mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

AND

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMMENDED)

NAME OF APPLICANT:	**MENTOZA HOLDINGS AND INVESTEMTS (PTY) LTD**
TEL NO:	**0723377458**
FAX NO:	**0865 364 881**
POSTAL ADDRESS:	**1793 RADEBE STREET, GALESHEWE, 8301**
PHYSICAL ADDRESS:	**1793 RADEBE STREET, GALESHEWE, 8301**
E-Mail ADDRESS:	**Mentorza0@gmail.com**

FILE REFENCE NUMBER SAMRAD: **NC 30/5/1/1/2/12220 PR**

1. IMPORTANT NOTICE:

In terms of the Mineral and petroleum Resources Development Act (Act 28 of 2002 as amended), the Minister must grant a prospecting or mining right if among others the mining "will not result in unacceptable pollution, ecological degradation or damage to the environment".

Unless and Environmental Authorization can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Programme report in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

In terms of section 16(3)(b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in terms of section 17(1)(c) the competent Authority must check whether the application has taken into account any minimum requirements applicable or instructions or guidance provided by the competent authority to the submission of application.

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorization for listed activities triggered by an application for a right or a permit are submitted in the exact format of, and provide all the information required in terms of, this template. Furthermore please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorization being refused.

It is furthermore an instruction that the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings gathered to compile the information required herein. (Unprocessed supporting information may be attached as appendices). The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in the order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation the applicant.

2. OBJECTIVE OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

The objective of the basic assessment process is to, through a consultative process –

(a) Determine the policy and legislative content within which the proposed activity is located and how the activity complies with the responds to the place and legislative context;

(b) identify the alternatives considered , including the activity, location, and technology alternatives; describe the need and desirability of the proposed alternatives,

(c) Identify the location of the development footprint within the preferred site based on an impact and risk assessment process inclusive of culmunative impacts and a ranking process of all the identified development footprint alternatives focusing on the geographical,physical,biological,social,economic,heritage and cultural aspect of the environment

(d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on these aspects to determine

(i) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and

(ii) the degree to which these impacts –
(aa) can be reversed

(bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

(e) identify the most ideal location for the activity within the preferred site based on the lowest level of the environmental sensitivity identified during the assessment

(f) identify, assess, and rank the impacts the activity will impose on the preferred location through life of the activity

(g) identify suitable measures to manage, avoid or mitigate identified impacts; and

(h) identify residual risks that need to be manage and monitored

PART A

SCOPE OF ASSESSMENT AND ENVIRONMENTAL IMPACT ASSESSMENT REPORT

1. Contact person and correspondence address

1.1 Details of

1.1.1 Details of the EAP

Name of the Practitioner: Tintswalo Millicent Simango
Tel no: 079 962 8010
Fax No:
e-mail address: simangotm@gmail.com

1.1.2 Expertise of the EAP

1.1.2.1 The qualification of the EAP

Bsc in Geology (University of Kwazulu-Natal)
Current studies: Honours Environmental Management (Unisa)

1.1.2.2 Summary of the EAP's past experience.

(In carrying oath the Environmental impact Assessment Procedure)

Millicent Tintswalo Simango is a qualified geologist (she holds a degree from the University of Kwazulu-Natal (KZN) and is currently completing her honours in Environmental Management with the University of South Africa). She has extensive experience in geographic information science and data management, is an experienced environmental management practitioner and has conducted extensive environmental studies.

She has conducted environmental studies for a major manganese and iron ore project in the Kuruman district for SNM Resources and is has previously conducted consulting work for Mentoza Holdings and Investments for an alluvial diamond project in Slypsteen farm in the magisterial district of Herbert, in the Northern Cape. In addition to assisting medium sized entities, she is also passionately working and assisting small miners particularly in the Barkley West and other parts of the Northern Cape and North West Provinces.

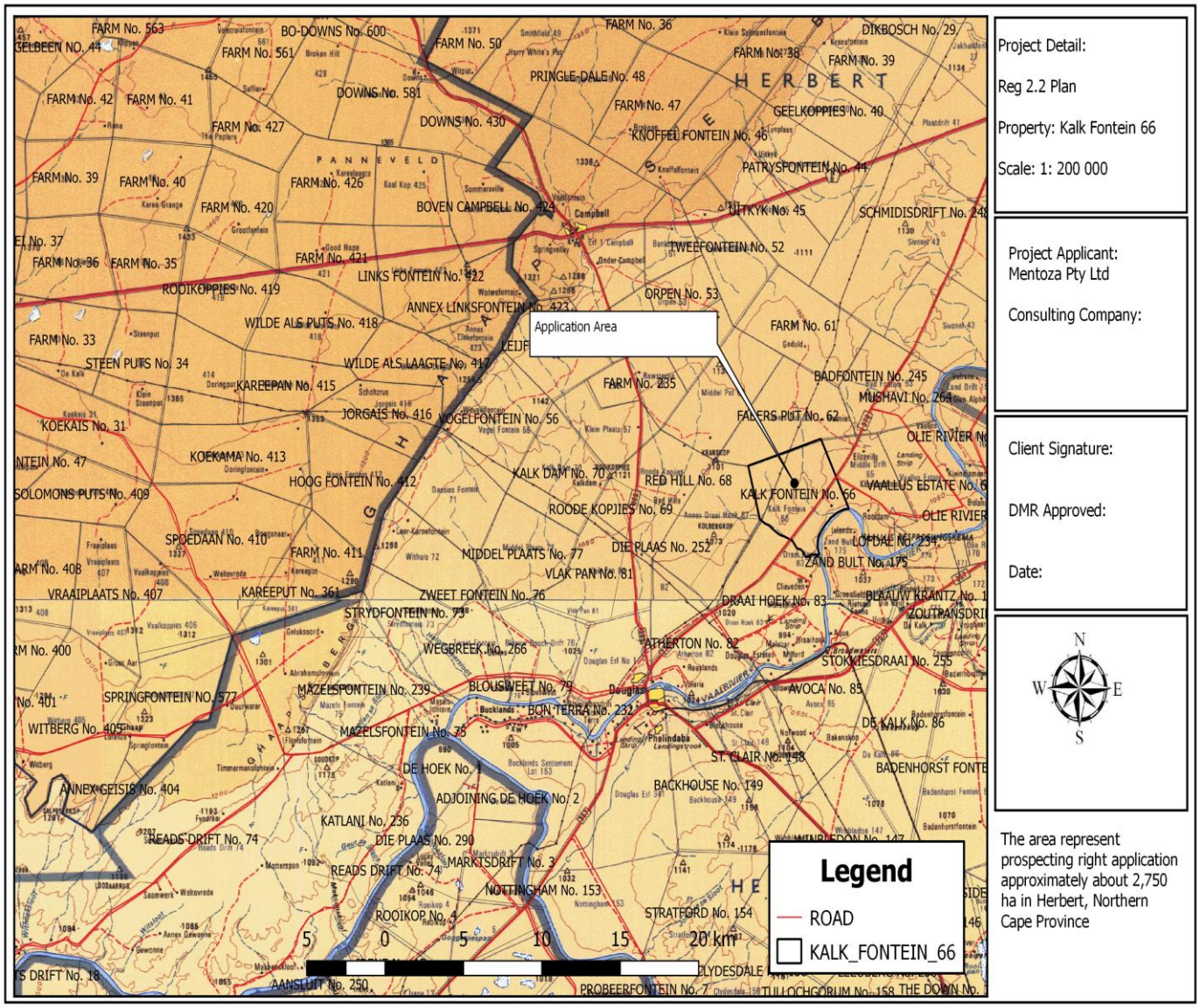
She is a specialist in the entire environmental management value chain, ranging from conducting environmental impact assessments, prospecting work permits and environmental authorisations; compiles basic assessment report and environmental management programme reports through to closure certificates for completed mining projects.

2. Location of the overall Activity

Farm Name	Kalkfontein Farm No. 66
Application area (Ha)	2750 ha
Magisterial district:	Herbert
Distance and direction from nearest town	20 Kilometers north of Douglas
21 digit Surveyor General Code for each farm portion	C0000C03200000000066000000

3. Locality map

(Show nearest town, scale not smaller than 1:250 000)



4. Description of the scope of the proposed overall activity

(Provide a plan drawn to a scale acceptable to the competent authority but not less than 1:10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on site)

4.1 Listed and specified activities

NAME OF ACTIVITY **(E.g. For prospecting –** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc … etc … etc** **E.g. For mining –** excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors **etc … etc … etc.)**	**ARIAL EXTENT OF THE ACTIVITY HA OR M²**	**LISTED ACTIVITY** **Mark with an X where applicable or affected.**	**APPLICABLE LISTING NOTCE** **(GNR 544, GNR 545 or GNR 546)**
Mining Activities	200 ha	X	GNR 983, Listed 1, Activity 21
Ablution			GNR 983, Listed 1, Activity 20
Workshop Area	0.072 ha	X	GNR 983, Listed 1, Activity 20
Bulk Sampling			
Excavation	1.25 ha	X	GNR 984, Listed 2, Activity 19
Topsoil	50 m	X	GNR 984, Listed 2, Activity 19
Overburden	-	-	-
Stock piles	0.13 ha	X	GNR 984, Listed 2, Activity 19
Waste dumps	0.13 ha	X	GNR 984, Listed 2, Activity 19
Settling dam	52 m^2	X	GNR 984, Listed 2, Activity 19
Berms	0.056 ha		GNR 984, Listed 2, Activity 19
Office site	3m²	X	GNR 983, Listed 1, Activity 20
Plant site	4m²	X	GNR 983, Listed 1, Activity 20
Chemical storage	10m²	X	GNR 983, Listed 1, Activity 20
Diesel storage	0.005 ha	X	GNR 983, Listed 1, Activity 20

Domestic waste facility	0.0008 ha	X	GNR 983, Listed 1, Activity 20
Access road	0.4 ha	X	GNR 983, Listed 1, Activity 20
Mine road		X	GNR 983, Listed 1, Activity 20

Description of the activities to be undertaken

(Describe Methodology or technology to be employed, including the type of commodity to be prospected / mined and for a linear activity, a description of the route of the activity)

- Construction

  - Bulk Sampling

    Construction for the commencement of the bulk sampling activities mainly consist of the prospecting related infrastructure that needs to be erected / installed to ensure environmental compliant prospecting operations.

    The total footprint of vegetation loss during this phase is 1ha. The structures, with their calculated footprint, include the ablution facility (2 x (2 x 2 m)), Vehicle parking with associated structures (6 x (8 x 4 m) + 10 x 3 m + 10 x 10 m + 8 x 4 m), Chemical store (2 x 5m), Plant site (30 x 30 m) and the Office with associated structures (12 x 4 m + 6 x 4 m). All sites and different structures will be clearly demarcated and all necessary regulatory signs installed.

- Operational

  During the prospecting activities geological investigations, Reverse Cycling Percussion drilling and bulk sampling activities will be conducted to test the diamond content, distribution and feasibility of the area.

  - Test pits

    18 test pits are propose at demarcated places with an estimated average depth of 3 meters each. Each test pit will have an approximate footprint of 7 x 4 m per time.

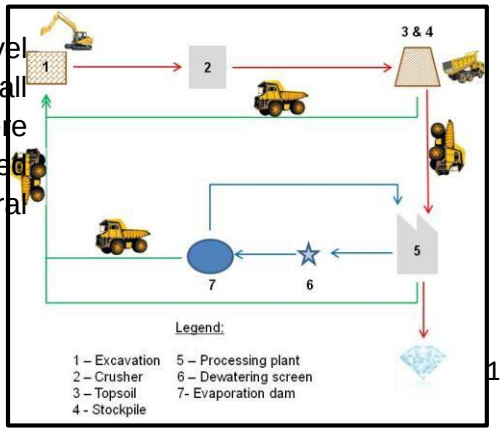
  - Bulk sampling

    During the operational phase 10 bulk samples, each 50 x 25 x 4 m, will be individually tested. The following methodology processes will be implemented to ensure cost effective prospecting activities as well as successful rehabilitation.

    - Diamond Processing

      The proposed and planned methodology is to ensure accurate statistical and geological information on that specific area. During the mineral processing the process is controlled with specified 'puddle' weight / density and controlled 'tap' intervals. It is also need to be ensured that the different samples is tested separately. The following methodology is proposed to be used for the testing of the area:-

      - The topsoil and overburden removed will be stored separately nest to the excavation for rehabilitation purposes. The gravel excavated is screened to remove all the rough boulder materials where after the finer gravels are stockpiled near the plant site for mineral processing activities.



- during the mineral processing the gravel is washed in a Diamond washing to obtain a concentrate of heavy minerals which includes the possible diamonds. This concentrate is transported to the recovery plant and all possible diamonds recovered.

- The puddle from the mineral processing plant is dewatered and the solid materials used for backfilling of the excavations. The excess water is stored in a settling dam where the suspended materials settles out and the clean water recycled to be used within the process again. The settling of the solids will done in either one settling dam constructed in a labyrinth effect or three dams where one overflows into the next. Once the bulk sample gravel has been treated, the settled solids in the dams will be excavated and either used as pit-fill or as topsoil where necessary.

- All oversized gravel screened, along with tailings from the recovery plant, will be used as pit back-fill. Surface rehabilitation will ensure that all overburden and original topsoil will be evenly spread across the disturbed areas. To finalize the rehabilitation process the overburden and topsoil will be evenly spread over the area. Regular inspections will be implemented to ensure the successful re-establishment of vegetation species and the removal in invader / pioneer plant species where necessary.

The logging of the bulk sample is to capture specific information such as sample number, sample locality, sample depth, ground lithology and gravel depth. During the diamond recovery process all the diamonds recovered will be logged indicating specific information such as grades recovered quality and classification with related market value.

Each bulk sample needs to be fully rehabilitated before the continuation to the following of the excavation in a natural order. With the spreading of topsoil to finalize. A two to three year (can be longer depending on climate conditions) monitoring programme will be initiated to ensure the successful re-establishment of vegetation

All recovery results and geological information obtained during this phase of activities are digitally logged and updated geological maps and models provided to identify more accurately the extent of any diamond bearing gravel deposits discovered as well as better estimates of the diamond distribution patterns therein.

- Decommissioning
  Once the prospecting activities have been completed the mine will start with the decommissioning and closure phase. During such will all infrastructure and equipment be removed and the compacted ground ripped and rehabilitated. Also will all the mine roads and trampled areas be ripped, rehabilitated and inspected for vegetation re-growth.

5. Policy and Legislative Context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative contect within which the development is proposed including an identification of all legislation, policies, plants, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process)	**REFERENCE WHERE APPLIED**	**HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLTATION AND POLICY CONTEXT.** (E.g. In terms of the National Water Act a Water Use License has / has not been applied for)
No person may … prospect … for and produce any mineral … or commence with any work incidental thereto on any area without – a ….prospecting permit…	Section 5 (4)(b) of Act 28 of 2002 (MPRDA, 2002 read together with Section 5A (b) of Act 49 of 2008 (MPRDA, 2008)	An application has been lodged with the Department of Mineral Resources.
No person may … prospect … for and produce any mineral … or commence with any work incidental thereto on any area without – an approved environmental management programme or approved environmental management plan, …	Section 5 (4)(a) of Act 28 of 2002 (MPRDA, 2002)	This document serves as the Basic Environmental Assessment and Environmental Management Programme
An environmental impact assessment report must contain all information that is necessary for the competent authority to consider the application and to reach a decision contemplated in regulation 35, an must include - …	Regulation 31(2) of Act 107 of 1998 (NEMA, 1998)	These guidelines and provided template is used in conducting this assessment.
A person who is required or wishes to obtain a license to use water must apply to the relevant responsible authority for a license	Section 40(1) of Act 36 of 1998 (NWA, 1998)	Water use license is in the process of being applied for
Waste resulting from … prospecting … and physical ... treatment of minerals	Section 18 (Category A) of Act 26 of 2014 (NEMWA, 2014)	In the process of conduction the Basic Environmental Assessment and Environmental Management Programme

6. Need and desirability of the proposed activities

(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location).

The application area is located 20 kilometers north of Douglas and includes geological known diamondiferous alluvial and kimberlite bodies.

The project area is known for its diamond richness from historical mining on the area itself, but socio economical poverty. Several diamond mines are operational within the area over the past years giving some relieve to the socio-economic status. The purpose of the proposed operations is to determine the mine feasibility of the area, but during such several jobs is created resulting in a small, but necessary income into households and local businesses. Should the prospecting results indicate feasible mining operations and the project developed, medium scale job creations may occur leading to economic growth of the area and regions.

7. Motivation for the overall preferred site, activities and technology alternative

The proposed project area is demarcated to include the target diamondiferous bodies as well as enough space for the construction of the offices and processing plant. An alternative office and/or plant site will result in the transportation of material creating more noise disturbance and possible air quality loss.

The activities and technology used is planned and designed to created and cause the minimal disturbance possible. Working hours is also kept within standard office hours for the purpose of minimizing noise disturbance.

No other alternatives in regard to preferred site, activities and technology is considered as the current planning is be best possible option at this stage to ensure minimal environmental disturbance and cost effective prospecting operations.

8. Full description of the process followed to reach the proposed preferred alternatives within the site

NB!! – This section is about the determination of the specific site layout and the location of infrastructure and activities on site, having taken into consideration the issues raised by interested and affected parties and the consideration of alternatives to the initially proposed site layout.

8.1 Details of the development footprint alternatives considered

With reference to the site plan provided and the location of the individual activities on site, provide details of the alternatives considered with respect to:

All of the following prospecting and prospecting related activities will occur and have its specified footprint within the project area as applied for at the Department of Mineral Resources.

- Test Pits
  - test pits locations will be determined through the geological investigations to be conducted in Phase 1 of the prospecting activities. It is however currently proposed that 5 test pits will be excavated along demarcated lines with an estimated depth of 3 meters each. These test pits will each have an overall footprint of 40 m² consisting of a 7 x 4 m area.

