  
 Department of Agriculture, Conservation & Environment  
 Mr CA Botha  
 Mr DFH Flemming  
 Mr JW Human  
 Mrs AS van Rooyen**

12. **The details of the engagement process.** (Including the community, and list as identified according to the scoping report guideline and identified in the scoping report and any further consultation since the compilation of the scoping report)

**A consultation meeting was held on 26 July 2011 at the Warrenton Public Library. The minutes of the meeting is attached hereto in annexure "E".**

### **12.1 Landowners**

**Transnet Ltd  
 Congregation of the Sisters of Nazareth Trust  
 Moleko's Farm Communal Property Association  
 Magareng Municipality**

## 12.2 Local Government

**Thembelihle Local Municipality**

**Provincial Government**

**None**

**Land Claims Commissioner**

**N/A**

**Traditional Authorities**

**N/A**

## 12.3 Government institutions

**Department of Mineral Resources**

**Department of Water Affairs and Forestry**

**National Department of Agriculture**

**Department of Agriculture, Conservation and Environment**

## 12.4 Local Communities

**N/A**

- 13. Details regarding the manner in which the issues raised were addressed.** (Include all the items to be included in the list referred to in the concomitant section of the guideline posted on the official website of the Department)

**Attached the minutes of the meeting as well as all correspondence regarding the issues raised and complaints or comments received.**

## 13.1 Description of the environment

**With the necessary precautions and environmental rehabilitation on the property this mining activities won't leave any effect on the land owner, Interested and Affected parties as well as the communities concerned.**

## 13.2 List of potential impacts

**With the necessary precautions the list of potential impacts will not have any effect on the participation of the landowner, and Interested and Affected parties.**

## 13.3 Potential impacts related to social and cultural impacts

**With the necessary precautions the list of potential impacts will not have any effect on the Social and Cultural impacts.**

### **13.4 Issues raised by Interested and Affected parties**

**No issues were raised by the Interested and Affected parties. If any issues are raised in future it will be noted and handled with the necessary attention.**

### **REGULATION 50 (g)**

#### **14. The appropriate mitigatory measures for each significant impact of the proposed mining operation.**

##### **14.1. Adequacy of predictive methods utilised.**

##### **Land Capability**

**Rehabilitation activities will be critical to ensure a level 3 grazing land.**

##### **Ground Water**

**Boreholes use must be regulated to ensure a constant water reserve.**

##### **Air Quality**

**The use of dust masks and water-carts can minimise any possible air quality issues.**

##### **Noise**

**Noise can be limited for employees and site visitors by supplying earplugs.**

##### **Topography**

**Rehabilitation must be done strictly according to the Environmental Management Plan to ensure that the topography is acceptable.**

##### **Topsoil**

**Topsoil must be kept separately to prevent contamination with other soil. It should be replaced in the natural place.**

##### **Visual Impacts**

**Overburden must be used to minimise visual impact.**

##### **Surface Water**

**Surface water around the excavations must be kept out of the excavations where possible or a draining period must be allowed.**

### **Soil Pollution**

**All maintenance is to be done within the maintenance yard and the machinery must be serviced on a regular basis ensuring soil pollution is minimised.**

- 14.2. Adequacy of underlying assumptions

**N/A**

- 14.3. Uncertainties in the information provided.

**N/A**

### **REGULATION 50 (h)**

#### **15. Arrangements for monitoring and management of environmental impacts.**

- 15.1. List of identified impacts which will require monitoring programmes.

**All environmental impacts will be monitored by management on a regular basis. All these impacts will be monitored on a monthly basis by Milnex 189 CC, Environmental Consultants. Any irregularities will be noted and management would rectify it immediately. This information will also be notified within the Performance Assessment submitted to the department.**

- 15.2. Functional requirements for the said monitoring programmes

**All impacts will be monitored against requirements specified within the Environmental Management Plan / Environmental Management Program.**

- 15.3. Roles and responsibilities for the execution of the monitoring programmes.

