



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: Helen Claire Harley

REFERENCE NUMBER: EC 30/5/1/3/2/10035/MP

ENVIRONMENTAL MANAGEMENT PLAN

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

STANDARD DIRECTIVE

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

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

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

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

The area on site is homogenous with the surrounding farmlands. It is situated on the Cedarville Flats, an alluvial basin acting as a sandy aquifer with the Mzimvubu River running through it. The topography is flat and slopes very gently down towards to Mzimvubu River. The area to the south of the property is hilly as opposed to flat. The vegetation is grassland and cultivation and grazing have been practised across the entire area.

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

There are numerous wetlands on site which should be avoided.

The grassland which occurred there naturally is classified as being vulnerable but the entire are is transformed and now comprises secondary grassland.

Some of the red data birds found foraging on the site will be selecting for certain plant species and therefore stock piling of topsoil and rehabilitation of the site is important.

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

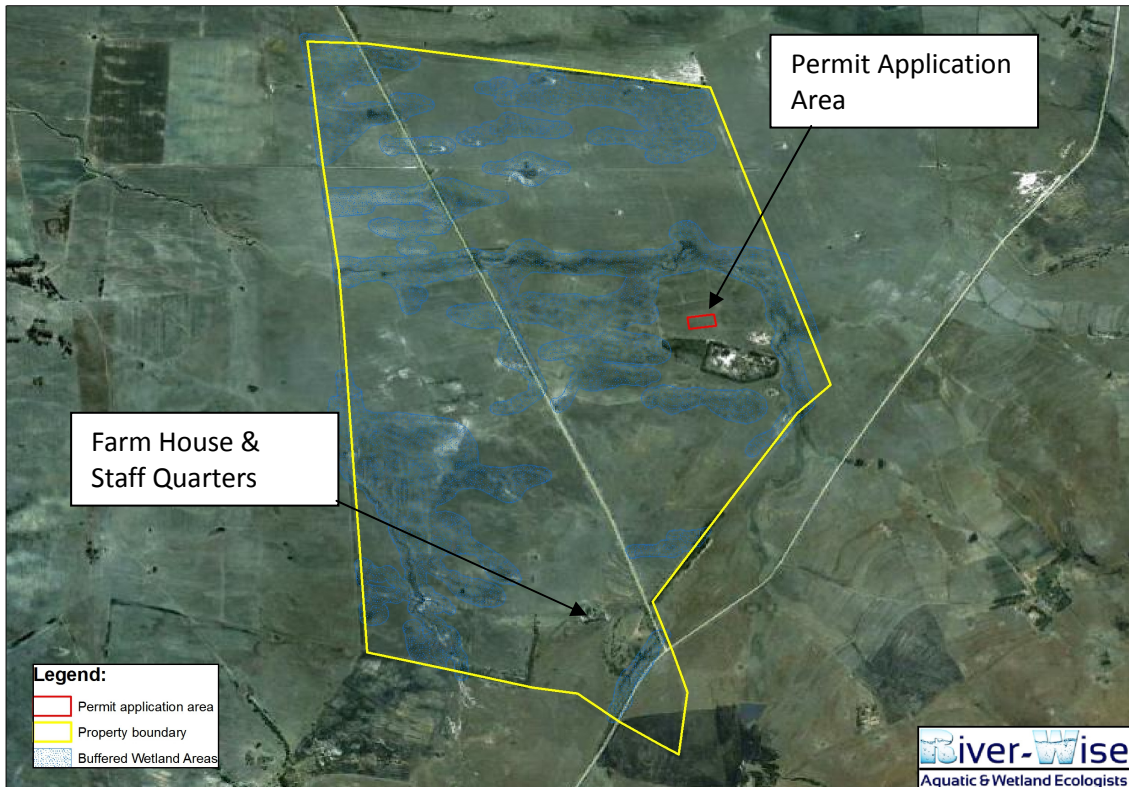


Figure 1. Map indicating the wetlands and proposed sand mining area.

The vegetation across the entire site is secondary / transformed and is utilized as grazing and this landuse is not indicated for practical reasons i.e to avoid cluttering the map.

There are no known cultural or heritage values associated with the site.

There is one main dwelling on site and this is adjoined by the staff quarters. The dwelling is serviced by eskom power and water is supplied from an onsite borehole. The property is bordered on four sides by four neighbours with the nearest neighbours dwelling being further than 1km away from the property boundary. Any mining activity will thus take place more than 1.5 km away from any neighbouring dwelling's. Neighbours are unlikely to be impacted in any way by the proposed mining activities.