  - This activity is necessary to determine the location, extent and depth of the possible diamondiferous kimberlite and also to minimize bulk sample footprint while optimizing the bulk sampling activities. Alternatives to be considered is the location of these test pits in relation to the environmental features or exercising a no-go option. The latter will result in 'blind' bulk sampling positioning on the kimberlite bodies rendering the possibility of inconclusive prospecting operations and / or greater environmental disturbance as the amount of bulk samples may increase to ensure a successful and conclusive prospecting progamme.

- Bulk sample excavations
  - The final bulk sample locations will be determined with the drilling results obtained during Phase 2 operations. It is however proposed that 50 x 25 x 4 m excavation to test for an accurate diamond distribution result on both the kimberlite bodies and alluvial deposits.

  - The technology used in this activity will be excavators, crushers, vibrating screens and dumper trucks to transport the excavated material from the excavation to the plant site.

  - Diamondiferous materials are excavated for mining purposes. The topsoil and overburden is removed where necessary and stored near the excavation for easier rehabilitation activities. The material is excavated, screened, crushed and transported to the plant site for mineral processing and diamond recovery.

  - This activity is the most critical part of the proposed prospecting activities and therefore the option of not implementing the activity cannot be considered.

- Topsoil and overburden dumps
  - All topsoil and overburden material removed is stored in close proximity of the excavation for rehabilitation purposes. The total disturbed footprint is 12 500 m², but only one dump of 50 x 25 m will be present at any given time frame during the bulk sampling operations.

  - No technology will be used in this activity other than dumper trucks transporting the material from the excavation and back during rehabilitation

  - If this activity is not implemented prospecting activities cannot continue and/or rehabilitation activities haltered. For this reason the option of not implementing the activity cannot be considered.

- Stockpiles
  - All gravel material removed and screened will be stockpiled close to the processing plant site for optimal operations. The stock pile is calculated to have a maximum foot print if 1 300 m² during any given time of the bulk sampling operations.

  - No technology will be used in this activity other than dumper trucks transporting the material to the stockpile and front-end loaders feeding the plant.

  - If this activity is not implemented prospecting activities cannot continue fluently affecting the cost effectiveness of the miming operations. For this reason the option of not implementing the activity cannot be considered.

- Waste dumps
  - Waste rock will be hauled from the various mining processes and stored separate from the stock dumps, but sill in the same region. The specific design of this activity is dependent on the amount of waste rock generated during the activities. The waste dump is calculated to have a maximum footprint of 0.2 m² during any given time of the bulk sampling operations.

  - No technology will be used within this activity and this is only the storing of waste rock material.

  - The operational aspects of the activity is the storing of waste rock till the removal thereof, usage in mining related features or rehabilitation of excavated areas.

  - The option of not implementing the activity is ruled out by the fact that waste rock is a by-product of any invasive prospecting activities and must be stored till usage or rehabilitation of the mining areas.

- Settling dams
  - The settlings dam 50x 50m) are located near the plant site for efficient water flow and use. This dam forms a unit for water recycling to ensure relative clean water for the mineral processing activities.

    The design of the dam is engineered in such a way that water overflow and settlement of suspended materials is ensured. At the end of the dam water released by means of a penstock into a 'storage dam' from where it is re-used in the processing operations.

  - Old dump and / or earth materials is used as the construction material for this dam. Water from the various activities will be pumped into the dam from where it follows a 'labyrinth' pathway.

  - The primary operational aspect of the activity is to clean the waste water that resulted from the mineral processing activities. Water is pumped into the settling dam. All suspended materials settle during the course of the 'channels' within the dam delivering clean water that is relayed to storage dam. The channels within the settling dam will be cleaned on a regular basis and the settled material used for covering material (topsoil) where necessary.

    The ultimate result of this activity is water recycling minimizing water use from the water resource as well as minimizing the ultimate footprint of the slimes dams.

  - Various design alternatives to this activity exist and is implemented on diamond mining operations. The specific design of this activity is currently the best design for prospecting activities and any alternative design may result on bigger activity impacts on the environment.

    Should the option of water reticulation be eliminated the recycling of water is not possible resulting in bigger slimes dams and a more difficult rehabilitation as well as a 100% use of source water. To ensure cost effective prospecting with minimal environmental impact the option of not implementing the activity is eliminated from the mine planning operations.

- Office site
  - The office block will be installed and have an approximate footprint of 72 m^2. This site will house several units including general office, mine health and safety office and first aid room.

  - The office site will be mobile offices (6 x 2m) fitted with relevant equipment/furniture for its specific task.

  - All administrative activities, storing of files, mine financials and discussions will be occurring within this facility.

  - Taking the rural setting of the project location into consideration, the best option is to keep the offices within the mine premises for proper managing, activity regulation, accident and damage control as well as optimizing productivity.

- Plant site
  - The processing plant site (approximately 20m in footprint) shall not be formally demarcated but demarcated with berms to indicate the allowed area for movement. Equipment used within this site will be installed in an almost inline manner for sufficient and effective mineral processing operations.

  - The technology used for the mineral processing area: diamond rotating pan, Conveyors, Scrubber, Dewatering screen, Slurry pump and recovery plant as well as a specialized Sand Auger.

  - Diamond recovery: The stock material is loaded into a feeder bin, which feeds the diamond rotating pan. A concentrate of heavy materials is obtained and tapped on specific time schedules. This concentrate is then treated / sorted within the recovery plant and the diamonds removed.

    The slurry obtained from the diamond rotating pans is treated within a dewatering screen and then further treated within the settling dams for recycled use. The solid material derived from the dewatering screens is stored on the waste dump.

    Sand recovery: The sand and / or sandy material is loaded into a feeder bind, which feeds the sand auger. The sand is washed and screened to remove water while classifying the different sizes.

    The water removed from the washed sand is relays back into the washing auger for 100% re-use.

  - The option of not implementing this activity is regarded as a no-go as this activity is one of the cores processes in any diamond mining operation.

- Ablution facility
  - Two chemical toilet facilities (each with a footprint of 2 x 2 m), separating male and female employees, will be installed on site.

  - Contractual agreements will be made and basic flushing chemical toilets installed. Within the female facility will sanity bins be provided for their specific needs and emptied on a daily bases.

  - These facilities are to support the sanitation protocol of the mine. These facilities will be readily available for personal use as needed.

  - The implementation of this structure and related activities is absolutely compulsive and enforced by the Basic Conditions of Employment Amendment Act, 2013 (Act 20 of 2013) in conjunction with the Basic Conditions of Employment Act, 1997 (Act 75 of 1997), Basic Conditions of Employment Amendment Act, 2002 (Act 68 of 2002) and Basic Conditions of Employment Amendment Act, 2003 (Act 52 of 2003)

- Vehicle storage
  - This facility will house various activities and structures with a total footprint of 408 m². These facilities include the vehicle parking lot (6 vehicles with each a parking footprint of 8 x 4 m), constructed wash bay (10 x 6 m), vehicle maintenance workshop (10 x 10 m) and an automotive parts store room (12 x 4). The area will also be cleared of all vegetation, leveled and parking zones demarcated either with berms or waste rock.

  - Drip pans will also be readily available for vehicles during off-time. No other technologies will be used during this activity

  - The parking area will be sectioned and demarcated for the various activities. All mine vehicles, visitors' vehicles, employee vehicles and heavy vehicles will be parked in this area within their different sections. All vehicles will however be required to adhere to the reversed parking policy for the safety of all vehicles in the case of an emergency.

  - Should this activity not be implemented pollution and chemical spill control cannot be optimally managed as well as the informal parking of other normal vehicles can lead to difficult driving environment for heavy vehicles. For this reason and legislative requirements this activity cannot be excluded as a prospecting related activity and thus planned to be implemented during the construction phase of the mining activities.

- Chemical storage
  - The storage facilities (2 x 5 m) are situated at the administrative portion of the mine. This is to ensure access control and regulation of chemical handling. The facility should be well ventilated construction with the ability to be locked.

  - Ventilation in this facility will be ensured through adequate roof ventilation systems. The structure itself will also be in the form of a mobile container.

  - This facility's main function is for the storing and controlling of legislative regulated and/or non-legislative regulated chemicals. The different types of chemicals must be stored separately as well as a differentiation between used and un-used chemicals should be made. Containers can also be place within this storage facility for the storage of used mechanical parts till the removal thereof.

    Once the use chemical containers are approximately 80% full the relevant agencies will be contacted for handling and correct removal of such chemicals.

  - The option of not implementing the activity is legislatively ruled out by specific regulations within the Mineral and Petroleum Resources Development Act and National Environmental Management Act regarding the storing of environmental hazardous chemicals.

- Diesel Storage
  - One diesel tank and its bunker bay with a footprint of 6 x 3 m and re-fueling concrete floor (8 x 4 m) will be installed at the vehicle parking site. This area shall be installed with all relevant danger signs.

  - The technology used shall be of the highest standards provided by the contracting diesel/fuel agency. The actual volume of the tank is currently unknown, but it is compulsive that the mine is supplied with a diesel tank already equipped with a leak-proof bay to prevent any ground contamination should the tank be leaking by fault or bursting.

  - Diesel will be kept within these container for refueling purposes during the mining activities. The contracting agency will be refilling these tanks on a regular basis and only then will the tank be inspected and maintenance procedures carried out.

    Machinery will be parked on a cement slap net to the tank for re-fuelling activities. This cement slap shall be contracted at a gradient with a run-off channel leading to a sump for impact prevention should any accidental spillage occur. The sump will also be cleaned and maintained on a regular basis by the contracting agency.

  - Taking the proximity of the town into consideration the option on not implementing the activity was considered but after careful consideration regarded as a no-go option.

- Domestic waste facility
  - The domestic waste facility (approximate footprint of 2 x 4 m) will be installed at the office sites.

  - The technology used shall be of local municipal standard including a tip-proof and scavenger proof bin. Agreements with the local municipality will signed for the removal of waste on their schedule.

  - All domestic waste on site will be place within these bins to keep the area clean and litter free.

  - The option of not implementing the activity can be taken into consideration and should the activity not be implemented a greater risk of littering results.

- Access and mine roads
  - The location and amount of roads will be finalized during the final mine planning and construction phase.

  - No foreign materials will be used in the construction of these roads. The roads will be scraped to specific measures and maintained on a regular basis. During maintenance may the roads be sprayed with a non-polluting substance mixed in water to chemically bound dust particles to aid in dust reduction and even in some cases prevention.

- The roads will be mainly used for mine traffic such as hauling of materials to different sites and employee travelling.

- Should the roads not be implemented and vehicles are allowed to travel how they please trampling of vegetation is a given factor leading to greater environmental degradation that the construction of these roads. For this reason the option of not implementing activity is ruled out in order to protect the surrounding environment as far as possible.

-

8.2 Details of the Public Participation Process followed

(Describe the process undertaken to consult interested and affected parties including public meeting and one on one consultation. NB! the affected parties must be specifically consulted regardless of whether or not they attended public meeting. (Information to be provided to affected parties must include sufficient detail to the intended operation to enable them to assess what impact the activities will have on them or on the use of their land) The public participation was undertaken from November 2018 to 30 February 2019, during which the following activities were undertaken:

Landowner Notices

The current landowner of the farm Kalkfontein (the subject of the prospecting right application) was provided with written notification of the project on 20 November 2018 (see appendices). The DMR Acceptance letter, a letter from Mentoza Holding and Investments (see appendices); a map indicating the co-ordinates of the farm applied for, together with a form where his comments or objections could be made. Upon receiving the notice, a register was signed by the Landowner confirming receipt of such.

Notice Board

A notice board was attached or fixed onto the property of the landowner from the 1st March 2019 requesting public comments be submitted within a period of 30 days (see attachments). This was in compliance with the requirement to have a notice board that is conspicuous and accessible by the public at the boundary or fence or corridor of the site where the activity to which the application relates.

Media Notice

A media notice (in English) containing the same information as the site notices was published in the Diamond Fields Advertiser (DFA) on Wednesday 21 November 2018 (see appendices). The notice indicated that Mentoza Holdings and Investments Pty (Ltd) (MHI) had submitted an application for a Prospecting Right to the DMR, the legislative context, the right of interested and affected parties to indicate their interest in the project, register on the IAP database or otherwise request additional information; provide comment or objections to the proposed prospecting activities. The notice further provided details of MHI where such objections or comments could be lodged. The timeframe of the commenting period was 30 days (thirty) from the date of publication of the notice. MHI was open to an extension of the public participation process upon receiving any such a formal request. Since none was requested, the entire process was concluded on the 30 April 2019.

Background Information and Notification Letters

Notification letters (attached as appendices) were sent out to the following identified State Departments and Stakeholders the Dept. of Agriculture and Rural Development (Kimberley), the Dept. of Environmental Affairs (Kimberley), the Dept. of Rural Development and Land Reform (Kimberley), the Dept. of Water and Sanitation (Kimberley), the Dept. of Mineral Resources (Kimberley), the Dept. of Public Works (Kimberley), Land Claims, SAHRA (Cape Town), SANRAL (Bellville), Eskom (Kimberley), Transnet (Bloemfontein), the Siyacuma Local Municipality (Douglas),These letters indicated that MHI had submitted an application for a Prospecting Right to the DMR, the legislative context, the right of interested and affected parties to indicate their interest in the project and register on the IAP database or otherwise request additional information; provide comment or objections to the proposed prospecting activities. The letters further provided the details of MHI where such objections or comments could be lodged. The map and location of the project

where the prospecting activities will take place was also provided. The timeframe of the commenting period was 30 days (thirty) from the date of receipt of the written notice. A database was prepared and maintained for the duration of the initial public commenting period which included representatives from all of the relevant State Departments, other Stakeholders, landowners and any IAPs requesting to register in response to the above or who otherwise provided comment. Any person responding to any of the abovementioned notifications was added to the IAP database. All comments received and responses thereto or other representations made were also recorded.

Comments and Response Report

A Comments and Response Report has been compiled which reflects the outcomes of the total public participation process - refer to the table below. Copies of the comments received are attached as appendices to this report. The summary of comments received, responses thereto and any other representations during public participation are included in this table.

.

8.3 Summary of issues raised by I&AP's

(Complete the table summarizing comments and issues raised and reaction to those responses)

INTERESTED AND AFFECTED PARTIES List the names of persons consulted in this column, and mark with an **X** where those who must be consulted were in fact consulted		**DATE COMMENTS RECEIVED**	**ISSUES RAISED**	**EAP's RESPONSE TO ISSUES AS MANDATED BY THE APPLICANT**	**SECTION AND PARAGRAPH REFENCE** in this report where the issues and or response were incorporated
AFFECTED PARTIES					
Landowner/s	**X**				
Kalkfontein Farm: Landowner G. H Faber	X A notification letter was hand delivered to the owner	The MHI form of public comments or objections was received from the landowere	No issues or objections were raised against the prospecting	No objection was made against the request	-
Lawful occupiers/s of the land			-	-	-
Landowners or lawful occupiers on adjacent properties					
			-	-	-
			-	-	-
Municipal councilor					
Municipality	X		-	-	-
Notification letter was hand delivered to Office of the the Municipal Manger of Ga-Segonyane informing the Council of the prospecting application and inviting comments or objections	X	No objection or comments were received from the Municipality	-	-	-
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA))					

South African Heritage Resources Agency (SAHRA) – A notification letter was sent to their CEO in Cape Town	X Notification letter was sent 24/11/18	Advised Mentoza Holdings and Investments (MHI) to upload application & all documents pertaining to the Environmental Authorization Application Process on SAHRIS.	-	MHI could not upload the environmental reports because their system was non-function for a long time. The response of the SAHRA on the matter is attached.	-
SANRAL South African National Roads Agency – A notification letter was sent to their CEO in Bellvile	X Notification letter was sent 24/11/18	I have received background information about the prospecting of alluvial diamonds. May I request that you please furnish me with a locality plan indicating the nearest national road in order to determine whether SANRAL could be impacted.	-	-SANRAL is recorded in the list of I&A parties and the locality plan was sent to them as requested.	-
ESKOM – Notification letter was sent to the Land Development and Environmental Manager at their regional office in Kimberley	X Notification letter was sent 24/11/18	No objection or comments were received from the Eskom	-	-	-
TRANSNET Notification letter was sent to their The Regional Manager in Bloemfontein	X Notification letter was sent 24/11/18	No objection or comments was received form Transnet	-	-	-

Communities				
Media notice issued in the Diamond Fields Advertiser (DFA) on the 21 November 2018		No comments or objections have been received from the public		
Dept Agriculture and Land Affairs		-	-	-
Notification addressed to the Chief Director: Provincial Office in Kimberley	X Notification letter was sent 24/11/18	No comments or objections were received from the department		
Dept Water Affair		-	-	-
Notification addressed to the Chief Director: Provincial Office in Kimberley	Notification letter was sent 24/11/18	No comments or objections were received from the department		
Traditional Leaders				

	X Public notice in the DFA on the 21 November 2018	No comments or objections have been received from the traditional leaders		
Dept of Environmental Affairs		-	-	-
Notification addressed to the Head of Dept. Provincial Office in Kimberley	X Notification letter was sent 24/11/18	No comments or objections were received from the department		
Department Public Works				
Notification addressed to the Head of Dept. Provincial Office in Kimberley	X Notification letter was sent 24/11/18	No comments or objections were received from the department		
OTHER AFFECTED PARTIES				
		-	-	-
INTERESTED PARTIES				

8.4 The Environmental attributes associated with the alternatives

(The environmental attributed described must include socio-economic, social, heritage, cultural geographical, physical and biological aspects)

8.4.1 Baseline Environment

8.4.1.1 Type of environment affected by the proposed activity

(its current geographical, physical, biological, socio-economic and cultural character).

- Geographical environment:
  - Geographical location: The proposed project area is situated 20 kilometers north of the Douglas are within the Herbert magisterial district, and falls within the provincial boundaries of the Northern Cape.