**The environment affected by the mining operations shall be rehabilitated by the holder, as far as practicable, to its natural state or to a predetermined and agreed to standard or land use which conforms with the concept of sustainable development. The affected environment shall be maintained in a stable condition that will not be detrimental to the safety and health of humans and animals and that will not pollute the environment or lead to the degradation thereof.**

**It is the responsibility of the holder of the mining right to ensure that the manager on the site and the employees are capable of complying with all the statutory requirements which must be met in order to mine, which includes the implementation of the Environmental Management Plan.**

**If operations are not to be conducted in an area that has already been disturbed, the holder must reach specific agreement with the Regional Manager concerning the responsibilities imposed upon him/herself**

pertaining to the rehabilitation of the area and the pollution control measures to be implemented.

15.4. Time frames for monitoring and reporting.

The appointed site manager will control the work in progress with the description in this document; and defaults will be rectified as soon as possible. The appointed site manager will follow the process on a monthly basis. He will further on a monthly basis check every aspect of the operation against prescriptions and if he should find certain aspects that are not addressed or impacts on the property that are not mitigated properly, he will rectify the identified inadequacies immediately. In the event of a unforeseen occurrence a professional person will be contracted to mitigate and manage it.

Regular monitoring of all the environmental management measures and components shall be carried out by the holder of the mining right in order to ensure that the provisions of this programme are adhered to.

Ongoing and regular reporting of the progress of implementation of this programme will be done.

Various points of compliance will be identified with regard to the various impacts that operations will have on the environment.

Inspections and monitoring shall be carried out on both the implementation of the programme and the impact on plant and animal life.

Visual inspections on erosion and physical pollution shall be carried out on a regular basis.

## **REGULATION 50 (i)**

### **16. Technical and supporting information.**

**Attach a specialist report with regard to the determination and description of the baseline environment.**

(Include all the items to be included in the list referred to in the concomitant section of the guideline posted on the official website of the Department)

### **SECTION 2**

## **ENVIRONMENTAL MANAGEMENT PROGRAMME**

### **Regulation 51 (a)**



## **1. Description of environmental objectives and specific goals for mine closure.**

### **1.1. Environmental aspects that describe the pre-mining environment.**

#### **Geology**

The impact on the geology will be permanent. There will be a removal of mineral and geological material during the mining process. The geology will be disturbed. Proper rehabilitation will minimize this, as certain elements will have been removed permanently.

#### **Topography**

The impact on the topography will be significant. Proper rehabilitation can ensure that the topography is returned to near its pre-mining state. After rehabilitation the visibility of the impact will be minimal.

#### **Soil**

With a proper rehabilitation program topsoil will be replaced and should be similar to conditions before mining started.

#### **Land Capability**

The land capability should not be affected by the mining operations. After rehabilitation it should still be classified as a class 3, grazing land.

#### **Ground Water**

Ground water resources on the property will be used. The impact will be normal after closure.

#### **Air Quality**

The impact on the air quality will be short term and minor. After closure and proper rehabilitation it will be the same as before activities started.

#### **Noise**

Existing noise levels in the area are mainly generated from surrounding agricultural and mining activities. Similar noise levels from conventional farming equipment operating in the district can be heard. After closure it will be the same as before activities started.

#### **Archaeological and Cultural Interest**

Evidence of Archaeological & Cultural remains were present on the property. The archaeological and cultural remains namely graveyards should be fenced off and protected at all times.

#### **Surface water**

After rehabilitation and closure no effects would be perceived.

### **Sensitive Landscapes**

The Vaal River is the only sensitive landscapes present on Fourteen Streams in the area applied for.

### **Visual Aspects**

The site will be visible from the Christiana / Warrenton tar road. No visual impact will be perceived after closure.

### **Social and Cultural impacts**

After closure Social and Cultural impacts might be a concern as job creation ended. The applicant has submitted a Social and Labour Plan as part of his application for a Mining Right. This concern can be minimised if employees and the community take this opportunity mentioned within the Social and Labour Plan to uplift themselves.

- 1.2. Measures required to contain or remedy any causes of pollution or degradation or the migration of pollutants, both for closure of the mine and post-closure.

- **Land capability**

Continuous rehabilitation activities will be finalize to ensure that land capability will be the same after closure.

- **Ground water**

Boreholes not in use for farming purposes should be sealed off after closure to protect it from vandals and pollution.

- **Air quality**

No measures required after closure.

- **Noise**

No measurements required after closure.

- **Topography**

No measurements required after proper rehabilitation and closure.

- **The way topsoil will be handled**

No measurements required after proper rehabilitation and closure

- **Visual impacts**

No measurements required after proper rehabilitation and closure.