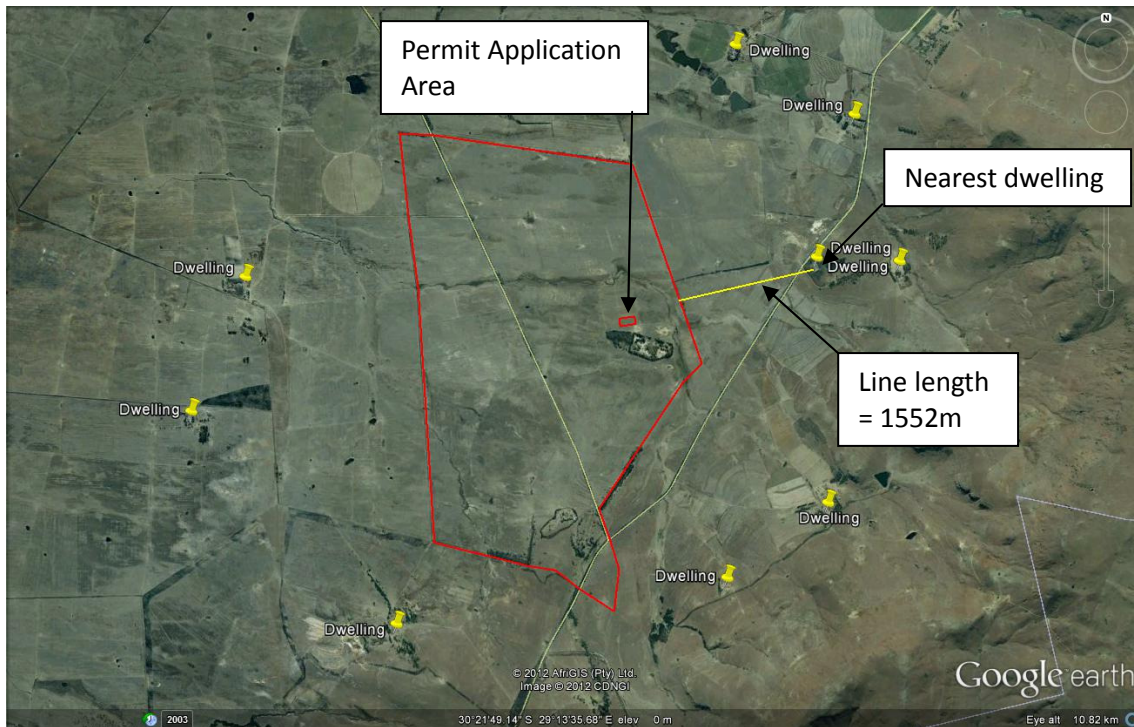


Figure 2. Neighbouring Dwellings at least 1.5km away from proposed activity.

The neighbouring farm use practices include crop cultivation and livestock production.

- 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,

As follows:

Annexure A: Consultation summary to DMR (submitted on-line)

Annexure B: Letter summary to DMR (submitted on-line)

Appendixes in support of above (submitted on-line)

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 material proposed to be mined is Sillica Sand. The method is very basic Open Cast Mining.

An access road is required to access the pit mining areas. A 1.5 ha area is demarcated. An excavator is used to remove the top 30cm of soil which is stockpiled

adjacent to the demarcated pit and aligned to create a barrier to wind erosion. The sand is then excavated from the pit as needed to a depth of between 1m to 3m.