  - Climate and rainfall: The weather provides hot wet summers and mild dry winters. The infrequent summer rains tend to take the form of occasional severe thunderstorms rather than prolonged soft showers. It is not unusual for winter night time temperatures to drop below freezing.

  - Geology and soils: The surface geology of the area comprises mainly of Quaternary sediments namely alluvial diamondiferous gravel, sand (red and grey aeolian sands), shale and andesite in places amygdaloidal and porphyritic with quartzite and conglomerate lenses near the bottom.

- Physical environment: The project areas and surrounding area is a relatively flat landscape with isolated kopjes and relative steep slope towards the Vaal River. The most prominent topographic altering features are irrigation land, Public Roads, canals and mining activities.

- Biological environment:
  - Fauna: The only fauna existing within the area is from livestock and / or game farming activities.

  - Flora:

Camel Thorn tree & Shepherd tree

During site visit Camel Thorn tree & Shepherd tree were identified on the proposed sites. Camel Thorn tree & Shepherd tree are a **protected tree species** under the National Forests Act No. 84 of 1998 In terms of a part of section 51(1) of Act No. 84 of 1998, no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a license granted by the Minister. In cases where the trees will need to be cut, disturbed, damaged or destroyed or possessed, collected, removed, transported, exported, purchased, sold or donated a flora permit will be applied for with the Northern Cape Department of Environmental Affairs & Nature Conservation. According to the attendees of the public meeting, the area consists of vultures (however they could not give the specific breed), hornbill birds “neushoringvoël”, Ibex “steenbok”, Camel Thorn tree & Shepherd tree.

Vaal River

The boundary of the site adjacent to the Vaal River, a suitable buffer should be clearly mapped, demarcated and maintained to protect the riparian vegetation.

Ecological habitat and landscape features

The proposed area falls within 4 vegetation units which includes SVk 4, SVk 6, AZa 4 and SVk5, known as the Kimberley Thornveld, Schmidtsdrift Thornveld, Upper Gariep Alluvial Vegetation and Vaalbos Rocky Shrubland (Mucina and Rutherford, 2006).

<u>The Kimberly Thornveld</u>,

Schmidtsdrift Thornveld and Vaalbos Rocky Shrubland is part of the Eastern Kalahari Bushveld Bioregion, which is a sub-bioregion for the Savanna Biome. While the Upper Gariep Alluvial Vegetation is part of the Alluvial Vegetation Bioregion which is a sub-bioregion for the Inland Azonal Vegetation. Kimberley Thornveld According to Mucina and Rutherford (2006:516), the Kimberley Thornveld vegetation covers the North West, Free State and Northern Cape Provinces: Most of the Kimberley, Hartswater, Bloemhof and Hoopstad Districts as well as substantial parts of the Warrenton, Christiana Taung, Boshof and to some extent the Barkley West District. This thornveld is situated on an

altitude of 1050m – 1400m. The area often has slightly irregular plains with a well-developed tree layer with *Acacia Erioloba*, *A. tortillis, A. karoo* and *Boscia albitrunca* and a well-developed shrub layer with occasional dense stands of *Tarchonanthus camphoratus* and *A. mellifera*. Grass layer open with much uncovered soil.

Schmidtsdrift Thornveld

According to Mucina and Rutherford (2006:518) the Schmidtsdrift Thornveld vegetation covers the Northern Cape, Free State and North West provinces. Footslopes and midslopes to the southeast and below the Ghaap Plateau from around Douglas in the southwest via Schmidtsdrif towards Taung in the northeast. A small less typical section is found east of the Ghaap Plateau from Warrenton towards Hertzogville. This thornveld is situated on an altitude of 1000m – 1350m. Vegetation and landscape features can be defined as mostly closed shrubby thornveld dominated by *Acacia mellifera* and *A. tortilis*. Apart from grasses, bulbous and annual herbaceous plans species are also prominent. The vegetation is sometimes very disturbed due to overgrazing by goats and other browsers.

Upper Gariep Alluvial Vegetation

According to Mucina and Rutherford (2006:639), the Upper Gariep Alluvial Vegetation covers the Free State and Northern Cape Province: Broad alluvia of the Orange River, lower Caledon as well as lower stretches of the Vaal, Riet and Modder rivers as far as Groblershoop. These river stretches are surrounded by vegetation units of broad transitional regions between the dry facies of the Savanna and Grassland and northern regions of the Nama-Karoo Biome. Altitude ranging from 1000 – 1500m. The area has flat alluvial terraces supporting complex of riparian thickets (gallery forests) dominated by native *Acacia karroo* and *Diospyros lycioides*, flooded grasslands, reed beds and ephemeral herblands populating mainly sand banks within the river and on its banks

Vaalbos Rocky Shrubland

According to Mucina and Rutherford (2006:516), the Vaalbos Rocky Shrubland covers the Northern Cape and Free State Provinces. It extends along solitary hills and scattered ridges east of the confluence of the Orange and Vaal Rivers, mainly in the Kimberley and Herbert Districts and west of a line bounded by the western Free State towns of Luckhoff, Petrusburg, Dealesville, Bultfontein and Hertzogville. This shrubland is situated on an altitude of 1000-1400m.

The vegetation and landscape features can be described as slopes and elevated hills and ridges within plains of mainly SVk 4 (Kimberley Thornveld), also in the vicinity of NKu 3 (Northern Upper Karoo). Evergreen shrub communities dominated by *Tarchonanthus camphoratus, Olea europaea* subsp. *Africana, Euclea crispa, Diospyros lycioides, Rhus burchellii* and *Buddleja saligna*. Sheltered, cool sites include trees such as *R. lancea, Celtis*

Critical Biodiversity Area

According to B-GIS "Critical biodiversity areas (CBAs) are areas of the landscape that need to be maintained in a natural or near-natural state in order to ensure the continued existence and functioning of species and ecosystems and the delivery of ecosystem services", therefore the purpose of CBA's is simply to indicate spatially the location of critical or important areas for biodiversity in the landscape.
According to the figure 6, the Namakwa District is the only district municipalities which have CBA maps in the Northern Cape. Thus there is no CBD for Pixley Ka Seme District Municipality within whose jurisdiction the proposed mining right application falls.

Wetland Areas
Wetland is defined as land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil (from the South African National Water Act; Act No. 36 of 1998).

The proposed area is next to the river, the boundary of the prospecting area in the south is next to the Vaal river and consists of depressions, Channelled valley-bottom wetland, Unchannelled valley-bottom wetland, seep, floodplain wetland. The wetland vegetation type falls within the Eastern Kalahari Bushveld Group 3 and 5.

According to the 2013 SANBI Biodiversity Series 22 a Depression is a wetland or aquatic ecosystem with closed (or near-closed) elevation contours, which increases in depth from the perimeter to a central area of greatest depth and within which water typically accumulates. Although they may at times have a river flowing into or out of them, depressions are especially characterised by their closed (or at least near-closed) contour shape, which makes them relatively easy to identify on topographic maps. Channelled valley-bottom wetland is a valley-bottom wetland with a river channel running through it. It is characterised by their position on valley floors and the absence of

characteristic floodplain features and the presence of a river channel flowing through the wetland. Dominant water inputs to these wetlands are from the river channel flowing through the wetland, either as surface flow resulting from flooding or as subsurface flow, and/or from adjacent valley-side slopes.

Floodplain wetland is a wetland area on the mostly flat or gently-sloping land adjacent to and formed by an alluvial river channel under its present climate and sediment load, which is subject to periodic inundation by overtopping of the channel bank. They generally occur on a plain and are typically characterised by a suite of geomorphological features associated with river-derived depositional processes, including point bars, scroll bars, oxbow lakes and levees. Floodplain wetlands must be considered as wetland ecosystems that are distinct from but associated with the adjacent river channel itself, which must be classified as a 'river'.

Land capability and agricultural potential

Climate and water availability

Kimberley normally receives about 283mm of rain per year, with most rainfall occurring mainly during summer. The chart below (lower left) shows the average rainfall values for Kimberley per month. It receives the lowest rainfall (0mm) in July and the highest (59mm) in March. The monthly distribution of average daily maximum temperatures (centre chart below) shows that the average midday temperatures for Kimberley range from 18°C in June to 32°C in January. The region is the coldest during July when the mercury drops to 0.3°C on average during the night. Consult the chart below (lower right) for an indication of the monthly variation of average minimum daily temperatures.

- •
- Agricultural / land capability

Land capability is the combination of soil suitability and climate factors. The site and surrounds has a land capability classification, on the 8 category scale, of Class 7 non-arable, which is limited to grazing, woodland or wildlife. The site has very severe limitations that makes it unsuited to cultivation and that restrict its use largely to grazing, woodland or wildlife

- Socio-economic environment: Current Socio-economic conditions are typical of economical and sustained farming activities.

  Job opportunities are sparse within the town and region leaving many individuals unemployed without an income to support his/her family even a basic survival level.

- Cultural environment: The cultural environment of the proposed project area can be described as a farming community with their everyday norms.

8.4.1.2 Description of the current land uses

The current land uses of the project area and surrounding areas can be best described as agricultural farm land as well as livestock and / or game farming.

8.4.1.3 Description of specific environmental features and infrastructure on the site

Specific environmental features and / or infrastructure occur on site or within close proximity include:

- Agricultural land
- Canal
- Eskom Power cable
- Farm buildings
- Farm dams
- Public gravel road
- Reservoirs
- provincial road
- Water borehole

8.4.1.4 Environmental and current land use map

(Show all environmental and current land use features)
(**See attached copy**)

8.5 Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts may occur

(Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impacts of such activities, and as informed by the consultations with affected parties together with the significance, probability and duration of the impacts. Please indicate the extent to which they can be reversed, the extent to which they may cause irreplaceable loss of resources, and can be avoided, managed or mitigated)

ACTIVITY	DESCRIPTION	Se	D	SP	C	P	Si
1. CONSTRUCTION PHASE IMPACTS							
Road construction	Loss of vegetation + habitat	M	L	L	M	H	L
Escom line	Loss of vegetation + habitat	NOT APPLICABLE					
Plant construction	Loss of vegetation + habitat	M	L	L	L	H	M
Pipeline installation	Loss of vegetation + habitat	L	L	L	L	M	L
Offices	Loss of vegetation + habitat	M	L	L	L	M	L
2. OPERATIONAL PHASE IMPACTS							
Prospecting	Geological degradation	L	L	L	L	M	M
Disposal	Topographic change - dump	M	L	L	L	H	L
Prospecting	Topographic change - pit	H	L	L	M	H	M
Prospecting	Soil pollution - accidental spills and leakages	H	L	L	H	M	H
Operation	Soil pollution (workshop, store, parking)	H	L	L	H	M	H
Operation	Loss of grazing	M	L	L	L	H	L
Operation	Loss of/ disturbance to plants	M	L	L	M	H	L
Extraction of groundwater	Depressed water table	NOT APPLICABLE					
Operation	Problem plant invasion	M	L	M	L	M	H
Operation	Effect on animals	M	L	L	L	M	L
*Waste water disposal	Water regime (regional)	H	L	L	M	L	M
Prospecting	Noise (earth moving equipment and crushers)	L	L	L	L	L	L
Operation	Air quality: Dust - Transport	M	L	L	L	M	L
Operation	Air quality: Dust - Crusher	M	L	L	L	M	L
Prospecting	Noise - blasting nuisance - regional	NOT APPLICABLE					
Prospecting	Noise - blasting nuisance -personnel	NOT APPLICABLE					
Prospecting, operation	Loss of archaeological items	H	L	L	H	L	H
Prospecting	Sensitive landscapes	H	L	L	M	L	M
Mining	Visual impact	L	L	L	L	M	L
3. DECOMMISSIONING PHASE IMPACTS							
Demolition	Waste disposal	POSITIVE					
Rehabilitation	Re-vegetation	POSITIVE					
4. RESIDUAL IMPACTS AFTER CLOSURE							
Vacated site	Rehabilitation of exposed areas	POSITIVE					
Vacated site	Safety risks	POSITIVE					

ACTIVITY	DESCRIPTION	Se	D	SP	C	P	Si
1. CONSTRUCTION PHASE IMPACTS							
Road construction	Loss of vegetation + habitat	M	L	L	M	H	L
Escom line	Loss of vegetation + habitat	NOT APPLICABLE					
Plant construction	Loss of vegetation + habitat	M	L	L	L	H	M
Pipeline installation	Loss of vegetation + habitat	L	L	L	L	M	L
Offices	Loss of vegetation + habitat	M	L	L	L	M	L
2. OPERATIONAL PHASE IMPACTS							
Prospecting	Geological degradation	L	L	L	L	M	M
Disposal	Topographic change - dump	M	L	L	L	H	L
Prospecting	Topographic change - pit	H	L	L	M	H	M
Prospecting	Soil pollution - accidental spills and leakages	H	L	L	H	M	H
Operation	Soil pollution (workshop, store, parking)	H	L	L	H	M	H
Operation	Loss of grazing	M	L	L	L	H	L
Operation	Loss of/ disturbance to plants	M	L	L	M	H	L
Extraction of groundwater	Depressed water table	NOT APPLICABLE					
Operation	Problem plant invasion	M	L	M	L	M	H
Operation	Effect on animals	M	L	L	L	M	L
*Waste water disposal	Water regime (regional)	H	L	L	M	L	M
Prospecting	Noise (earth moving equipment and crushers)	L	L	L	L	L	L
Operation	Air quality: Dust - Transport	M	L	L	L	M	L
Operation	Air quality: Dust - Crusher	M	L	L	L	M	L
Prospecting	Noise - blasting nuisance - regional	NOT APPLICABLE					
Prospecting	Noise - blasting nuisance -personnel	NOT APPLICABLE					
Prospecting, operation	Loss of archaeological items	H	L	L	H	L	H
Prospecting	Sensitive landscapes	H	L	L	M	L	M
Mining	Visual impact	L	L	L	L	M	L
3. DECOMMISSIONING PHASE IMPACTS							
Demolition	Waste disposal	POSITIVE					
Rehabilitation	Re-vegetation	POSITIVE					
4. RESIDUAL IMPACTS AFTER CLOSURE							
Vacated site	Rehabilitation of exposed areas	POSITIVE					
Vacated site	Safety risks	POSITIVE					

8.6 Methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks

(Describe how the significance, probability and duration of the aforesaid identified impacts that were identified through the consultation process were determined in order to decide the extent to which the initial site layout needs revision).

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

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

SEVERITY

- *Low negative impact* (indicates a state of 'calmness' concluding that the effect the operations may have on the environment is so insignificant that the wellbeing of the environment or any individual will not be degraded or prohibited.)

- *Medium negative impact* (describes as state of 'manageable stress', giving the idea of that the effect of the operations on the environment is significant enough to cause tolerable disturbance to the wellbeing or overall conditions of the environment or any individual.)

- *High negative impact* (indicating a state of 'high stress', meaning that the effect of the operations on the environment is so significant that the wellbeing and overall conditions of the environment or any individual will be degraded or prohibited.)

DURATION

- *Short-term* (short-term duration is rated as a period less than two years and indicated as a low impact.)

- *Medium-term* (medium-term impact is rated as the period between 2 and 5 years and indicated as a medium impact.)

- *Long-term* (long term impact is rated as the any period exceeding 5 years and indicated as a high impact.)

SPATIAL SCALE

- *Localized* (the disturbance occurs within a radius of 500 m from point of existence and indicated as low impact)

- *Fairly widespread* (the disturbance is carried over a short distance, between 500 m and 1 km radius from point of existence and indicated as medium impact)

- *Widespread* (disturbance exercise a negative affect over an area greater than 1 km radius from point of existence and indicated as high impact.)

CONSEQUENCE - *Low consequence* (meaning that the probability of cumulative impact occurrence is minimal with little to no lasting effects and is indicated as low impact)

- *Medium consequence* (meaning that the probability of cumulative impact occurring exists with a moderate, short-term lasting effect and is indicated as medium impact.)

- *High consequence* (meaning that the probability of cumulative impact occurrence is absolute with a short to medium-term lasting effect and indicated as high impact)

SIGNIFICANCE - *Low overall significance* (the disturbance caused by the impact is minimal with an excellent probability for total recovery after operations ceased.)

- *Medium overall significance* (the disturbance caused by the impact is moderate with a good chance for total recovery over an intermediate period after operations ceased.)

- *High overall significance* (the disturbance caused by the impact is severe with a poor to no probability for recovery after operations ceased.).

LEGEND FOR TABLES

Se	-	Severity	D	-	Duration
SP	-	Spatial Scale	P	-	Probability
Si	-	Significance	L	-	Low negative impact
H	-	High negative impact	M	-	Medium negative impact

8.7 The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternatives will have on the environment and the community that may be affected.

(Provide a discussion in terms of advantages and disadvantages of the initial site layout compered to alternative layout options to accommodate concerns raised by affected parties)

The proposed prospecting operations and current proposed site plan shows to have an overall medium to low negative impact on the property. Any alterations to the site layout or prospecting and prospecting related activities may result in a lesser significant impact on the environment, but not significant enough to consider alterations.

The residing farm owner and surrounding residing farm owners may be minimally influenced by the prospecting operations in regard to noise, air quality loss and grazing field loss. After considering alternative processes and site layout, these alterations did not proof any significant minimization of the impacts affecting the farming activities and residing individuals. It is rather recommended that more strict implementation and adherence to the mitigation measures

8.8 The possible mitigation measures that could be applied and the level of risk

(With regard to the issues and concerns raised by affected parties proved a list of the issued raised and an assessment / discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered)

The impacts will be assessed according to the criteria outlined in the following paragraphs, which is largely based on Department of Environmental Affairs' Guideline document: EIA Regulations. Issues of concern are broken down into Biophysical and Socio and Cultural impacts that include economic considerations. The issues that have been identified have been determined through various site visits, stakeholder engagements, consultation of published information and brainstorming amongst the consultants. Each issue is ranked according to extent, duration, magnitude and probability. From these criteria, a significance rating is obtained, the method and formula is described below. Where possible, mitigation recommendations have been made and are presented in tabular form.