- **Surface water**

No measurements required after proper rehabilitation and closure.

- **Soil pollution**

**No measurements required after proper rehabilitation and closure.**

**2. Description of environmental objectives and specific goals for the management of identified environmental impacts emanating from the proposed mining operation.**  
(As informed by the information provided in the EIA in terms of Regulation 50 (h)).

2.1. List of identified impacts which will require monitoring programmes.

**All environmental impacts will be monitored on a regular basis by management. All these impacts will be monitored on a monthly basis by Milnex 189 CC, Environmental Consultants. Any irregularities will be noted and management should rectify it immediately.**

**These information will also be notified within the Performance Assessment submitted to the department**

2.2. List of the source activities that are the cause of the impacts which require to be managed.

**All impacts will be monitored against requirements specified within the Environmental Management Plan / Environmental Management Program.**

2.3. Management activities which, where applicable, will be conducted daily, weekly, monthly, quarterly, annually or periodically as the case may be in order to control any action, activity or process which causes pollution or environmental degradation.

**The environment affected by the mining operations shall be rehabilitated by the holder, as far as practicable, to its natural state or to a predetermined and agreed to standard or land use which conforms with the concept of sustainable development. The affected environment shall be maintained in a stable condition that will not be detrimental to the safety and health of humans and animals and that will not pollute the environment or lead to the degradation thereof.**

**It is the responsibility of the holder of the mining right to ensure that the manager on the site and the employees are capable of complying with all the statutory requirements which must be met in order to mine, which includes the implementation of the Environmental Management Plan.**

**If operations are not to be conducted in an area that has already been disturbed, the holder must reach specific agreement with the Regional Manager concerning the responsibilities imposed upon him/herself pertaining to the rehabilitation of the area and the pollution control measures to be implemented.**

- 2.4. The roles and responsibilities for the execution of the monitoring and management programmes.

The appointed site manager will control the work in progress with the description in this document; and defaults will be rectified as soon as possible. The appointed site manager will follow the process on a monthly basis. He will further on a monthly basis check every aspect of the operation against the prescriptions, if he should find certain aspects that are not addressed or impacts on the property that are not mitigated properly, he will rectify the identified inadequacies immediately. In the event of an unforeseen occurrence a professional person will be contracted to mitigate and manage it.

Regular monitoring of all the environmental management measures and components shall be carried out by the holder of the mining right in order to ensure that the provisions of this programme are adhered to.

Ongoing and regular reporting of the progress of implementation of this programme will be done.

Various points of compliance will be identified with regard to the various impacts that operations will have on the environment.

Inspections and monitoring shall be carried out on both the implementation of the programme and the impact on plant and animal life.

Visual inspections on erosion and physical pollution shall be carried out on a regular basis.

3. **Description of environmental objectives and specific goals for the socio-economic conditions as identified in the social and labour plan.** (Include all the items to be included in the list referred to in the concomitant section of the guideline posted on the official website of the Department)

#### **Social and Cultural Impacts**

Furthermore, the Social and Cultural impacts are discussed together. The applicant has submitted a Social and Labour Plan as part of the application for a Mining Right. In the Social and Labour Plan the following positive impacts are identified:

The development of a Human and Resource Development Plan

A Skills Development Plan

An Employment Equity Plan

A Labour Plan to protect workers during downscaling and retrenchments

A Local Economic Development Plan, for the development of an infrastructure for the Warrenton community

A Housing and Living Plan to improve the housing and living conditions of the Warrenton community

A Procurement Progression Plan to see that preferred suppliers are given to HDSA's

**To promote employment and advance Social and Economic welfare of all South Africans**

**Contributing to the transformation of the mining industry. 51% of the shares of the applicant is held by HDSA's**

**A detailed plan to contribute towards the Social and Economic development of the Warrenton community**

**Creation of 60 jobs (Employees at the mine)**

**Creation of 200 new indirect job opportunities (Employees at local business who benefits from services and consumables submitted to the mine)**

**Duration of career opportunities (Training of employees)**

**Local economic stimulation**

**The development of new technologies**

**Resource utilisation**

**Land-use planning**

**Research opportunities**

**Longer term environmental monitoring**

#### **4. Description of environmental objectives and specific goals for historical and cultural aspects.**

4.1. Environmental objectives and goals in respect of historical and cultural aspects identified in specialist studies conducted during the EIA phase.