2.1.2 Plan of the main activities with dimensions

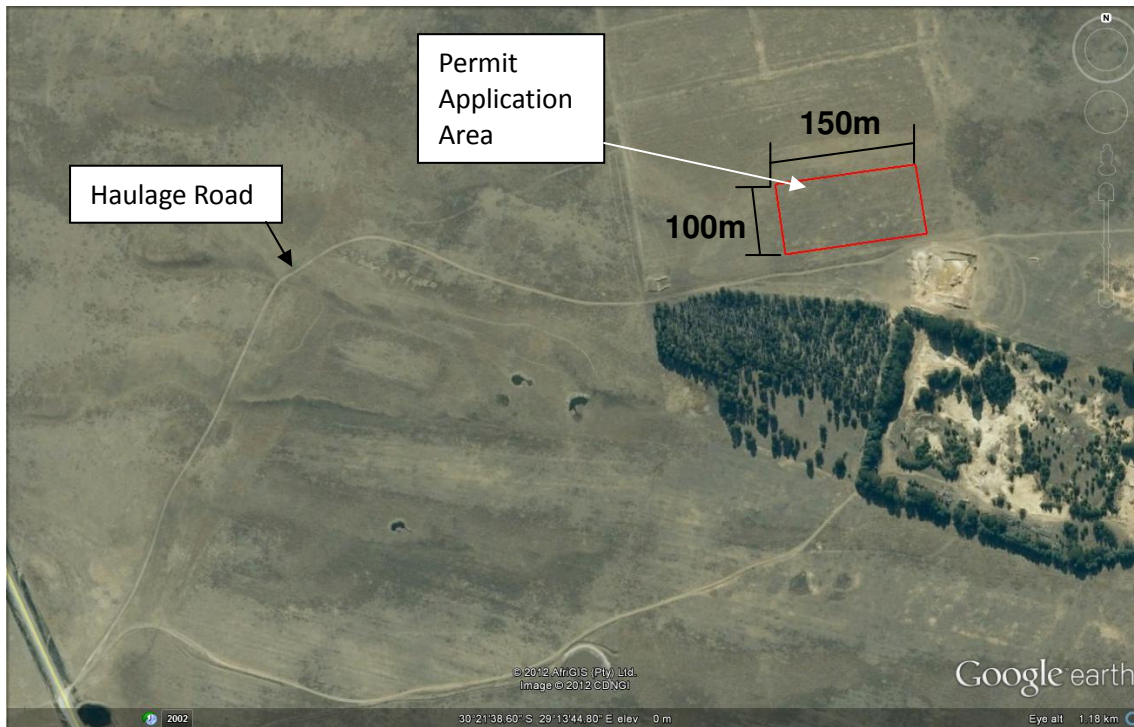


Figure 3. Plan showing the main activities and dimensions.

2.1.3 Description of construction, operational, and decommissioning phases.

Construction Phase: Not Applicable, as there is no planned infrastructure

Operational Phase: This phase comprises the mechanical extraction of sand from the demarcated pit and loading into vehicles which access the site via the haulage road indicated in Figure 3, above. The operational phase of a sand mining pit is anticipated to be 2–5 years.

Decommissioning Phase: Rehabilitation of the pit, involving the replacement of topsoil and replanting and re-establishment of vegetative cover, as well as monitoring and evaluation. Rehabilitation phase is 3 to 6 months.

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

There are no listed activities which are triggered by the NEMA EIA Regulations.

2.2 Identification of potential impacts

(Refer to the guideline)

2.2.1 Potential impacts per activity and listed activities.

The impacts that have been identified per activity are listed in the EMP Report Appendix 1, of this report.

2.2.2 Potential cumulative impacts.

Provided that the area mined is satisfactorily rehabilitated there should be no cumulative impacts arising from this activity.

2.2.3 Potential impact on heritage resources

No graves, archaeological or cultural sites have been identified on the site.

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

Because the area is remote and the proposed activity located far away from any neighbouring dwellings (i.e. more than 1.5km) it is not anticipated to have any impacts on any communities or individuals in close proximity. There are also no impacts of this activity on any competing land use, this is because the activity will in no way compromise any of the existing activities taking place any adjacent properties.

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

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

As follows:

Annexure A: Consultation summary to DMR (submitted on-line)

Annexure B: Letter summary to DMR (submitted on-line)

Appendixes in support of above (submitted on-line)

2.2.6 Confirmation of specialist report appended.

(Refer to guideline)

See attached as Appendix 1

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

Impacts are scored in terms of probability (likelihood of occurrence), extent (spatial scale), intensity (severity/magnitude) and duration. Impact significance is determined by summing the numerical value for the impact rating scales for each impact and multiplying by the probability of that impact occurring. See Appendix 1. For further details.

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

See table 6, of appendix 1.

3.1.3 Assessment of potential cumulative impacts.

No cumulative impacts are anticipated.

3.2 Proposed mitigation measures to minimise adverse impacts.

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

Refer to table 6, of appendix 1.

3.2.2 Concomitant list of appropriate technical or management options

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

Refer to the Environmental Management Programme Appendix 1.

3.2.3 Review the significance of the identified impacts

(After bringing the proposed mitigation measures into consideration).

Refer to Table 9. Of Appendix 1.