Status of Impact

The impacts are to be assessed as either having a:

- negative effect (i.e. at a `cost' to the environment),
- positive effect (i.e. a `benefit' to the environment), or
- neutral effect on the environment

Extent of the Impact

- (**1**) Site (i.e. within the boundaries of the site),
- (**2**) Local (i.e. the area within 5 km of the site),
- (3) Municipal (i.e. the municipal area the site falls into Douglas)
- (**4**) Provincial (i.e. Northern Cape),
- (**5**) National (i.e. South Africa), or
- (**6**) International (i.e. Southern Africa).

Duration of the Impact

The length that the impact will last for is described as either:

- (**1**) immediate (>1 year)
- (**2**) short term (1-5 years),
- (**3**) medium term (6-15 years),
- (**4**) long term (the impact will cease after the operational life span of the project),
- (**5**) permanent (no mitigation measure of natural process will reduce the impact after construction).

Magnitude of the Impact

The intensity or severity of the impacts is indicated as either:

- (**0**) none (where the aspect will have no impact on the environment),
- (**2**) Minor (where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected),

- (**4**) Low (where the impact affects the environment in such a way that natural, cultural and social functions and processes are slightly affected),
- (**6**) Moderate (where the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way),
- (**8**) High (where natural, cultural or social functions or processes are altered to the extent that it will temporarily cease), or
- (**10**) Very high / don't know (where natural, cultural or social functions or processes are altered to the extent that it will permanently cease).

Probability of Occurrence

The likelihood of the impact actually occurring is indicated as either:

- (**0**) None (the impact will not occur),
- (**1**) improbable (the possibility of the impact materialising is very low as a result of design, historic experience, or implementation of adequate corrective actions)
- (**2**) low probability (there is a possibility that the impact will occur),
- (**3**) medium probability (the impact may occur),
- (**4**) high probability (it is most likely that the impact will occur), or
- (**5**) definite / don't know (the impact will occur regardless of the implementation of any prevention or corrective actions, or you don't know what the probability will be based on too little published information).

Significance of the Impact

Based on the information contained in the points above, the potential impacts are assigned a significance weighting (**S**). This weighting is formulated by adding the sum of the numbers assigned to extent (**E**), duration (**D**) and magnitude (**M**) and multiplying this sum by the probability (**P**) of the impact.

$$S= (E+D+M) P$$

The significance weightings are given below:

- (**<30**) low (i.e. where this impact would not have a direct influence on the decision to develop in the area),
- (**30-60**) medium (i.e. where the impact could influence the decision to develop in the area unless it is effectively mitigated),

(**>60**) high (i.e. where the impact must have an influence on the decision process to develop in the area).

Briefly describe and compare the potential impacts (as appropriate), significance rating of impacts, proposed mitigation and significance rating of impacts after mitigation that are likely to occur as a result of the construction phase for the various alternatives of the proposed development. This must include an assessment of the significance of all impacts.

3.1 CONSTRUCTION PHASE

The issues that have been identified during the construction stage of the development are as follows.

Site camp will be having a negative impact during pre-construction phase, as all construction material and machinery will bring on site. If a constructor bring many material and tractor activities on site at same time it will increase the negative impact on the site.

Issue	**Corrective measures**	**Site Camp**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Site Camp	No	Site (1)	Negative	immediate (1)	Low (4)	Low probability (2)	**Low (12)**
	Yes	Site (1)	Negative	Immediate (1)	Minor (2)	Low probability (2)	**Low (8)**
Corrective Actions	• No accommodation, temporary or otherwise, is allowed at facilities; • Site camps shall be located generally as designated in the Site Layout Plan. The exact location per site shall be to the approval of the ECO and shall at all times be located in disturbed areas, preferably using old or existing sites and in close to existing facilities wherever possible. No site camp may be situated on any area demarcated as sensitive or restricted; • Site camps shall be properly fenced and adequately demarcated; • No domestic animals are allowed on the site; • No uncontrolled cooking facilities are permitted, in the field or working area; • No open fires are permitted in the field.						

3.1.2 Vegetation

During pre-construction phase. Vegetation cover will be removed due to site clearance. Considering that the proposed project is located on an area zoned for residential and it is an infill development, vegetation such as grass species will be removed. However, those plant species that can be accommodated on the project design will not be removed; they will rather form part of the landscaping after the construction phase.

Issue	**Corrective measures**	**vegetation**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Vegetation	No	Site (1)	Negative	Permanent (5)	Low (4)	Definite(5)	**Medium (45)**
	Yes	Site (1)	Negative	Permanent (5)	Minor (2)	Definite (5)	**Medium (35)**
Corrective Actions	• Site Camp will be rehabilitated, Therefore the site cannot be rehabilitated to its original condition; the impact would persist through all phases' construction development. • Vegetation will be removed on the area that construct want to work on it,(Footprint of the Garden site only) • Removal on vegetation on other area will be avoided						

3.1.3 Soil

3.1.3.1 Loss of resources

During construction phase, the soils underlying the proposed stockpile are and other related infrastructure will be disturbed. However, topsoil is a resource of high conservation value to current and future generations. It is a gene bank containing seeds of indigenous species and forms the growing medium for plants, flowers and trees. It is usually nutrient rich and has a good texture for plant growth. It is therefore an important medium for the successful rehabilitation of disturbed land and is a valuable part of the environmental system. These soils will require stripping and stockpiling for future use and rehabilitation.

Issue	**Corrective measures**	**Loss of soil**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Loss of soil	No	Site (1)	Negative	Short term(2)	Low(4)	Definite(5)	**Medium (35)**
	Yes	Site (1)	Negative	Immediate (1)	Minor (2)	Definite (5)	**Low(20)**
Corrective Actions	• Topsoil up to a maximum of 30 cm should be removed before the construction activities; • Soil heaps should not be higher than 1,5 metres; • Soil heaps must be covered to prevent wind and water erosion; • Topsoil (up to a maximum of 30 cm) that is removed must be stockpiled for re-use in subsequent landscaping activities; • The topsoil should be stockpiled separately from the subsoil and construction materials; • No remnants of stockpiles have been left in positions or states that may be eroded during and after construction						

3.1.3.2 Soil Contamination/Pollution

Potential soil pollution could result from the release, accidental or otherwise, of chemicals, oils, fuels, sewage, wastewater containing cement and concrete waste, detergents, solid waste, litter and other such substances. Rainwater running into exposed areas containing cement, oil, diesel and other such substances could also result in soil pollution threat to site and adjacent properties. However, this type of pollution can be avoided if mitigation strategies are put in place and implemented.

Issue	**Corrective measures**	**Soil Contamination/Pollution**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Soil Contamination/Pollution	No	Site (1)	Negative	Short term(2)	Low (4)	Low Probability (2)	**Low (14)**
	Yes	Site (1)	Negative	Immediate(1)	Minor (2)	Improbability (1)	**Low (4)**

Corrective Actions	• Major spillage incidents (i.e. chemicals, oils, diesel, etc.) should be reported to the GDARD; • If spills do occur and soils become contaminated, the appropriate remedial measures will be identified in consultation with an appropriately qualified specialist • Ensure that rainwater does not run into fuel storage areas and other such substances as this could result in a pollution threat to sensitive environmental areas; • Fuel storage areas must be placed on high lying ground and contain a banded area in case of a spill;

3.1.4 Erosion

During construction phase, all land at the site will be susceptible to erosion when the vegetation cover and top soil is removed. Natural gradients at the site are not significant but the soils have low clay content and thus are not cohesive.

Issue	**Corrective measures**	**Erosion**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Erosion	No	Site (1)	Negative	Short term (2)	Low (4)	Low Probability (2)	**Low (14)**
	Yes	Site (1)	Negative	Immediate (1)	Minor (2)	Improbability (1)	**Low (4)**
Corrective Actions	• Berms must be constructed to direct all runoff into the storm water system; • A temporal storm water channel for unexpected rains during construction must be prepared, these includes silt fences, brushwood, and rows of sawdust-filled onion bags; • Runoff from the site itself must be free from oil, waste and litter before joining the stormwater system. This must be ensured by securing any containers containing hazardous substances, so that it cannot enter runoff, and by cleaning up any refuse and construction material from the site on a regular basis. • Litter management in the storm water system must be implemented;						

3.1.5 Fauna and Flora

There is no fauna and Flora special found in the area. As the area is vacant space between the residential areas and the community move through the area as a displacement.

3.1.6 Alien Plant Invasion

Construction activities at the proposed project area could encourage spread of alien invader plant species via imported material and construction vehicles. This is a potentially significance at the site, and it could be cumulative and prevail beyond the operational phase if not managed properly

Issue	**Corrective measures**	**Alien Plant Invasion**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Alien Plant Invasion	No	Site (1)	Negative	Short term(2)	Low (4)	Probability(2)	**Low (14)**
	Yes	Site (1)	Negative	Immediate(1)	Minor (2)	Improbability (1)	**Low (4)**
Corrective Actions	• Ensure that no foreign material is brought (e.g. seed or invasive alien plants) onto the site						

3.1.7 Noise

The level of the noise will depend on the type of machinery and the size of the construction vehicles that will be brought on the site.

Noise is a definite issue that has to be taken into account during a construction phase. The type of the project and the area in which the projects takes place will have different impacts. Probably the two most important concepts in the regulation of noise is the determination of a *disturbing noise* and *noise nuisance*.
A **disturbing noise** is one that exceeds the zone sound level as set by the local authority and if not set, then any noise which exceeds the ambient sound level at the same measuring point by 7dBA or more.
A **noise nuisance** means any sound, which disturbs or impairs or may disturb or impair the convenience or peace of persons.

Issue	**Corrective measures**	**Noise**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Noise	No	Site (1)	Negative	Short term (2)	Low (4)	medium probability (3)	**Low (21)**
	Yes	Site (1)	Negative	Immediate (1)	Minor (2)	Low probability (2)	**Low (8)**
Corrective Actions	• All reasonable measures must be taken to minimize noise generated on site. • Construction vehicles must be kept in good working condition to prevent excessive noise • Surrounding residents must be notified of any disturbance noise such as blasting. • Cement and concrete must be mixed away from the residential area.						

3.1.8 Visual Impact

During the construction phase the presence of construction personnel and equipment may create visual impacts the area is not accustomed to. In addition, earthworks must be limited to the area that is to undergo construction work in the immediate future thereby limiting the amount of exposed ground at any particular point in time, which additionally will mitigate against soil erosion and dust pollution. The significance of the visual impact of the proposed development during construction is therefore considered to be low.

Issue	**Corrective measures**	**Visual impact**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Visual	No	Site (1)	Negative	Permanent (5)	High (8)	Definite (5)	**High (70)**
	Yes	Site (1)	Negative	Permanent (5)	Moderate (6)	Definite (5)	**Medium (60)**
Corrective Actions	• The absolute minimum amount of vegetation and topsoil should be removed from construction site. • When top soil is stored, it shouldn't be more than 1 and half metres high. • Use of bright colours must be avoided.						

3.1.9 Impact on Areas of Historical/Cultural Significance

No archaeological sites have been uncovered on this site. If further archaeological sites are exposed during construction work, work must be halted and it should immediately be reported to a Museum and South African Heritage Resources Agency (SAHRA).

Any archaeological or heritage artefacts or sites that may be uncovered during construction must be reported to the Environmental Control Officer, who must in turn enlist the services of a suitably qualified heritage specialist to examine the site. The bricks from the sandstone structure should be salvaged by a heritage organization for future display

3.1.10 Water (Ground and surface water pollution)

They will be very little production of effluent from the construction phase of the proposed development.

Issue	**Corrective measures**	**Ground and surface water pollution**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Ground and surface water	No	Site (1)	Negative	Immediate (1)	Low (4)	Low probability (2)	**Low (12)**
	Yes	Site (1)	Negative	Immediate (1)	Minor (2)	Improbable (1)	**Low (4)**
Corrective Actions	• Adequate measures are to be taken during construction to manage storm water runoff. • Erosion control measures must be implemented during the construction phase.						

	• Construction must be inspected for any leakages of fuel. • Construction vehicles must not be fixed or serviced on site. • Temporary ablution facilities must be provided for the construction team.

3.1.11 Dust Impact

Insignificant amounts of dust are anticipated from the construction of the proposed project. Considering the nature of the soils in this area, the impact of dust will be limited to the site and it will be improbable to occur is appropriate, dust suppression methods will be used.

Issue	**Corrective measures**	**Dust impact**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Dust	No	Site (1)	Negative	Immediate (1)	Low (4)	High probability (4)	**Low (16)**
	Yes	Site (1)	Negative	Immediate (1)	Minor (2)	Improbable (1)	**Low (4)**
Corrective Actions	• All exposed surfaces subjected to dust generation must be managed with appropriate dust suppression methods, such as spraying water before disturbing the ground. • Unnecessarily exposed surfaces should be rehabilitated after the construction period.						

3.1.12 Air Quality

Aspects associated with the construction phase will definitely cause dust deposition to the area. Vehicles entrainment of dust from construction sites represents a relatively large source of fugitive dust emissions.

Issue	**Corrective measures**	**Air Quality**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Air Quality	No	Local (2)	Negative	Short term (2)	Low (4)	Low probability (2)	**Low (16)**
	Yes	Local (2)	Negative	Immediate (1)	Minor (2)	Improbability (1)	**Low (5)**
Corrective Actions	*Debris handling* • Wind speed reduction through sheltering and wet suppression *Vehicles transport* • Wet suppression *Dust entrainment* • Reduction of unnecessary traffic and strict speed control • Wet material being hauled *Materials storage, handling and transfer operations* • Wet suppression *General construction* • Wind speed reduction, wet suppression & early paving of permanent parking *Open areas (wind-blown emissions)*						

	• Early re-vegetation, compaction and stabilization of disturbed soil, Reduction of frequency of disturbance • A speed limit of 40km/h must not be exceeded on site. • Vegetation retention should be reduced the dust travel. • All excavations and site clearance should only be done during agreed working times. *Fire prevention* • Open fires shall not be allowed on site. • All cooking shall be done in demarcated areas that are approved by the ECO. • The contractor shall ensure that there is adequate operational fire-fighting equipment on site.

3.1.13 Waste

Waste is anticipated from the construction of the proposed project .Waste shall be identified and be separated into recyclable and non recyclable waste, these includes: Hazardous waste, General waste and reusable construction material. Waste generated from the operational phase will not be directly linked to the proposed project.

Issue	**Corrective measures**	**Waste**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Waste	No	Site(1)	Negative	Permanent (5)	Low (4)	Definite (5)	**Medium (50)**
	Yes	Site (1)	Negative	Permanent (5)	Low (4)	Definite (5)	**Medium (50)**
Corrective Actions	*Refuse* • The contractor shall ensure that all refuse is disposed off by him/her and the sub-contractors' employees into the refuse bins supplied and arrange to be emptied on a daily basis. These bins must be adequate in number and accessibility. • Refuse bins shall be watertight, wind-proof and scavenger proof and shall be appropriately placed throughout the site and shall also be conspicuous (e.g. painted bright yellow). Refuse must also be protected from rain, which may cause pollutants to leach out; • Refuse may not be burned or buried on or near the site						

3.2 OPERATION PHASE

3.2.1 Vegetation

No impact on the vegetation during operation phase of the garden site. Once construction is complete, rehabilitation (e.g. the planting of indigenous vegetation) of all un-built areas must be undertaken in order to restore

the aesthetic and ecological value of the area. Only indigenous vegetation should be utilised for the rehabilitation of disturbed areas, no mitigation measures has been provided for this aspect in this section.

3.2.2 Soil

During operation (completion of the development) care should be taken not to let sewage leaks (and to a lesser degree water leaks) continue for more than one or two hours (reasonable time for detection and implementation of a clean-up plan). All designs should be in accordance with the Guidelines for Human Settlement, Planning and Design (CSIR & Construction Technology, 2000). The garden site will be tarred and have a storm water channel, therefore, no soil contamination will be occur, no mitigation measures has been provided for this aspect in this section.

3.2.3 Erosion

No soil erosion expected to be occurring as the garden site it will be tarred and stormwater management will be in place. Therefore, no mitigation measures have been provided in this section.

3.2.4 Fauna and Flora

There is no fauna and Flora special found in the area. As the area is vacant space between the residential areas and the community move through the area as a displacement.

3.2.5 Alien Plant Invasion

After rehabilitation and landscaping, any alien plant invasion will be cleared from the entire site, Species that are declared invasion species (according to the Conservation of Agriculture Resources Act (Act 43 of 1983) must be removed form the site.

Issue	**Corrective measures**	**Alien Plant Invasion**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Alien Plant Invasion	No	Site (1)	Negative	Short term (2)	Low (4)	Probability 2)	**Low (14)**
	Yes	Site (1)	Negative	Immediate(1)	Minor (2)	Improbability (1)	**Low (4)**
Corrective Actions	• Ensure that no foreign plant (e.g. invasive alien plants) are growing up on the site						

3.2.6 Noise

Vehicles will make noise during the daily basis when they come to drop and collect the waste in garden, specially the vehicles that are not in good condition.

Issue	**Corrective measures**	**Noise**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Noise	No	Site (1)	Negative	Permanent (5)	Low (4)	High probability (4)	**Medium (40)**

	Yes	Site (1)	Negative	Permanent (5)	Minor (2)	Low probability (2)	**Low (14)**
Corrective Actions	• All reasonable measures must be taken to minimize noise generated on site. • Vehicles must be kept in good condition to prevent excessive noise • Surrounding residents must be notified of any disturbance noise. • No vehicles will be service on the place.						

3.2.7 Visual Impact

During the operational phase and after construction complete, the garden site will create visual impacts to the area.

Issue	**Corrective measures**	**Visual impact**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Visual	No	Site (1)	Negative	Permanent (5)	Low (4)	Definite (5)	**Medium (50)**
	Yes	Site (1)	Negative	Permanent (5)	Minor (2)	Definite (5)	**Medium (40)**
Corrective Actions	• Planting of trees will minimize the visual impact. • Use of bright colours must be avoided.						