**Evidence of Archaeological & Cultural remains namely graveyards are present on the property.**

#### **Regulation 51 (b) – Outline of the implementation programme**

#### **5. The appropriate technical and management options chosen for each environmental impact, socio-economic condition and historical and cultural aspect in each phase of the mining operation, as follows;**

5.1. Actions, activities or processes, including any NEMA EIA Regulation listed activities, which cause pollution or environmental degradation. (Include all the items to be included in the list referred to in the concomitant section of the guideline posted on the official website of the Department)

##### **Construction**

**Erection of a pan plant.**

##### **Operational**

**Open excavation of pits and trenches.**

**Storage of topsoil.**

**Removal of gravel to stockpile.**

**Wash puddle back into excavations.**

**Concurrent rehabilitation of excavations as well as historical unsolved rehabilitation.**

## **Closure**

**Removal of pan plant.**

**Final rehabilitation of excavations and pits.**

**Establish grazing land and preparation of maize / wheat land for the next harvesting season.**

**Removal of mining roads.**

## **Post Closure**

**Final rehabilitation of grazing land or harvesting land if necessary.**

- 5.2. 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)

**5.2.1 The right holder, management and employees will be trained to do the planning, construction and rehabilitation according to the rules stipulated within the Mineral Petroleum Resources Development Act. All activities must be monitored and managed on a regular basis.**

**5.2.2 (a) Signs of irregularities must be reported to management and noted within a register on site as an early warning system.**

**(b) The right holder and management will implement systems to prevent damage. If necessary, mining activities must be stopped until all precautionary measurements are implemented.**

**(c) Employees and Interested and Affected parties should be informed of any risk.**

**(d) If any damage occur it should be rectified immediately before activities restart.**

**(e) Measurements must be implemented for all affected parties to be on the lookout for recaputilation.**

**( f) If necessary the matter must be reported to the Department of Mineral Resources, local government institutions and all affected parties.**

## **5.2.3 Technical, management and financial implications**

**The right holder and management will be implementing systems to approach technical specialists in any emergency case. Provision for financial support will be in place to cover related costs.**

- 6. Action plans to achieve the objectives and specific goals contemplated in Regulation 50 (a).**

17. Time schedules of deadlines for each action to be undertaken to implement each technical or management option chosen. (Include all the items to be included in the list referred to in the concomitant section of the guideline posted on the official website of the Department)

**(a) Construction**

**Erection of a pan plant.**

**(i) Time schedule**

**Within 1-3 months from the date of approval of the mining right. This action won't have any impact on the environment, socio-economic, or historical and cultural aspects.**

**(b) Operational**

**Open excavations for pits and trenches.  
Removal and storage of topsoil.  
Removal of gravel to stockpile.  
Wash puddle back into excavations.  
Concurrent rehabilitation.**

**(i) Time schedule**

**From the time after completion of the site erection.**

**This phase will have a impact on:**

**Geology**

**The impact on the geology will be permanent. There will be a removal of mineral and geological material during the mining process. The geology will be disturbed. Proper rehabilitation will not minimize this, as certain elements will have been removed permanently.**

**Topography**

**The impact on the topography will be significant. Proper rehabilitation can ensure that the topography is returned to its pre-mining state.**

**Soil**

**There will be a dramatic impact on the topsoil if it is not removed and stored separately. The topsoil differs in depth between 0,5m to 1m which simplifies the rehabilitation process. The soil is followed by up to 2m gravel.**

**Land Capability**

**The land capability should not be affected by the mining operations. After rehabilitation it should still be classified as a class 3, grazing land or crop fields as before mining operations starts.**

**Ground Water**

**An amount of ground water will be used for the mining process. As this is a**

small mining operation, the impact will not be significant.

#### **Air Quality**

The impact on the air quality will be short term and minor. In a rural context the degrading of air quality will be insignificant, and the only impact will be due to vehicle emissions, surrounding agricultural and mining activities and dust from mining and raw material handling. The impact will take place below detectable levels. The degrading of air quality will be minimized by using dust masks, protective glasses and a water cart to dampen the soil.

#### **Noise**

Existing noise levels in the area are mainly generated from surrounding agricultural and mining activities. Similar noise levels from conventional farming equipment operating in the district can be heard. The workers will be issued with earplugs for their protection if the noise levels are unacceptable.