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

4.1 Plans for quantum calculation purposes.

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

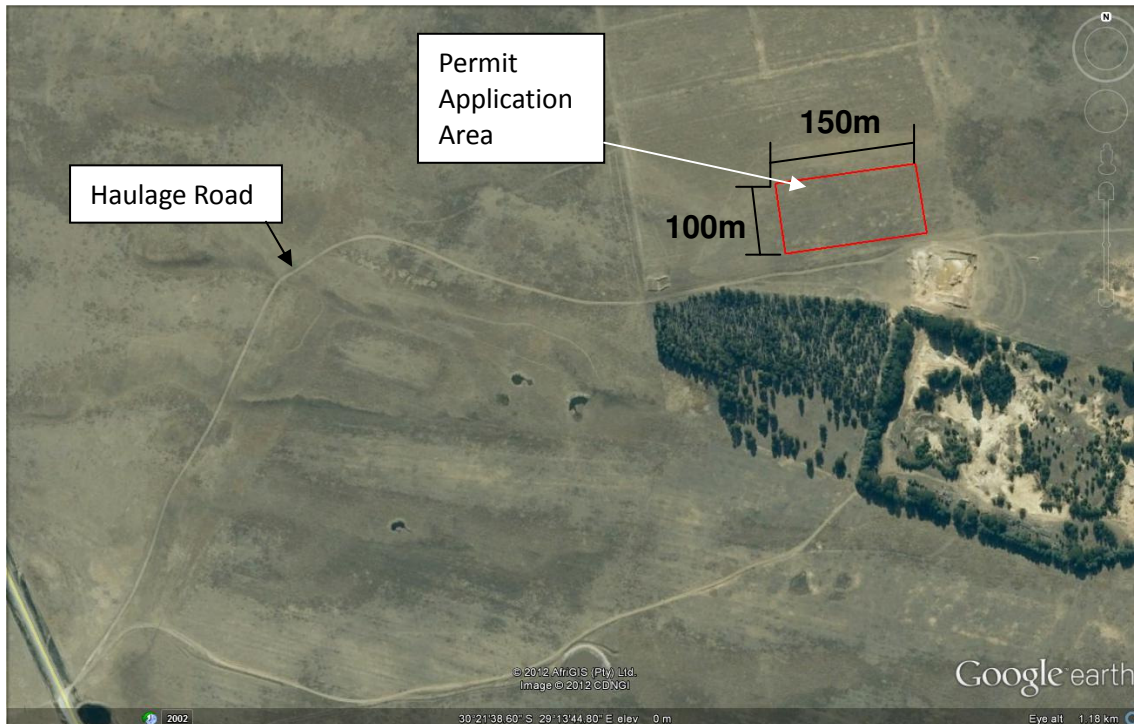


Figure 4. Plan showing the main activities and dimensions.

The location and aerial extent are the same for all phases of the operation.

4.2 Alignment of rehabilitation with the closure objectives

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

The closure objectives are to re-instate the current existing conditions and agricultural potential of the land. The rehabilitation plan (see Table 8, of appendix 1) is compatible with the closure objectives.

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 financial undertaking previously prepared for application purposes and already submitted on-line

4.4 Undertaking to provide financial provision

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

- See financial undertaking previously prepared for application purposes and already submitted on-line

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

5.1 List of identified impacts requiring monitoring programmes.

Surface Water	Alteration to Streamflow Regulation & Runoff
	Pollution/Sedimentation
Soil	Erosion
Vegetation	Destruction
	Alien Vegetation
Wildlife	Disturbance
	Barrier to movement/Hazard
Climate	Atmospheric Emissions
Air Quality	Dust Generation
	Co and Co ² Emissions
Noise	Noise Disturbance
Traffic Impact	Increased Traffic
	Safety
Domestic Waste	Litter

Rehabilitation will also require monitoring on a monthly basis for the first 6 months, thereafter every 6 months for two years.

5.2 Functional requirements for monitoring programmes.

Ongoing inspection by the Mine Manager and Monthly Inspections by the Environmental Control Officer.

5.3 Roles and responsibilities for the execution of monitoring programmes.

Whilst the Mine Manager must undertake to monitor activities on a daily basis, and the ultimate responsibility for satisfying the monitoring requirements is the role of the Mine Manager, the Environmental Control Officer is responsible for ensuring compliance of all aspects of monitoring.

5.4 Committed time frames for monitoring and reporting.

The appointed environmental control officer will submit monthly reports on all of the above mentioned impacts requiring monitoring.

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).