3.2.8 Impact on Areas of Historical/Cultural Significance

No archaeological sites have been uncovered on this site. If further archaeological sites are exposed during construction work, work must be halted and it should immediately be reported to a Museum and South African Heritage Resources Agency (SAHRA).

3.2.9 Water (Ground and surface water pollution)

They will be very little production of effluent from the operational phase of the proposed development. Storing of waste will end up with pollution the water and servicing of vehicles on site will end up with oil spillage and will also pollute the water.

Issue	**Corrective measures**	**Ground and surface water pollution**					**Significance**
		Nature	Status	Duration	Magnitude	Probability	
Ground and surface water	No	Local (2)	Negative	Permanent (5)	Low (4)	Low probability (2)	**Low (24)**
	Yes	Local (2)	Negative	Permanent (5)	Minor (2)	Improbable (1)	**Low (9)**
Corrective Actions	• Stormwater management will be on place • All vehicles must not be fixed or serviced on site to avoid oil spillage.						

3.2.10 Dust Impact

No dust expected to be occur during operational phase as the garden site will be tarred, therefore, if occurs from storing waste material, dust suppression methods will be used.

Issue	Corrective measures	Dust impact					Significance
		Nature	Status	Duration	Magnitude	Probability	
Dust	No	Site (1)	Negative	Permanent (5)	Low (4)	Low probability (2)	**Low (18)**
	Yes	Site (1)	Negative	immediate (1)	Minor (2)	Improbable (1)	**Low (4)**
Corrective Actions	• All waste material subjected to dust generation must be managed with appropriate dust suppression methods						

3.2.11 Air Quality

No air quality is expected from the operational phase

3.2.12 Waste

Storing of different waste in one place or storing for long time will end up with emission or cumulative the pollution.

Issue	Corrective measures	Waste					Significance
		Nature	Status	Duration	Magnitude	Probability	
Waste	No	Site (1)	Negative	Short term (2)	Low (4)	Low probability (2)	**Low (14)**
	Yes	Site (1)	Negative	Immediate (1)	Minor (2)	Improbability (1)	**Low (4)**
Corrective Actions	• Always there will be a person on the gate to identified the waste material are the same as that a listed to be stored on site • Security office will always on the gate to identify all the waste that they vehicles are carrying. • Waste material that will be stored will be identified and be separated into recyclable and non-recyclable waste.						

i) The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternatives will have on the environment and the community that may be affected (Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties)

During the operational stages of the mining operation, there is a possibility of **sterilisation of the mineral reserves** and resources due to improper placement of infrastructure. The infrastructure and stockpiles/dumps will alter the **topography** by adding features to the landscape. Topsoil removal and excavations will unearth the natural topography. The construction of infrastructure and various facilities in the mining area can also result in loss of soil due to erosion. **Vegetation** will be stripped in preparation for placement of infrastructure and excavations, and therefore the areas will be bare and susceptible to erosion.

The **topsoil** that is stripped and piled on surrounding areas can be eroded by wind and rain. The soil will be carried away during runoff. The cleared areas will be rehabilitated, but full restoration of soils might only occur over a number of years, subsequent to the re-establishment of vegetation. Furthermore, improper stockpiling and soil compaction can result in soil sterilisation. Leaching can also occur, resulting in the loss of nutrients.

There is also a possibility that equipment might leak oil, thus causing surface spillages. The hydrocarbon soil contamination will render the soil useless unless they are decontaminated. The storage of fuels on site might have an impact on soil if the tanks that are available on site are not properly monitored and maintained to avoid leakages. Then there is the potential that contaminated soil can be carried through runoff to contaminate water resources and soil stockpiled for rehabilitation. **Soil pollution** is therefore possible, but through mitigation it can be minimised.

The loss of **land capability and land use** can occur in two ways. Firstly, through topsoil removal, disturbances and loss of soil fertility; and secondly through the improper placement of infrastructure. Most of the site has a land capability for grazing, but grazing activities can still be performed in areas not earmarked for the operation, and with proper rehabilitation the land capabilities and land use potential can be restored.

Groundwater could be directly affected if any oil and fuel spillages occur during these scenarios and activities, then groundwater will be directly contaminated. Similarly, hazardous surface spillages will seep into the underlying aquifers and contaminate ground water. Improper handling of hazardous material will cause contamination of nearby surface water resources (pans and drainage lines) during runoff episodes. Lack of storm control structures will lead to erosion of stockpiles during heavy rains and runoff will carry suspended solids into the downstream environment. This might cause high silt load and affect stream flow. If no, or inadequate ablution facilities are available then workers might feel the need to use the veld for this purpose, which can contaminate natural resources.

Any excavations within the **pans or drainage lines** will impact on the **surface water** environment by altering their physical characteristics. These impacts include the alteration of flow patterns, ponding and an increase in the concentration of suspended solids and sedimentation. Furthermore, species eggs/seeds that usually remain dormant due to their adaptations to ephemerality, will be lost when the top biological layer of the pans are removed during excavations.

Mining activities on site will reduce the natural habitat for ecological systems to continue their operation. It is not expected that the areas of high ecological function will rehabilitate following disturbance events. It is likely that the pristine **vegetation** and any protected species will be destroyed during the operation. While general clearing of the area and mining activities destroy natural vegetation, **invasive plants** can increase due to their opportunistic nature in disturbed areas. If invasive plants establish in disturbed areas, it may cause an impact beyond the boundaries of the mining site. These alien invasive species are thus a threat to surrounding natural vegetation and can result in the decrease of biodiversity and ecological value of the area. Therefore, if alien invasive species are not controlled and managed, their propagation into new areas could have a high impact on the surrounding natural vegetation in the long term. With proper mitigation, the impacts can be substantially reduced.

The **transformation of natural habitats to mining and associated infrastructure** will result in the loss of habitat affected individual species, and ecological processes. In turn this will result in the displacement of faunal species dependent upon such habitat. Increased noise and vibration due to operational activities will disturb and possibly displace birds and other wildlife. Fast moving vehicles take a heavy toll in the form of road kills of small mammals, birds, reptiles, amphibians and a large number of invertebrates. Associated infrastructure will result in the loss of connectivity and fragmentation of natural habitat.

Fragmentation of habitat will lead to the loss of migration corridors, in turn resulting in degeneration of the affected population's genetic make-up. This results in a subsequent loss of genetic variability between meta-populations occurring within the study site. Pockets of fragmented natural habitats hinder the growth and development of populations.

During the operation the abovementioned activities have potential for **dust generation**. It is anticipated that the extent of dust emissions would vary substantially from day to day depending on the level of activity and the specific operations. The operation will typically have low to moderate levels of **noise**, along with man-influenced sounds such as traffic on the secondary road, activities on the farm and very occasional air traffic. The proposed operation will add a certain amount of noise to the existing noise in the area.

The impact of site generated trips on the traffic and infrastructure of the existing **roads** is expected to be moderate. Furthermore, if road safety is not administered it can have a high impact on the safety of fellow road users.

The activities on site have the potential to impact upon **heritage resources**. Heritage sites are fixed features in the environment, occurring within specific spatial confines. Any impact upon these resources will be permanent and irreversible. Any movement of vehicles, equipment or personnel through areas containing these artefacts could result in the permanent destruction of the artefacts and loss of heritage resources.

The operation will create a number of **new employment opportunities and uplift the local community**. The magnitude of this impact will depend on the number of people that will be employed and the number of contractors sourced. An influx of people into the area could possibly impact on safety and security of local farm residents. During the decommissioning and at closure of the site, staff will most likely be retrenched, resulting in people being unable to find new employment for a long period of time.

Economic slump of the local towns after site closure is not considered to be an associated potential impact, because there are other mining operations in the region. However, income streams from wage bills as well as goods and services contracts (at all geographical levels) will come to an end, reducing the monetary income of individuals and operation-related businesses.

It is likely, however that there will be residual **positive economic impacts** that are not fully reversed with the closure of the site, and that the economy will not decline to its original level prior to the development of this project. This is because the operation will generate substantial income for the regional and local economy, both directly and indirectly, during its life.

ii) The possible mitigation measures that could be applied and the level of risk

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered)

Geology and mineral resource

Level of risk: Very low

Mitigation measures

- Ensure that **optimal use** is made of the available mineral resource through proper planning.
- The **mine blocks should be delineated** first and all infrastructure positions should be selected with the main aim of avoiding sterilization of future resources.
- No dumping of materials prior to approval by mine manager.

Topography

Level of risk: Medium - Low

Mitigation measures

- **Backfill** all excavations continuously with overburden and waste bricks, if possible, otherwise when they become available;
- Employ effective **concurrent rehabilitation strategies** to restore surface topography of excavations and plant site;
- Stabilise the mine residue deposits;
- All infrastructure should be demolished during closure.

Soil erosion

Level of risk: Low

Mitigation measures

- At no point may plant cover be removed within the **no-development zones and buffers**;
- All attempts must be made to avoid exposure of dispersive soils;
- **Re-establishment of plant cover** on disturbed areas (active seeding programme) must take place as soon as possible, once activities in the area have ceased;
- **Ground exposure should be minimised** in terms of the surface area and duration, wherever possible;
- Construction that requires the clearing of large areas of vegetation and excavation should ideally occur during the dry season only;
- Construction during the rainy season (November to March) should be closely monitored and controlled;
- The **surface run-off** from the exposed ground should be controlled with the careful placement of flow retarding barriers;
- The **topsoi**l that is excavated during construction should be stock-piled in layers and protected by berms to prevent erosion;

- **All stockpiles** must be kept as small as possible, with gentle slopes (18 degrees) in order to avoid excessive erosional induced losses;
- Excavated and stockpiled soil material are to be stored and bermed on the higher lying areas of the footprint area and not in any storm water run-off channels or any other areas where it is likely to cause erosion, or where water would naturally accumulate;
- Stockpiles susceptible to wind erosion are to be covered during windy periods;
- **Inspections** must be carried out at regular intervals to **identify areas where erosion is occurring;**
- Appropriate remedial action, including the rehabilitation of eroded areas, must occur;
- Rehabilitation of the erosion channels and gullies;
- The mining operation should avoid land with steep slopes;
- **Dust suppression** should take place, without compromising the sensitive water balance of the area;
- Linear infrastructure such as **roads and pipelines** will be inspected at least monthly to check that the associated water management infrastructure is effective in controlling erosion;
- **Topsoil stockpiles** must be kept as small as possible in order to prevent compaction and the formation of anaerobic conditions;
- Topsoil must be stockpiled for the shortest possible timeframes in order to ensure that the quality of the topsoil is not impaired;
- Topsoil stockpiles must be kept separate from sub-soils;
- The topsoil should be replaced as soon as possible on to the backfilled areas, thereby allowing for the re-growth of the seed bank contained within the topsoil;
- **Refuelling** must take place in well demarcated areas and over suitable drip trays to prevent soil pollution;
- **Spill kits** to clean up accidental spills from earthmoving machinery must be well marked and available on site;
- **Workers must undergo induction** to ensure that they are prepared for rapid clean-up procedures;
- All facilities where **dangerous materials** are stored must be contained in a bund wall;
- **Vehicles and machinery** should be regularly serviced and maintained.

Soil pollution

Level of risk: Low

Mitigation measures

- **Refuelling** must take place in well **demarcated areas** and over suitable drip trays to prevent soil pollution.
- **Spill kits** to clean up accidental spills from earthmoving machinery must be well-marked and available on site.
- Workers must undergo induction to ensure that they are prepared for rapid clean-up procedures.

- All facilities where dangerous materials are stored must be contained in a bund wall.
- Vehicles and machinery should be regularly serviced and maintained.

Land capability and land use

Level of risk: Low

Mitigation measures

- **Ensure that optimal use is made of the available land through consultation with land owner and proper planning of mining activities**.
- **Surface agreement or purchase agreement** to be signed with land owners.
- Employ effective **rehabilitation strategies** to restore land capability and land use potential of the farm.
- All activities to be restricted within the demarcated areas.
- Ensure that land which is not used during construction is made available for grazing farming.

Ground water

Level of risk: Low

Mitigation measures

- **Training and awareness**
    - **Make all employees aware of water conservation/water demand management, water pollution avoidance and minimization measures reporting procedure and registry of incidents.**
    - Train all employees to reduce water consumption.
    - Make one (1) individual person at a management level responsible for the management of the overall mine **water balance**. Train departmental heads in the managing of water balance, water pollution and water conservation within their sectors.
    - Train all employees in the **implementation of standard operating procedures (SOP's)** (e.g. hydrocarbon management, sewerage plant management, monitoring and record keeping).
    - Arrangements shall be implemented to **support water resources**, aquatic environments, ecosystem services and conservation research efforts carried out by local, regional and national research groups in order to further knowledge and understanding of such attributes in the areas of operation.
    - Mechanisms shall be created and implemented **to provide information and raise awareness** among employees, customers and suppliers and other stakeholders to enhance knowledge and understanding of water resources, aquatic environments and conservation issues.
- Allow for a **safe working environment**
- Implement a groundwater monitoring program, which includes:
    - Groundwater levels and quality;
    - Discharge quality and volume.
- Maintain reticulation infrastructure
    - Pump maintenance and supply spares;

- Flow and level monitoring;
- Continuous inspection of the reticulation system.

Surface water

Level of risk: Low - Medium

Mitigation measures

- Sufficient care must be taken when **handling hazardous materials** to prevent pollution (Should be done according to Material Safety Data Sheet from the supplier).
- If **servicing and washing of the vehicles** occur on site, there must be specific **washbay** constructed for these activities, which must have concrete foundations, bunding as well as oil traps to contain any spillages.
- A walled concrete platform, dedicated store with adequate flooring or bermed area and ventilation must be used to accommodate chemicals such as fuels, oils, paints, herbicide and insecticides.
- **Oil residue** shall be treated with oil absorbent and this material removed to an approved waste site.
- **Spill kits** must be easily accessible and workers must undergo induction regarding the use thereof.
- At all times care should be taken not to contaminate surface water resources.
- Provide bins for staff at appropriate locations, particularly where food is consumed.
- The mining site should be cleaned daily and litter removed.
- Conduct ongoing **staff awareness programmes** in order to reinforce the need to avoid littering, which can contribute to surface water pollution.
- Only environmental friendly materials must be used during the construction phase to minimize pollution of surface water runoff and/or underground water resources.
- **Pipe leakages** should be minimized.
- **Proper clean and dirty water separation techniques** must be used to ensure uncontaminated water returning to the environment.
- Any **sediment traps** used during further construction phases should be left in place until after the first rainstorm following construction.
- **Storm water canals** must be inspected regularly and silt build up removed as and when required to ensure proper functioning of the facility.
- Non mining waste i.e. grease, lubricants, paints, flammable liquids, garbage, historical machinery and other combustible materials generated during activities should be placed and stored in a controlled manner (bins/skips/drums) in a **proper temporary bunded waste designed area.**
- The **topography** of rehabilitation disturbed areas must be rehabilitated in such a manner that the rehabilitated area blends in naturally with the surrounding natural area. This will reduce soil erosion and improve natural re-vegetation.

Indigenous flora

Level of risk: Low to medium

Mitigation measures

- **Footprint areas of the mining activities must be scanned for Red Listed and protected plant species prior to mining**;
- It is recommended that these plants are identified and marked prior to mining.
- These plants should where possible, be incorporated into the design layout and left in situ.
- However if threatened of destruction by mining these plants should be **removed (with the relevant permits from DAFF and DENC)** and relocated if possible.
- A **management plan** should be implemented to ensure proper establishment of ex situ individuals, and should include a monitoring programme for at least two years after re-establishment in order to ensure successful translocation.
- All those working on site must be **educated** about the conservation importance of the fauna and flora occurring on site.
- Minimise the **footprint** of transformation
- Encourage proper rehabilitation of mined areas
- Encourage the growth of **natural plant species** (diverse selection of natural plant species).
- Mechanical methods (hand-pulling) of control to be implemented extensively.
- Annual follow-up operations to be implemented.
- Ensure measures for the adherence to speed limit.
- Maintenance of **firebreaks**;
- No trees felled for firewood;

Alien invasive plants

Level of risk: Low

Mitigation measures

- Minimise the footprint of transformation.
- Encourage proper rehabilitation of mined areas.
- Encourage the growth of natural plant species.
- **Mechanical methods (hand-pulling) of control to be implemented extensively**.
- Annual follow-up operations to be implemented.

Fauna

Level of risk: Medium

Mitigation measures

- **Mining activities** must be planned, where possible in order to encourage (faunal dispersal) and should minimise dissection or fragmentation of any important faunal habitat type.
- The extent of the **mining area** should be demarcated on site layout plans (preferably on disturbed areas or those identified with low conservation importance). No construction personnel or vehicles may leave the demarcated area except those authorized to do so. Those areas surrounding the mine site that are not part of the demarcated development area should be considered as a no go zone for employees, machinery or even visitors.

- Appointment of a full-time **ECO** must render guidance to the staff and contractors with respect to suitable areas for all related disturbance, and must ensure that all contractors and workers undergo Environmental Induction prior to commencing with work on site.
- All those working on site must undergo **environmental induction** with regards to fauna and in particular **awareness** about not harming or collecting species such as snakes, tortoises and owls which are often persecuted out of superstition.
- All those working on site must be educated about the conservation importance of the fauna and flora occurring on site.
- The environmental induction should occur in the appropriate languages for the workers who may require translation.
- **Reptiles and amphibians** that are exposed during the clearing operations should be captured for later release or **translocation** by a qualified expert.
- Employ measures that ensure adherence to the speed limit.
- Careful consideration is required when planning the placement for stockpiling topsoil and the creation of access routes in order to avoid the destruction of pristine habitats and minimise the overall mining footprint.
- **The Footprint areas of the mining activities must be scanned for Red Listed and protected plant species prior to mining**;
- Low angle access ramp in excavations;
- **Snares & traps** removed and destroyed; and
- Maintenance of **firebreaks**.