#### **Archaeological and Cultural Interest**

The mining activity will not have any impact on the Archaeological and Cultural. These graveyards will be protected at all times.

#### **Surface water**

Surface water may gather in and around the excavations due to rain. Operation will be stopped until the water is drained, and the soil is dried to such an extent that it's accessible for operation.

#### **Sensitive Landscapes**

The Vaal River is the only sensitive landscape present on Fourteen Streams in the area applied for a Mining Right.

No mining activities will take place within 100m from the river or within the 100 year floodline.

#### **Visual aspects**

The site will not be visible from the Christiana / Warrenton tar road. There will be no difference between a normal opencast operations visual impact and the visual impacts on Fourteen Streams.

### **(c) Closure**

Removal of pan plant.  
Final rehabilitation of excavations and pits.  
Establish grazing land .

#### **Time schedule**

After completion of the operational phase. The impact of this phase will be minimal, all rehabilitation would be done concurrent, during the construction phase. Therefore this will only be to remove equipment and accessories,



**finalize rehabilitation on the site area and removal of roads that are not in use for farming purposes.**

**(d) Post Closure**

**Final rehabilitation of grazing land if necessary.**

**Time schedule**

**From date of final closure until grazing land is rehabilitated properly. This phase will not have any impact on a aspect mentioned for the mining right.**

**7. Procedures for environmentally related emergencies and remediation**

(An environmental emergency plan that includes all the items referred to in the concomitant section of the guideline posted on the official website of the Department)

**7.1 Environmental Emergency Plan**

**7.1.1 Monitor**

**The right holder, management and employees will be trained to do the planning, construction, rehabilitation according to the rules stipulated within the Mineral Petroleum Resources Development Act. All activities must be monitored and managed on a regular basis.**

**7.1.2 Prosedures**

- (a) Signs of irregularities must be reported to management and noted within a register on site as an early warning system.**
- (b) The right holder and management will implement systems to prevent damage. If necessary, mining activities must be stopped until all precautionary measurements are implemented.**
- (c) Employees and interested and affected parties should be informed of any risk.**
- (d) If any damage occur it should be rectified immediately before activities restart.**
- (e) Measurements must be implemented for all affected parties to be on the lookout for recaputilation.**
- (f) If necessary the matter must be reported to the Department of Mineral Resources, local government institutions and all affected parties.**

**7.1.3 Technical, management and financial implications**

**The right holder and management will be implementing systems to approach technical specialists in any emergency case. Provision for financial support will be in place to cover related costs.**

## 8. Planned monitoring and environmental management programme performance assessment.

8.1. Description of planned monitoring of the aspects of the environment which may be impacted upon. (Include all the items referred to in the concomitant section of the guideline posted on the official website of the Department)

- (a) Topsoil
- (b) Access to the site
- (c) Office / camp sites
- (d) Toilet facilities, waste water and refuse disposal
- (e) Rehabilitation of the office / camp site
- (f) Vehicle maintenance yard and secured storage areas
- (g) Maintenance of vehicles and equipment
- (h) Waste disposal
- (i) Rehabilitation of vehicle yard and secured storage areas

8.2. Provide a description as to how the implementation of the action plans contemplated in regulation 51 (b) (ii) as described will be monitored as described in paragraph 6 of the EMP will be monitored.

**The right holder and management will implement a time schedule and monitor, that actions will take place within the mentioned timeframe.**

8.3. Frequency of proposed reporting for assessment purposes.

**Monthly report to the Department of Mineral Resources**  
**Annual reports - after each completed year.**  
**Performance Assessment Report - every second year.**  
**Review of the Quantum of the Financial Provision - annually.**

## 9. Financial provision in relation to the execution of the environmental management programme:-

9.1. Plan showing the location and aerial extent of the aforesaid main mining actions, activities, or processes anticipated. (Include all the items referred to in the concomitant section of the guideline posted on the official website of the Department)

**Attached herewith the layout plan in Annexure "D".**

9.2. Annual forecasted financial provision calculation (Refer to the concomitant section of the EIA and EMP guideline)

**Attached herewith the Quantum of Financial Provision in Annexure "H".**

9.3. Confirmation of the amount that will be provided should the right be granted.

**The amount of the Financial Provision is R 252 172-00.**

**9.4.** The method of providing financial provision contemplated in Regulation 53.

**A bank guarantee will be used to furnish the Department of Mineral Resources with this Financial Provision.**

#### **10. Environmental Awareness Plan (Section 39 (3) (c))**

(Include all the items referred to in the concomitant section of the guideline posted on the official website of the Department)