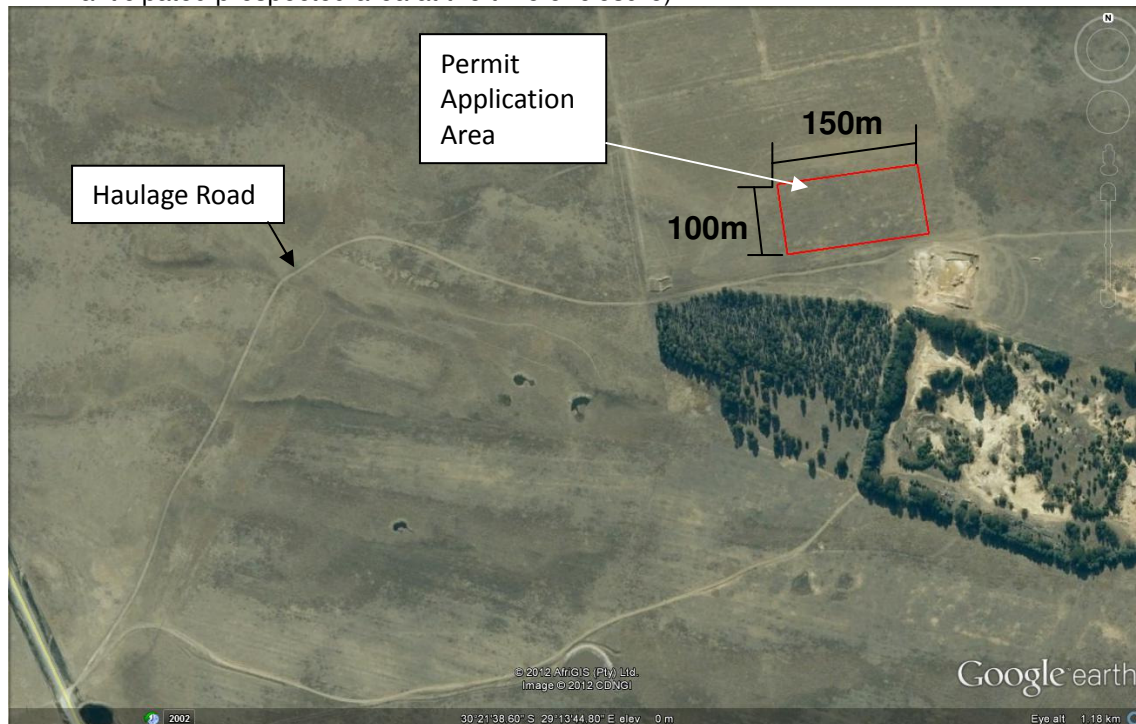


Figure 5. Plan showing the main activities and dimensions.

The location and aerial extent are the same for all phases of the operation.

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

The entire area impacted by mining will be rehabilitated to pre-mining state.

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).

As follows:

Annexure A: Consultation summary to DMR (submitted on-line)

Annexure B: Letter summary to DMR (submitted on-line)

Appendixes in support of above (submitted on-line)

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

As follows:

Annexure A: Consultation summary to DMR (submitted on-line)

Annexure B: Letter summary to DMR (submitted on-line)

Appendixes in support of above (submitted on-line)

7.1 Identification of interested and affected parties.

(Provide the information referred to in the guideline)

As follows:

Annexure A: Consultation summary to DMR (submitted on-line)

Annexure B: Letter summary to DMR (submitted on-line)

Appendixes in support of above (submitted on-line)

7.2 The details of the engagement process.

As above

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

As above

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

As above

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

As above

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

As above

7.2.5 Other concerns raised by the aforesaid parties.

As above

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

As above

7.2.7 Information regarding objections received.

As above

7.3 The manner in which the issues raised were addressed.

As above

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).

One on one communication with the employees & demonstration where required.

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)t.

Refer to Table 7, of appendix 1.

8.3 Environmental awareness training.

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

Environmental awareness training will take place monthly. Issues that pose a risk will be discussed and an understanding of the issues generated. As per Table 6, of appendix 1.

Most of the emergency situations will require action by the Mine Manager and so the discussions will focus around the situations which may arise to which the mine manager must be alerted.

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)

- ✓ R30 000 per annum (specific to rehabilitation only)
 - Cost of seeds per month: R500
 - Costs of fuel per month: R500
 - Manual labour per month: R1000
 - Admin and stationary costs (disbursements): R300

- o Contingencies per month:

R200

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

Per financial plan submitted on line

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	Barbara Wiseman
Identity Number	7602250144082

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