Habitat

Level of risk: Medium

Mitigation measures

- Mining activities must be planned, where possible in order to encourage faunal dispersal and should minimise dissection or fragmentation of any important faunal habitat type.
- The extent of the mining area should be demarcated on site layout plans (preferably on disturbed areas or those identified with low conservation importance). No construction personnel or vehicles may leave the demarcated area except those authorised to do so.

Air quality

Level of risk: Low-Medium

Mitigation measures

- Vegetation must be removed when soil stripping is required only. **These areas should be limited to include those areas required for mining** only, hereby reducing the surface area exposed to wind erosion. Adequate demarcation of these areas should be undertaken.
- Control options pertaining to topsoil removal, loading and dumping are generally limited to **wet suppression**.
- Where it is logistically possible, control methods for gravel roads should be utilised to reduce the re-suspension of particulates. Feasible methods include

wet suppression, avoidance of unnecessary traffic, speed control and avoidance of track-on of material onto paved and treated roads.

- The length of time where open areas are exposed should be restricted. Mining should not be delayed after vegetation has been cleared and topsoil removed.
- **Dust suppression methods** should, where logistically possible, must be implemented at all areas that may / are exposed for long periods of time.
- **For all mining activities management should undertake to implement health measures in terms of personal dust exposure, for all its employees**:
    - **Speed limits;**
    - **Spraying of surfaces with water;**
    - **The waste brick dump will be used to backfill the opencast quarry/excavations and all remaining material on the surface will be removed to the original topsoil level. This material will then be backfilled into the depressions. Any compacted area will then be ripped to a depth of 300mm, where possible, the topsoil or growth medium returned and landscaped.**

Noise and vibration

Level of risk: Medium

Mitigation measures

- Machinery with low noise levels which complies with the manufacturer's specifications to be used.
- Construction activities to take place during daytime period only.
- Noise monitoring on a quarterly basis.
- Vehicles to comply with manufacturers' specifications and any activity which will exceed 90.0dBA to be done during daytime only.
- Emergency generators to be placed in such a manner that it is away from any residential area.
- Noise monitoring to be done along the mine footprint and noise sources within the mine boundary on a monthly basis after which the frequency can change to a quarterly basis.
- The siren when conveyor, hauling vehicles area reversing and/or any other mine vehicle to be replaced with a vibrating type siren if it is approved by the Department of Labour.
- Haul roads to be levelled on a regular basis to avoid the formation of potholes.
- Actively manage the process and the noise management plan must be used to ensure compliance to the noise regulations and/or standards. The levels to be evaluated in terms of the baseline noise levels.

Visual impacts

Level of risk: Low Medium

Mitigation measures

Mitigation measures may be considered in two categories:

Primary measures that intrinsically comprise part of the development design through an iterative process. Mitigation measures are more effective if they are implemented from project inception when alternatives are being considered; and

Secondary measures designed to specifically address the remaining negative effects of the final development proposals:

- Primary measures that will be implemented should mainly be measures that minimise the visual impact by **softening the visibility of the mining activities**, by "blending" with the surrounding areas. Such measures will include rehabilitation of the disturbed area, by re-vegetation of the area and using an aesthetically pleasing design for the proposed development.
- Secondary measures will include planting of trees, re-vegetation of the area and using lights that will not create a night sky glow. It will also include measures to minimise the visual impact during the operational phase and construction phase.
- During the construction phase the following mitigation measures should be implemented to minimise the visual impact.
- Ensure that the design fits into the surrounding environment and it is aesthetically pleasing.
- Reduce the construction period through careful planning and productive implementation of resources.
- Plan the placement of lay-down areas and any potential temporary construction camps in order to minimise vegetation clearing.
- Restrict the activities and movement of construction workers and vehicles to the immediate construction site and existing access roads.
- Ensure that rubble, litter and disused construction materials are managed and removed regularly.
- Ensure that all infrastructure and the site and general surrounds are maintained in a neat and appealing way.
- Reduce and control construction dust emitting activities through the use of approved dust suppression techniques; and
- Restrict construction activities to daylight hours in order to negate or reduce the visual impacts associated with lighting or restrict lighting to certain areas.
- During operational phase, the following mitigation measures should be implemented to minimise the visual impact.
- Ensure that the design fits into the surrounding environment and it is aesthetically pleasing.
- Ensure that all infrastructure and the site and general surroundings are maintained in a neat and appealing way;
- Rehabilitation of disturbed areas and re-establishment of vegetation;
- Mitigation of lighting impacts includes the pro-active design, planning and specification lighting for the development by a lighting engineer. The correct specification and placement of lighting and light fixtures for the proposed development will go far to contain rather than spread the light.

Secondary impacts anticipated as a result of the proposed development (i.e. visual character, sense of place and tourism potential) are not possible to mitigate.

Traffic and road safety

Level of risk: low

Mitigation measures

- Implement measures that ensure the adherence to **traffic rules**.

Heritage resources

Level of risk: Medium

Mitigation measures

- **Any heritage and cultural resources (e.g. graveyards, ruins, historic structures, etc.) must be protected and preserved by the delineation of a no go zone.**
- **Should any further graves be disturbed, exposed or uncovered during site preparations, these should immediately be reported to an accredited archaeologist. Burial remains should not be disturbed or removed until inspected by an archaeologist**.
- Stone tools should be avoided where possible and fresh exposures should be recorded before destruction. All stone tool artefacts should be recorded, mapped and collected before destruction.
- Should development necessitate impact on any building structures, the developer should apply for a **SAHRA Site destruction permit** prior to commencement of construction.

Socio-economic

Level of risk: Low-Medium

Mitigation measures

In order to ensure that negative impacts are minimised and positives are enhanced, the following is recommended:

- Implement the mitigation measures as proposed in this report.
- As **job creation is one of the most pressing socio-economic needs in the local community**, Mentoza Holdings and Investments (Pty) LtdLtd through the development of the Mine should focus on SMME development and related local job creation, whilst considering the limitations of the available local skills.
- Mentoza Holdings and Investments (Pty) LtdLtd should assist their employees to **find suitable housing in the towns surrounding the mining area** to limit additional impacts on the provision of services and infrastructure by the TLM.
- Assistance in terms of **skills development** for those that would be employed during the start-up and construction phases of the project, as well as for permanent employees during the operational phase of the project would be necessary. Education is critical to sustain the socio-economic development of the community members living in the area. Continued support for training and capacity building thus remain important.
- Possible **SMME links** to the mine should be pursued to maximise local business benefits;

- The establishment of a management and **monitoring committee** to deal with increased social pressure on the local area, as well as increased pressure on the infrastructure and services provision is recommended. Such a committee should not only consist of representatives of Dela Best Enterprise (Pty) Ltd, but all the mining companies operating in the area together with representatives from the Sol Plaatjie Local Municipality.
- The development and execution of the Social and Labour Plan should be done in consultation with the Sol Plaatjie Local Municipality.
- Dela Best Enterprise (Pty) Ltd should **communicate** and present their involvement in the community (goodwill, social responsibility, capacity building programmes, skills development, general development support and so forth) to obtain community support.
- Ensuring continued contact and communication between Eton Mine, the Sol Pllatjie Local Municipality, and local community leaders, as well as nearby landowners is critical, especially during the start-up and construction phase, but should also continue for the life of mine.

Interested and affected parties

Level of risk: Low

Mitigation measures

- Maintain active **communication** with IAPs.
- Ensure transparent communication with IAPs at all times.
- IAPs must be kept up to date on any changes in the mining operation.
- A **complaints management system (register)** should be maintained by the mine to ensure that all issues raised by community members are followed up and addressed appropriately.

iii) Motivation where no alternative sites were considered

No viable alternative sites were identified for the following reasons:

- Dela Best Enterprise (Pty) Ltd did an application for a Mining Right over the application area.
- Previous mining results and findings indicate that diamonds within the boundaries of the abovementioned property can be viably mined.
- The final locality of the above infrastructure was decided upon after taking into account of the following:-
  - Mining Right application over the area;
  - Locality of the clay bodies;
  - Topography of the area;
  - Wind direction and speed;
  - Heritage Resources;
  - Environmental features; and
  - Discussions with the surface owner during two meetings.

9. Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site (In respect of the final site layout plan) through the life of the activity

(Including (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures)

- Assessment of each identified potentially significant impact and risk

  (This section of the report must consider all the known typical impacts of each of the activities (including those that could or should have been identified by knowledgeable persons) and not only those that were raised by registered interested and affected parties.)

11. Environmental impact statement

11.1 Summary of the key findings of the environmental impact assessment

During the conduction of the Environmental Impact Assessment several key element regarding the proposed project came under attention:

- With due consideration towards the negative impact the prospecting activities pose on the environment with the knowledge of the current status of the environment, it can be concluded that the prospecting activities will may have some negative impact on the area.

- The community from nearby small towns will benefit the prospecting operations through local employment and income security.

11.2 Final Site Map

(Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental senilities of the preferred site indicating any areas that should be avoided, including buffers.) (see annexures)

11.3 Summary of the positive and negative impacts and risks of the proposed activity and identified alternative.

Throughout the document the focus point was to identify and assess the negative impacts the proposed operations may have on the bio-physical, socio-economic and cultural environment. The major negative influences the proposed operations may pose are noise disturbance, alleviated dust levels, and vegetation loss.

12. Proposed impact management objectives and the impact management outcomes of inclusion in the EMPr

(Based on the assessment and where applicable the recommendations from specialist reports, the recording of proposed impact management objectives and the impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorization.)

The proposed impact management objective is to create environmental sustainable prospecting operation by the management, remediation or elimination of environmental impacts through the implementation and adherence of mitigation measures as legislatively required.

The above mentioned outcomes can be achieved through the implementation of the following impact specified objectives and their outcomes:

- Minimizing of vegetation loss caused by construction and site maintenance:
  - Vegetation clearing control
  - Rip and rehabilitation of unnecessary compacted areas
  - Adherence to mine roads
  - Implementation of a no collection and no open fire policy

- Prevention of soil pollution due to chemical spillage
  - Regular maintenance of earth moving equipment and machinery.
  - Inspection on chemical containing activities against faults and leaks.
  - Immediate rehabilitation of an affected area.
  - Suitable disposal of contaminated soil.

- Reduction of noise levels caused by mine machinery, mineral processing and earth moving equipment.
  - Undue noise levels will be kept to acceptable hours.
  - Modification of earth moving equipment to reduce noise levels.
  - Aim to keep noise levels within the approved prescribed standards.

- Minimization of dust upliftment causing loss of air quality.
  - Watering of the dirt roads and vegetation cleared areas.
  - Adherence to speed limits.
  - Erosion protection of mine dumps.

- Surface and ground water quality degradation
  - Adherence to water management guidelines
  - Specific water facility construction.
  - Storm water control.
  - Measurement of water level and quality.
  - Implementation of ground water monitoring system.

- Waste disposal
  - Implementation of waste disposal facilities ○ Contractual agreements for waste removal. ○ Waste removal schedules,
  - Compliance to good housekeeping rules.

- Environmental awareness training on
  - Fauna and Flora
  - Proper waste management
  - Specific work related safety awareness,

13. Aspects for inclusion as conditions of Authorization

(Any aspects which must be made conditions of the Environmental Authorization)

At this stage all aspects that must be included into the environmental authorization are detailed in this document. Should any aspects arise that needs to be made conditions this document will be updated accordingly and will be submitted to all relevant departments.

14. Description of any assumptions, uncertainties and gaps in knowledge

(Which relate to the assessment and mitigation measures proposed)

Any assumptions, uncertainties and gaps in knowledge that could arise during the operation of the prospecting activities will be addressed and mitigation measures implemented to prevent any damage to the environment. Such assumptions, uncertainties and gaps in knowledge will be described, implemented and handed to the relevant departments.

To prevent any unnecessary assumptions, uncertainties and gaps in knowledge, the Basic Environmental Assessment part of this document should not be read alone, as it only contain impact assessment with summarized management options, but rather read as a whole with the Environmental Management Programme which include detailed management measures for each listed activity as described in the Basic Environmental Assessment.

15. Reasoned opinion as to whether the proposed activity should or should not be authorized

15.1 Reasons why the activity should be authorized or not

The proposed prospecting operations should be strongly considered for authorization as mine development will result in the upliftment of local communities, economic growth of the town, region and possibly province.

15.2 Conditions that must be included in the authorization

15.2.1 Specific conditions to be included into the compilation and approval of EMPr

Specific conditions to be included into the compilation and approval of the EMPr are the adherence to all mitigation measures as stipulated within the EMPr.

15.1.2 Rehabilitation requirements.

Rehabilitation Requirements should include, but is not limited to the following:

- The area must be rehabilitated as close as possible to its original natural state as possible.

- Rehabilitation must be done to the complete satisfaction of all relevant departments
  .
- Where necessary must a soil bed be provided and sawn with indigenous plant species to ensure re-establishment of vegetation.

- A two to three year monitoring programme must be implemented to ensure the success of vegetation re-establishment and the elimination of invader / pioneer plant species.

- All other rehabilitation measures as contained within the EMPr, mitigation measures, inclusive must be adhered to or a grounded reason for why any of these could not be met.

16 Period for which the Environmental Authorization is required

The Environmental Authorisation is required for a period of five (5) years effective from the date of granting the prospecting right application.

17 Undertaking

(Confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic Assessment Report and the Environmental Management Programme report.)

The Director, Mr MM Setlogelo, confirms that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic Assessment Report and the Environmental Management Report.

18 Financial Provision

(State the amount that is required to both manage and rehabilitate the environment in respect or rehabilitation.)

CALCULATION OF THE QUANTUM

Applicant: **MENTOZA HOLDING AND INVESTMENTS (PTY) LTD** **Ref 12220 PR**

Date:21-04-2019

No.	Description	Unit	A	B	C	D	E=A*B*C*D
			Quantity	Master Rate	Multiplication factor	Weighting factor 1	Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	15,94	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	221,99	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	327,14	1	1	0
3	Rehabilitation of access roads	m2	0	39,72	1	1	0
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	385,55	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	210,3	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	443,97	1	1	0
6	**Opencast rehabilitation including final voids and ramps**	**ha**	**0**	**225 957,57**	**1**	**1**	**0**
7	Sealing of shafts adits and inclines	m3	0	119,17	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	155 155,97	0,52	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	193 243,96	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	561 272,05	1	1	0
9	Rehabilitation of subsided areas	ha	0	129 919,76	1	1	0
10	General surface rehabilitation	ha	0,1	122 909,70	1	1	12290,97
11	River diversions	ha	0	122 909,70	1	1	0
12	Fencing	m	0	140,2	1	1	0
13	Water management	ha	0	46 733,73	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	5	16 356,80	1	1	81784
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		94074,97

1	Preliminary and General	11288,9964	**weighting factor 2** 1	11288,9964
2	Contingencies	9407,497		9407,497
			Subtotal 2	114771,46
			VAT (15%)	16068,00
			Grand Total	**130839**

18.1 Explain how the aforesaid amount was derived

As seen from the table mentioned above the amount of R 130 839.00 was calculated using the Department of Mineral Resources approved Financial Provision Quantum Calculation table.

18.2 Confirm that this amount can be provided from operation expenditure

(Confirm that the amount, is anticipated to be an operating cost and is provided for as such in the Mining work programme, Financial and Technical Competence Report or Prospecting Work Programme as the case may be)

Financial Provision is provided for as a regulatory cost, totalling **R 130 839.00** (under the rehabilitation cost category) in the Prospecting Work Programme.

.

19 Specific Information required by the competent Authority

19.1 Compliance with the provisions of sections 24(4)(a) and (b) read with section 24(3)(a) and (7) of the National Environmental Management Act (Act 107 of 1998). The BEA report must include the:-

19.1.1 Impact on the socio-economic conditions of any directly affected person

(Provide the results of investigation, assessment and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier or, where applicable, potential beneficiaries of any land restitution claim, attached the investigation report as an **Appendix**)

The prospecting activities will contribute to the local economy via its impact on job creation, total disposable income and value-added activities. The mine will support business activity in the local economy for the duration of the mine.

Five measures of economic impacts can be used to demonstrate the potential positive effect of the proposed prospecting operation on the local economy:

- Employment – the extent of employment can be measured as number of jobs or in terms of full time equivalents
- Payroll income – the gross remuneration of employees in terms of salaries and wages
- Capital Expenditure (CAPEX) – the total amount spent on the purchasing of fixed assets and total spent on construction
- Operating expenditure and maintenance (OPEX) – the total amount spent locally by businesses on goods and services, excluding salaries and wages as well as rents or interest.
- Revenue – The total value of sales arising from business activity at the mine

19.1.2 Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act.

(Provide the result of investigation, assessment and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No 25 of 1999) with the exception

of the national estate contemplated in section 3(2)(i)(vi) and (vii) of the Act.)

It is not foreseen that should any archaeological sites of any significance exist, but should any exist they will be impacted / destroyed by the proposed prospecting operations. To minimize the impact total avoidance of any heritage site must be strictly adhered to.

20 Other matter required in terms of sections 24(a) and (b) of the Act.

(the EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist.)

The compiler of this document, also the appointed EAP, has knowledge of the area on which the proposed project is situated. An extensive field visit for investigation could not be executed, but an in depth desktop study was conducted using existing literature and data base knowledge acquired over the years.

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

1. Draft environmental management programme

1.1Details of

E-**Details of the EAP**

Name of the Practitioner: Tintswalo Millicent Simango
Tel no: 079 962 8010
Fax No:
e-mail address: simangotm@gmail.com

F-**Expertise of the EAP**

1.1.2.1 The qualification of the EAP

Bsc in Geology (University of Kwazulu-Natal)
Current studies: Honours Environmental Management (Unisa)

1.1.2.2 Summary of the EAP's past experience.

(In carrying oath the Environmental impact Assessment Procedure)

Millicent Tintswalo Simango is a qualified geologist (she holds a degree from the University of Kwazulu-Natal (KZN) and is currently completing her honours in Environmental Management with the University of South Africa). She has extensive experience in geographic information science and data management, is an experienced environmental management practitioner and has conducted extensive environmental studies.