**10.1 The right holder will inform his employees of any environmental risk.**

**(a) On a regular basis and during weekly staff training / information meetings as precautionary measurements.**

**(b) If a potential risk is identified, a meeting will be set to inform all relevant parties of the risk as well as actions taken to prevent, minimise and correct the result of the potential risk.**

**10.2 The following environmental risks will be handled as follows:**

**(a) Dust / Air Quality**

**Dust masks and the use of a water cart to wet the area will utilize the matter.**

**During ultimate windy conditions mining activities will stop.**

**Speed limits will be implemented on access and mine roads to prevent dust.**

**(b) Topsoil**

**Topsoil will be kept separate and will be protected with band walls against wind and water erosion.**

**(c) Spillages of oil, grease and other pollutants**

**It should be collected immediately in containers and should be chemically treated by a qualified institution and removed to a recognised facility for storage.**

#### **10.3 General Environmental Awareness**

**The right holder, management and all employees will be trained and informed of all environmental matters and the precautionary measurement to prevent this matters. If any risk occur it should be noted within a register on site and management should take immediate action to prevent any risks.**

**All employees and possible affected parties should be notified of the potential risk by an emergency meeting and corrective measurement should be implemented.**

# **11. Attachment of specialist reports, technical and supporting information.**

(Provide a List)

- A. Locality Map
- B. Baseline Risk Assessment
- C. Topographical Map
- D. Layout Plan
- E. Proof of consultation with the interested and affected parties
- F. Company Documents
- G. Copy of Title Deed
- H. Quantum of Financial Provision
- I. Geographical Map
- J. Plan contemplated in Regulation 2.2
- K. Advertisement in newspaper
- L. Plan showing the divided areas
- M. The map including the spatial locality and environmental, cultural / heritage, infrastructure and land use features identified on site and on the neighbouring properties and farms
- N. Photographs of existing infrastructure
- O. Climate Statistics
- P. Soil report
- Q. Biophysical report
- R. Letter from H2ON Environmental Specialist
- S. Results of Water analysis
- T. Archaeological Impact Assessment
- U. Environmental Awareness Plan

# **12. SECTION 39 (4) (a) (iii), Capacity to manage and rehabilitate the environment**

(Include all the items referred to in the concomitant section of the guideline posted on the official website of the Department)

**An amount of R 400 000 is set aside for rehabilitation and emergency environmental risks that might occur.**

**This amount is limited due to the fact that rehabilitation will be minimal as it will be done on a concurrent part of daily activities.**

### 13. UNDERTAKING

- 13.1. The Environmental Management Programme will, should it comply with the provisions of section 39 (4) (a) of the Act and the right be granted, be approved and become an obligation in terms of the right issued. As part of the proposed Environmental Management Programme, the applicant is required to provide an undertaking that it will be executed as approved and that the provisions of the Act and regulations thereto will be complied with.

**I, Lindi Labuschagne authorized representative of the Coppersun Twelve (Pty) Ltd, the applicant for a Mining Right, hereby declares that the above information is true, complete and correct and comply with the provision of Section 39 (4) (a) of the Act. I undertake to implement the measures as described and indicated in this document. I understand that this undertaking is legally binding and that failure to give effect hereto will render me liable for prosecution if I commit any of the offences stated in Section 98 of the MPRDA (Act 28 of 2002) and depending on the offence can be subjected to penalties as set out in Section 99 of the MPRDA. I am also aware that the Regional Manager may, at any time, but after consultation with me, make such changes to this plan, as he / she may deem necessary.**

**Signed on the 7<sup>th</sup> day of December 2011 at Schweizer Reneke.**

\_\_\_\_\_  
**Lindi Labuschagne**

### 14. IDENTIFICATION OF THE REPORT

<b>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.</b>	
<b>Full Names and Surname</b>	<b>Lindi Labuschagne Authorized representative of Coppersun Twelve (Pty) Ltd</b>
<b>Identity Number</b>	<b>821125 / 0111 / 080</b>

**-END-**