She has conducted environmental studies for a major manganese and iron ore project in the Kuruman district for SNM Resources and is has previously conducted consulting work for Mentoza Holdings and Investments for an alluvial diamond project in Slypsteen farm in the magisterial district of Herbert, in the Northern Cape. In addition to assisting medium sized entities, she is also passionately working and assisting small miners particularly in the Barkley West and other parts of the Northern Cape and North West Provinces.

She is a specialist in the entire environmental management value chain, ranging from conducting environmental impact assessments, prospecting work permits and environmental authorisations; compiles basic assessment report and environmental management programme reports through to closure certificates for completed mining projects.

1.2 Description of the Aspects of the Activity

(Confirm that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section 9 herein as required)

The description of the aspects of the activity are already covered in Part A Section 9 of this document, but also included below.

ACTIVITY Whether listed or not listed.	POTENTIAL IMPACT (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater, contamination, air pollution)….	ASPECTS AFFECTED	PHASE In which impact is anticipated (e.g. construction, commissioning, operational, Decommissioning, closure, post closure)	SIGNIFICANCE IF NOT MITIGATED	MITIGATION TYPE (modify, remedy, control or stop) through (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity	SIGNIFICANCE IF MITIGATION
Clean & Dirty water systems:	Surface disturbance Groundwater Contamination Soil contamination Surface water contamination	Soil Groundwater Surface Water	Construction Commissioning Operational Decommissioning Closure	Medium	It will be necessary to divert storm water around excavation areas by construction of a temporary gravel cut-off berm that will prevent surface run-off into the excavation area, Excavations, where and when applicable, should be rehabilitated concurrently as mining progresses. The re-vegetation of disturbed areas is important to prevent erosion and improve the rate of infiltration. Erosion channels that may develop before vegetation has established should be rehabilitated by filling, levelling and re-vegetation where topsoil is washed away. Groundwater level monitoring Groundwater quality and quantity monitoring Monitoring and maintenance of oil traps in relevant areas. Drip trays used.	Low

					Immediately clean hydrocarbon spill. Linear infrastructure such as roads and Water control dams will be inspected at least monthly to check that the associated water management infrastructure is effective in controlling erosion. Maintain a buffer zone of 100 m around the pans and streams. Note that these buffer zones are essential to ensure healthy functioning and maintenance of wetland. Minimizing – unavoidable impacts shall be minimized by taking appropriate and practicable measures such as transplanting important plant specimens, confining works in specific area or season, restoration (and possibly enhancement) of disturbed areas, etc. Special care needs to be taken during the construction phase to prevent surface storm water rich in sediments and other pollutants from entering the natural drainage systems / wetlands. Effluents and waste should be recycling and re-use as far as possible.	
Sewage facilities	Soil contamination Groundwater contamination	Soil Groundwater	Construction Commissioning Operational Decommissioning Closure	Low	Maintenance of sewage facilities on a regular basis. Removal of chemical toilets or building on closure	Very Low
Fuel Storage	Groundwater	Soil	Construction	Medium	Maintenance of Diesel tanks and	Low

facility (refuel and lube station)	contamination Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance	Groundwater Surface water	Commissioning Operational Decommissioning Closure		bund walls. Oil traps Groundwater quality monitoring Drip tray at re-fuelling point. Refuelling must take place in well demarcated areas and over suitable drip trays to prevent soil pollution. Spill kits to clean up accidental spills from earthmoving machinery must be well-marked and available on site. Workers must undergo induction to ensure that they are prepared for rapid clean-up procedures. All facilities where dangerous materials are stored must be contained in a bund wall. Vehicles and machinery should be regularly serviced and maintained.	
Mining Area (Excavations)	Dust Groundwater contamination Noise Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance Surface water contamination	Air quality Fauna Flora Groundwater Noise and vibration Soil Surface Water Topography Safety	Commissioning Operational Decommissioning Closure	Medium	Access control Dust control and monitoring Groundwater Quality and quantity monitoring Noise and vibration control and monitoring Continuous rehabilitation Storm water run-off control Immediately clean hydrocarbon spill Drip trays Waste brick dump stability control and monitoring Erosion control Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor	Low

					components; Installing acoustic enclosures for equipment causing radiating noise; Installing vibration isolation for mechanical equipment; Re-locate noise sources to areas which are less noise sensitive, to take advantage of distance and natural shielding; Taking advantage during the design stage of natural topography as a noise buffer; Develop a mechanism to record and respond to complaints. Maintain a buffer zone of 30 m around the pans and streams. Note that these buffer zones are essential to ensure healthy functioning and maintenance of wetland. Minimizing – unavoidable impacts shall be minimized by taking appropriate and practicable measures such as transplanting important plant specimens, confining works in specific area or season, restoration (and possibly enhancement) of disturbed areas, etc. Special care needs to be taken during the construction phase to prevent surface storm water rich in sediments and other pollutants from entering the natural drainage systems / wetlands. Effluents and waste should be recycling and re-use as far as possible.	

					Mining activities must be planned, where possible in order to encourage (faunal dispersal) and should minimise dissection or fragmentation of any important faunal habitat type. The extent of the mining area should be demarcated on site layout plans (preferably on disturbed areas or those identified with low conservation importance). No construction personnel or vehicles may leave the demarcated area except those authorized to do so. Those areas surrounding the mine site that are not part of the demarcated development area should be considered as a no go zone for employees, machinery or even visitors. Appointment of a full-time ECO must render guidance to the staff and contractors with respect to suitable areas for all related disturbance, and must ensure that all contractors and workers undergo Environmental Induction prior to commencing with work on site. All those working on site must undergo environmental induction with regards to fauna and in particular awareness about not harming or collecting species such as snakes, tortoises and owls which are often persecuted out of superstition. All those working on site must be educated about the conservation importance of the fauna and flora occurring on site. The environmental induction should occur in the appropriate languages	

					for the workers who may require translation. Reptiles and amphibians that are exposed during the clearing operations should be captured for later release or translocation by a qualified expert. Employ measures that ensure adherence to the speed limit. Careful consideration is required when planning the placement for stockpiling topsoil and the creation of access routes in order to avoid the destruction of pristine habitats and minimise the overall mining footprint. The Footprint areas of the mining activities must be scanned for Red Listed and protected plant species prior to mining; Low angle access ramp in excavations; Snares & traps removed and destroyed; and Maintenance of firebreaks. It will therefore be necessary to divert storm water around opencast areas by construction of a temporary gravel cut-off berm that will prevent surface run-off into the mining excavation area. Excavations, where and when applicable, should be rehabilitated concurrently as mining progresses. The re-vegetation of disturbed areas is important to prevent erosion. Erosion channels that may develop before vegetation has established	

					should be rehabilitated by filling, levelling and re-vegetation where topsoil is washed away.	
Office –Bricks, concrete, doors, windows or pre-fabricated office on concrete	Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance	Fauna Flora Groundwater Soil	Construction Commissioning Operational Decommissioning Closure	Low	Immediately clean hydrocarbon spill Rip disturbed areas to allow re-growth of vegetation cover. Note that these buffer zones are essential to ensure healthy functioning and maintenance of wetland Note that these buffer zones are essential to ensure healthy functioning and maintenance of wetland. Minimizing – unavoidable impacts shall be minimized by taking appropriate and practicable measures such as transplanting important plant specimens, confining works in specific area or season, restoration (and possibly enhancement) of disturbed areas, etc. Special care needs to be taken during the construction phase to prevent surface storm water rich in sediments and other pollutants from entering the natural drainage systems / wetlands. Effluents and waste should be recycling and re-use as far as possible.	Very Low
Parking Bay	Dust	Air Quality Fauna	Construction Commissioning	Medium	Dust Control and monitoring Groundwater quality monitoring	Low

	Groundwater contamination Noise Removal and disturbance of vegetation cover and natural habitat of fauna Surface disturbance	Flora Groundwater Noise Soil Surface Water	Operational Decommissioning Closure		Noise control and monitoring Drip trays Storm water run-off control Immediately clean up hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover. Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor components; Installing acoustic enclosures for equipment causing radiating noise; Installing vibration isolation for mechanical equipment; Re-locate noise sources to areas which are less noise sensitive, to take advantage of distance and natural shielding; Taking advantage during the design stage of natural topography as a noise buffer; Develop a mechanism to record and respond to complaints.	
Plant area	Dust Noise Groundwater contamination Removal and disturbance of vegetation cover and natural habitat of fauna	Air Quality Fauna Flora Groundwater Noise Soil Surface water Safety	Construction Commissioning Operational Decommissioning Closure	Medium	The surface area required for the plant and associated brick-making surface areas should be kept to what is really required for the specified and delineated area . Access control Maintenance of processing plant Dust control and monitoring Groundwater quality monitoring Noise and vibration control and	Medium

	Soil contamination Surface disturbance				monitoring Drip trays Storm water run-off control Immediately clean hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor components; Installing acoustic enclosures for equipment causing radiating noise; Installing vibration isolation for mechanical equipment; Re-locate noise sources to areas which are less noise sensitive, to take advantage of distance and natural shielding; Taking advantage during the design stage of natural topography as a noise buffer; Develop a mechanism to record and respond to complaints. . Note that these buffer zones are essential to ensure healthy functioning and maintenance of wetlandMaintain a buffer zone of 100 m around the pans and streams. Note that these buffer zones are essential to ensure healthy	

					functioning and maintenance of wetland. Minimizing – unavoidable impacts shall be minimized by taking appropriate and practicable measures such as transplanting important plant specimens, confining works in specific area or season, restoration (and possibly enhancement) of disturbed areas, etc. Special care needs to be taken during the construction phase to prevent surface storm water rich in sediments and other pollutants from entering the natural drainage systems / wetlands. Effluents and waste should be recycling and re-use as far as possible.	
Water distribution Pipeline	Groundwater abstraction and use Surface disturbance	Fauna Flora Groundwater Surface Water	Construction Commissioning Operational Decommissioning Closure	Medium	Monitor pipeline for water leaks Maintenance of pipeline Groundwater levels and quality monitoring Linear infrastructure such as roads and pipelines will be inspected at least monthly to check that the associated water management infrastructure is effective in controlling erosion.	Low

Roads (both access and haulage road on the mine site):	Dust Groundwater contamination Noise Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance	Air quality Fauna Flora Groundwater Noise and vibration Soil Surface water	Construction Commissioning Operational Decommissioning Closure	Medium	Maintenance of roads Dust control and monitoring Groundwater quality monitoring Noise control and monitoring Speed limits Storm water run-off control Erosion control Immediately clean hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor components; Installing acoustic enclosures for equipment causing radiating noise; Installing vibration isolation for mechanical equipment; Re-locate noise sources to areas which are less noise sensitive, to take advantage of distance and natural shielding; Taking advantage during the design stage of natural topography as a noise buffer; Develop a mechanism to record and respond to complaints. Linear infrastructure such as roads and pipelines will be inspected at least monthly to check that the associated water management infrastructure is effective in controlling erosion.	Low

Salvage yard (Storage and laydown area)	Groundwater contamination Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance Surface water contamination	Fauna Flora Groundwater Soil Surface Water	Construction Commissioning Operational Decommissioning Closure	Medium	Access Control Maintenance of fence Groundwater quality monitoring Storm water run-off control Immediately clean hydrocarbon spill	Low
Security Gate and guard house at access control point	Dust Groundwater contamination Noise Removal and disturbance of vegetation cover and natural habitat of fauna Surface disturbance	Air Quality Fauna Flora Groundwater Soil	Construction Commissioning Operational Decommissioning Closure	Medium	Access control Maintenance of boom gates and entrance Dust control and monitoring Noise control and monitoring Groundwater quality monitoring Immediately clean hydrocarbon spill Rip disturbed areas to allow re-growth of vegetation cover. Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor components; Installing acoustic enclosures for equipment causing radiating noise; Installing vibration isolation for mechanical equipment; Re-locate noise sources to areas which are less noise sensitive, to take advantage of distance and natural shielding;	Low

					Taking advantage during the design stage of natural topography as a noise buffer; Develop a mechanism to record and respond to complaints.	
Stockpilearea	Dust Groundwater Contamination Noise Removal and disturbance of vegetation cover and natural habitat of fauna Surface disturbance	Air Quality Fauna Flora Groundwater Noise Soil Surface Water	Commissioning Operational Decommissioning Closure	Medium	Dust Control and monitoring Groundwater quality monitoring Noise control and monitoring Drip trays Storm water run-off control Immediately clean hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor components; Installing acoustic enclosures for equipment causing radiating noise; Installing vibration isolation for mechanical equipment; Re-locate noise sources to areas which are less noise sensitive, to take advantage of distance and natural shielding; Taking advantage during the design stage of natural topography as a noise buffer; Develop a mechanism to record and respond to complaints.	Low
Topsoil storage area (temporary)	Dust Removal and disturbance of vegetation cover and	Air Quality Fauna Flora Groundwater Noise	Commissioning Operational Decommissioning Closure	Medium	Al topsoil need to be removed and stockpiled on a site not earmarked for mining. Dust Control and monitoring	Low

	natural habitat of fauna Soil disturbance Surface disturbance	Soil Surface Water			Storm water run-off control Continuous rehabilitation Rip disturbed areas to allow re-growth of vegetation cover Backfilling of topsoil during rehabilitation Topsoil stockpiles must be kept as small as possible in order to prevent compaction and the formation of anaerobic conditions. Topsoil must be stockpiled for the shortest possible timeframes in order to ensure that the quality of the topsoil is not impaired. Topsoil stockpiles must be kept separate from sub-soils (overburden). The topsoil should be replaced as soon as possible on to the backfilled areas, thereby allowing for the re-growth of the seed bank contained within the topsoil. Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor components; Installing acoustic enclosures for equipment causing radiating noise; Installing vibration isolation for mechanical equipment; Re-locate noise sources to areas which are less noise sensitive, to take advantage of distance and natural shielding; Taking advantage during the design	

					stage of natural topography as a noise buffer; Develop a mechanism to record and respond to complaints.	
Waste disposal site (domestic and industrial waste):	Groundwater contamination Contamination of soil Surface water contamination	Groundwater Soil Surface water	Construction Commissioning Operational Decommissioning Closure	Medium	Storage of Waste within receptacles Storage of hazardous waste on concrete floor with bund wall Removal of waste on regular intervals	Low
Waste rock dumps	Dust Groundwater Contamination Noise Removal and disturbance of vegetation cover and natural habitat of fauna Surface disturbance	Air quality Fauna Flora Groundwater Noise Soil Surface Water Topography	Commissioning Operational Decommissioning Closure	Medium	Waste dumps should be stored in a dedicated demarcated site on a temporary basis until such time excavations could be backfilled or bricks could be sold-off. Dust control and monitoring Groundwater quality monitoring Noise control and monitoring Storm water run-off control Rip disturbed areas to allow re-growth of vegetation cover Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor components; Installing acoustic enclosures for equipment causing radiating noise; Installing vibration isolation for mechanical equipment; Re-locate noise sources to areas which are less noise sensitive, to take advantage of	Low

					distance and natural shielding; Taking advantage during the design stage of natural topography as a noise buffer; Develop a mechanism to record and respond to complaints. Note that these buffer zones are essential to ensure healthy functioning and maintenance of wetland. Note that these buffer zones are essential to ensure healthy functioning and maintenance of wetland. Minimizing – unavoidable impacts shall be minimized by taking appropriate and practicable measures such as transplanting important plant specimens, confining works in specific area or season, restoration (and possibly enhancement) of disturbed areas, etc. Special care needs to be taken during the construction phase to prevent surface storm water rich in sediments and other pollutants from entering the natural drainage systems / wetlands. Effluents and waste should be recycling and re-use as far as possible. Mining activities must be planned, where possible in order to encourage	

					(faunal dispersal) and should minimise dissection or fragmentation of any important faunal habitat type. The extent of the mining area should be demarcated on site layout plans (preferably on disturbed areas or those identified with low conservation importance). No construction personnel or vehicles may leave the demarcated area except those authorized to do so. Those areas surrounding the mine site that are not part of the demarcated development area should be considered as a no go zone for employees, machinery or even visitors. Appointment of a full-time ECO must render guidance to the staff and contractors with respect to suitable areas for all related disturbance, and must ensure that all contractors and workers undergo Environmental Induction prior to commencing with work on site. All those working on site must undergo environmental induction with regards to fauna and in particular awareness about not harming or collecting species such as snakes, tortoises and owls which are often persecuted out of superstition. All those working on site must be educated about the conservation importance of the fauna and flora occurring on site. The environmental induction should occur in the appropriate languages for the workers who may require translation.	

					Reptiles and amphibians that are exposed during the clearing operations should be captured for later release or translocation by a qualified expert. Employ measures that ensure adherence to the speed limit. Careful consideration is required when planning the placement for stockpiling topsoil and the creation of access routes in order to avoid the destruction of pristine habitats and minimise the overall mining footprint. The Footprint areas of the mining activities must be scanned for Red Listed and protected plant species prior to mining; Low angle access ramp in excavations; Snares & traps removed and destroyed; and Maintenance of firebreaks.	
Workshop and Wash bay	Groundwater contamination and usage Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination	Groundwater Soil Surface water	Construction Commissioning Operational Decommissioning Closure	Medium	Groundwater quality and quantity monitoring Concrete floor with oil/water separator Storm water run-off control Immediately clean hydrocarbon spills	Low

Water tank:	Groundwater abstraction and usage Surface disturbance	Fauna Flora Groundwater Surface Water	Construction Commissioning Operational Decommissioning Closure	Medium	Monitor water quality and quantity Maintenance of tanks (check for leaks). Groundwater levels and quality monitoring.	Low

1.3Composite Map

(Provide a map (**Attached as an Appendix**) at an appropriate scale which superimposes the proposed activity, its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers)

1.4 Description of Impact management objectives including management statements

1.4.1 Determination of closure objectives

(Ensure that the closure objectives are informed by the type of environment described)

The sole determined objective is to rehabilitate the area during and after prospecting activities to such an extent that the post-mining environment is almost in the same condition as the original undisturbed environment.

When rehabilitation proofs successful the vegetation re-growth may be of such quality that this area can be used as a grazing field for farmer livestock.

1.4.2 Volumes and rate of water use required for the operation

The diamond recovering process as a whole requires approximately 7 200 m³ of water per a month operational cycle. This process includes 14ft rotating pan and grease tables.

Other prospecting related activities such as the ablution facilities and office buildings also require the use of water, but the amount of water needed are still unknown at this stage.

1.4.3 Has a water use licence has been applied for?

The appointed EAP with co-operation from the project applicant is in the final stages of applying for water use authorization. Requirements to apply for such authorization include the Basic Environmental Assessment Report / Environmental Management Programme.

1.4.4 Impacts to be mitigated in their respective phases

Measures to rehabilitate the environment affected by the undertaking of any listed activity

ACTIVITES (As listed in 2.11.1)	**PHASE** of operation in which activity will take place. State: Planning and design, Pre-construction, Construction, Operational, rehabilitation, Closure, Post closure	**SIZE AND SCASLE of disturbance** (volumes, tonnages and hectares or m^2)	**MITIGATION MEASURES** (describe how each of the recommendations herein will remedy the cause of pollution or degradation and migration of pollutants)	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented. Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation therefore state either:- Upon cessation of the individual activity Or Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be
Drilling	Construction	0.072 ha	• The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species • All infrastructure will be equipped with appropriate signs indicating function and potential dangers	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

	Operational		• No vehicle repairs and maintenance will occur within the operational area and will be restricted to the workshop. • Old diesel and related chemicals must be discarded within appropriate marked close containers and stored in the chemical storage facility till removal thereof • On accidental spillage the contaminated soil will be removed and appropriately stored till the removal there off. • The area must be continuously inspected for spillages and remediated immediately • All vehicle traffic are restricted to the roads and demarcated traffic areas • No indigenous shrubs or trees will unnecessarily uprooted and used for fire wood	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• If any pioneer species are observed the reporting thereof to the rehabilitation site manager is highly recommended. • Employees will be advised to stay clear from any wild animals or reptiles and not to disturb or provoke them in any manner. • Strict adherence to the mine roads and no off-road driving to prevent trampling of vegetation and ground compaction • The mine shall be responsible for compliance with the relevant legislation in respect to noise. • Hearing protection will be made available to all employees where attenuation cannot be implemented. • Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water.		

			• Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all vehicle and heavy vehicle drivers are aware of procedures and restrictions in terms of this document. • Fire extinguishers will be kept in good order and serviced regularly. • Hard hats, earplugs, safety glasses, dust masks, gloves, hard point boots, reflector vests and reflective overalls is compulsory before entering this area. • The entrance will be clearly marked will all regulatory signs, to indicate a potential dangerous zone.		

			• Related waste/ scrap must be dispose of in the appropriate manner		
	Decommissioning		• The excavation will be filled with waste gravel and soil, with the topsoil and overburden in the correct order. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas. • Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

Excavation	Construction	1.25 ha	• The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species • All infrastructure will be equipped with appropriate signs indicating function and potential dangers • Overburden and topsoil will be stored separately next to the excavation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	Operational		• When working on equipment outside the workshop the appropriate measure needs to be implemented to prevent chemical spillage • No vehicle repairs and maintenance will occur within the operational area and will be restricted to the workshop.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Old diesel and related chemicals must be discarded within appropriate marked close containers and stored in the chemical storage facility till removal thereof • On accidental spillage the contaminated soil will be removed and appropriately stored till the removal there off. • Stored topsoil / tailings will be evenly spread to the recover the area • The area must be continuously inspected for spillages and remediated immediately • All vehicle traffic are restricted to the roads and demarcated traffic areas • Washing of equipment shall be restricted to urgent maintenance requirements only. • No indigenous shrubs or trees will unnecessarily uprooted and used for fire wood		

			• If any pioneer species are observed the reporting thereof to the rehabilitation site manager is highly recommended. • Employees will be advised to stay clear from any wild animals or reptiles and not to disturb or provoke them in any manner. • Strict adherence to the mine roads and no off-road driving to prevent trampling of vegetation and ground compaction • A site will be identified and colour coded water tanks will be erected for safe human consumption. • The mine shall be responsible for compliance with the relevant legislation in respect to noise. • Hearing protection will be made available to all employees where attenuation cannot be implemented. • Every vehicle in operation will be equipped with a silencer on the exhaust system.		

			• Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all vehicle and heavy vehicle drivers are aware of procedures and restrictions in terms of this document. • Fire extinguishers will be kept in good order and serviced regularly. • Hard hats, earplugs, safety glasses, dust masks, gloves, hard point boots, reflector vests and reflective overalls is compulsory before entering this area.		

			• The entrance will be clearly marked will all regulatory signs, to indicate a potential dangerous zone. • Related waste/ scrap must be dispose of in the appropriate manner		
	Decommissioning		• The excavation will be filled with waste gravel and soil, with the topsoil and overburden in the correct order. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas. • Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

Topsoil dump	Construction	1.25 ha	• The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	Operational		• If any pioneer species are observed the reporting thereof to the rehabilitation site manager is highly recommended. • Employees will be advised to stay clear from any wild animals or reptiles and not to disturb or provoke them in any manner. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document.		
	Decommissioning		• Rip and rehabilitate all compacted areas. • Rehabilitation will be finalized by planting of indigenous species with regular inspection for the removal of invader pioneer species.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Stockpiles	Construction	0.13 ha	• The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

	Operational		• If any pioneer species are observed the reporting thereof to the rehabilitation site manager is highly recommended. • Employees will be advised to stay clear from any wild animals or reptiles and not to disturb or provoke them in any manner. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	Decommissioning		• Rip and rehabilitate all compacted areas.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations.	Upon commencement of activity.

			• Rehabilitation will be finalized by planting of indigenous species with regular inspection for the removal of invader pioneer species.	Further does all mitigation measures proofs successful in impact management.	
	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Waste Dumps	Construction	0.13 ha	• The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	Operational		• If any pioneer species are observed the reporting thereof to the rehabilitation site manager is highly recommended.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Employees will be advised to stay clear from any wild animals or reptiles and not to disturb or provoke them in any manner. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document.		
	Decommissioning		• Rip and rehabilitate all compacted areas. • Rehabilitation will be finalized by planting of indigenous species with regular inspection for the removal of invader pioneer species.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Settling dams	Construction	1 ha	• The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species • It should be ensured that the dams are sealed / leak proof	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	Operational		• No indigenous shrubs or trees will unnecessarily uprooted and used for fire wood • If any pioneer species are observed the reporting thereof to the rehabilitation site manager is highly recommended.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Employees will be advised to stay clear from any wild animals or reptiles and not to disturb or provoke them in any manner. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document. • The structure must be continuously inspected for faults • The entrance will be clearly marked will all regulatory signs, to indicate a potential dangerous zone.		

	Decommissioning		• All structures will be broken down and removed from site. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas. • Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species. • On closure Department of Water Affairs will be consulted in aiding with the rehabilitation of the facility	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

Mineral Processing	Construction		• The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species • All infrastructure will be equipped with appropriate signs indicating function and potential dangers	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	Operational		• When working on equipment outside the workshop the appropriate measure needs to be implemented to prevent chemical spillage • No vehicle repairs and maintenance will occur within the operational area and will be restricted to the workshop. • Old diesel and related chemicals must be discarded within appropriate marked close containers and stored in the chemical storage facility till removal thereof	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• On accidental spillage the contaminated soil will be removed and appropriately stored till the removal there off. • Stored topsoil / tailings will be evenly spread to the recover the area • The area must be continuously inspected for spillages and remediated immediately • All vehicle traffic are restricted to the roads and demarcated traffic areas • Washing of equipment shall be restricted to urgent maintenance requirements only. • No indigenous shrubs or trees will unnecessarily uprooted and used for fire wood • If any pioneer species are observed the reporting thereof to the rehabilitation site manager is highly recommended.		

			• Employees will be advised to stay clear from any wild animals or reptiles and not to disturb or provoke them in any manner. • Strict adherence to the mine roads and no off-road driving to prevent trampling of vegetation and ground compaction • A site will be identified and colour coded water tanks will be erected for safe human consumption. • The mine shall be responsible for compliance with the relevant legislation in respect to noise. • Hearing protection will be made available to all employees where attenuation cannot be implemented. • Every vehicle in operation will be equipped with a silencer on the exhaust system. • Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water.		

			• Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document. • Fire extinguishers will be kept in good order and serviced regularly. • Hard hats, earplugs, safety glasses, dust masks, gloves, hard point boots, reflector vests and reflective overalls is compulsory before entering this area. • The entrance will be clearly marked will all regulatory signs, to indicate a potential dangerous zone.		

			• Related waste/ scrap must be dispose of in the appropriate manner		
	Decommissioning		• All structures will be broken down and removed from site. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas. • Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Office Block	Construction	0.0072 ha	• All buildings will consist of appropriate signs indicating function and potential dangers • The only necessary vegetation will be cleared	All mitigation measures within this document comply with the NEMA and DMR rules and regulations.	Upon commencement of activity.

			• On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species • Soil shall be exposed for a minimum time a possible once cleared of vegetation. The timing in clearing shall be co-ordinated as much as possible to avoid prolonged exposure to wind and water erosion • No indigenous shrubs or trees will be unnecessarily uprooted	Further does all mitigation measures proofs successful in impact management.	
	Operational		• Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document. • Fire extinguishers will be kept in good order and serviced regularly.		
	Decommissioning		• All structures will be broken down and removed from site. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas. • Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Plant Site	Construction	0.1 ha	• All buildings will consist of appropriate signs indicating function and potential dangers • The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species • Soil shall be exposed for a minimum time a possible once cleared of vegetation. The timing in clearing shall be co-ordinated as much as possible to avoid prolonged exposure to wind and water erosion • No indigenous shrubs or trees will be unnecessarily uprooted	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

	Operational		• Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document. • Fire extinguishers will be kept in good order and serviced regularly.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
	Decommissioning		• All structures will be broken down and removed from site. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations.	Upon commencement of activity.

			• Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species.	Further does all mitigation measures proofs successful in impact management.	
	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Ablution	Construction	0.0008	• The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species • Soil shall be exposed for a minimum time a possible once cleared of vegetation. The timing in clearing shall be co-ordinated as much as possible to avoid prolonged exposure to wind and water erosion	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• No indigenous shrubs or trees will be unnecessarily uprooted • Concealed septic tanks must be installed above ground, where it can be regularly inspected for leakage		
	Operational		• Ablution blocks shall be at all times be sanitized • Sanitary bins will be provided within the building, no sanitary material will be allowed within the septic tanks • All human waste and related waste will be contained within septic tanks installed for this purpose • Septic tanks and chemical toilets will be chemically treated and maintained by a contracting agency • The local municipality may be contracted on the draining of the septic tank and the removal of its contents to the sewerage plant of their choice	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Sanitary material within the bins provided will be closed in colour plastics and disposed of with domestic waste • No indigenous shrubs or trees will unnecessarily uprooted and used for fire wood • If any pioneer species are observed the reporting thereof to the rehabilitation site manager is highly recommended. • Employees will be advised to stay clear from any wild animals or reptiles and not to disturb or provoke them in any manner. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers.		

			• The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document. • The entrance will be clearly marked will all regulatory signs		
	Decommissioning		• All structures will be broken down and removed from site. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas. • Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species. • On closure Department of Water Affairs will be consulted in aiding with the rehabilitation of the facility	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Vehicle parking	Construction	0.0408 ha	• A demarcated fenced area away from the operational sight will be cleared for vehicle storage and parking • The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species • Soil shall be exposed for a minimum time a possible once cleared of vegetation. The timing in clearing shall be co-ordinated as much as possible to avoid prolonged exposure to wind and water erosion • No indigenous shrubs or trees will be unnecessarily uprooted	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

	Operational		• Drip pans will be readily available and no parked heavy vehicle will be without a drip pan. • No vehicle repairs and maintenance will occur within the operational area and will be restricted to the workshop. • Old diesel and related chemicals must be discarded within appropriate marked close containers and stored in the chemical storage facility till removal thereof • On accidental spillage the contaminated soil will be removed and appropriately stored till the removal there off. Stored topsoil / tailings will be evenly spread to the recover the area • The area must be continuously inspected for spillages and remediated immediately • Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document. • Fire extinguishers will be kept in good order and serviced regularly.		
	Decommissioning		• All structures will be broken down and removed from site. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species.		
	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Stores	Construction	0.001 ha	• All buildings will consist of appropriate signs indicating function and potential dangers • The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Soil shall be exposed for a minimum time a possible once cleared of vegetation. The timing in clearing shall be co-ordinated as much as possible to avoid prolonged exposure to wind and water erosion • No indigenous shrubs or trees will be unnecessarily uprooted		
	Operational		• Stored chemicals must be in marked closed containers • For remediation purposes a neutralizing agent for each chemical must be available at the entrance of the room at all time • Un-used chemicals must be separated from used chemicals as well as each type of chemical will be group to prevent cross-contamination • Chemicals removed from storage will be in approved containers to minimize the possibility of spillage	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Safety wear for workers will always be available for urgent situations. • Fire extinguishers for this purpose will be available at all times • Chemical and chemical containing waste will be stored in closed containers within the chemical storage room. • All personnel handling chemical related products will follow handling procedures • Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers.		

			• The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document. • Once the area specified for these waste is approximately 80% full and decommissioning of the mine the different agencies dealing with these specific chemicals will be contacted for the safe removal thereof.		
	Decommissioning		• With decommissioning of the mine the different agencies dealing with these specific chemicals will be contacted for the safe removal thereof. • All structures will be broken down and removed from site. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species.		
	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Diesel storage	Construction	0.005 ha	• Diesel tanks will stand in a leak-proof bay, supporting the tank volume plus 10% and a 1.5 m wide cement buffer will encircle the area • The floor area must be constructed at a gradient and a run-off sump to capture all contaminated water to be treated by a separator • All buildings will consist of appropriate signs indicating function and potential dangers	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species • Soil shall be exposed for a minimum time a possible once cleared of vegetation. The timing in clearing shall be co-ordinated as much as possible to avoid prolonged exposure to wind and water erosion • No indigenous shrubs or trees will be unnecessarily uprooted		
	Operational		• Vehicles which are filled with fuel will park on a cement floor for if any spillage occurs it can be cleaned • Two fire extinguishers will be present at all times • No vehicle repairs and maintenance will occur within the operational area and will be restricted to the workshop.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Old diesel and related chemicals must be discarded within appropriate marked close containers and stored in the chemical storage facility till removal thereof • The area must be continuously inspected for spillages and remediated immediately • All vehicle traffic are restricted to the roads and demarcated traffic areas • No indigenous shrubs or trees will unnecessarily uprooted and used for fire wood • If any pioneer species are observed the reporting thereof to the rehabilitation site manager is highly recommended. • Employees will be advised to stay clear from any wild animals or reptiles and not to disturb or provoke them in any manner.		

			• Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document. • Fire extinguishers will be kept in good order and serviced regularly.		
	Decommissioning		• All structures will be broken down and removed from site. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations.	Upon commencement of activity.

			• Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species. • On closure Department of Water Affairs will be consulted in aiding with the rehabilitation of the facility	Further does all mitigation measures proofs successful in impact management.	
	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Domestic Waste	Construction	0.0008 ha	• All buildings will consist of appropriate signs indicating function and potential dangers • The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Soil shall be exposed for a minimum time a possible once cleared of vegetation. The timing in clearing shall be co-ordinated as much as possible to avoid prolonged exposure to wind and water erosion • No indigenous shrubs or trees will be unnecessarily uprooted • Marked containers will be made available for storage of domestic waste		
	Operational		• Domestic waste will be kept in closed marked containers. • Containers will be removed on a regular basis. • Domestic waste will be dumped at a registered site for such disposal. • Regular inspection of containers and for spillages must be done. • Spillages need to be remediated immediately. • Safety wear for workers will always be available for urgent situations.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Fire extinguishers for this purpose will be available at all times • .Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers. • The mine shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document.		

			• Once the area specified for these waste is approximately 80% full and decommissioning of the mine the different agencies dealing with these domestic waste will be contacted for the safe removal thereof.		
	Decommissioning		• With decommissioning of the mine the specific agencies dealing with domestic waste will be contacted for the safe removal thereof. • All structures will be broken down and removed from site. • All domestic waste and chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas. • Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

	After closure		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.
Mine and Access roads	Construction	0.4 ha	• As far as possible will be made use of existing farm roads • Only when utmost necessarily will new roads be scraped. • No foreign materials will be used in the construction of roads • The only necessary vegetation will be cleared • On vegetation clearing should any nests with chicks or eggs be discovered a local nature conservation officer shall be called to relocate the species	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Soil shall be exposed for a minimum time a possible once cleared of vegetation. The timing in clearing shall be co-ordinated as much as possible to avoid prolonged exposure to wind and water erosion • No indigenous shrubs or trees will be unnecessarily uprooted • Roads will be marked with the appropriate signs for safety.		
	Operational		• The roads must be continuously inspected for spillages and remediated immediately • All vehicle traffic are restricted to the roads and demarcated traffic areas • No indigenous shrubs or trees will unnecessarily uprooted and used for fire wood • If any pioneer species are observed the reporting thereof to the rehabilitation site manager is highly recommended.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

			• Employees will be advised to stay clear from any wild animals or reptiles and not to disturb or provoke them in any manner. • Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water. • Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated • The mine shall be responsible for any cleaning up resulting from the failure by his employees or suppliers.		
	Decommissioning		• All structures will be broken down and removed from site. • All chemical spills will be rehabilitated immediately • Rip and rehabilitate all compacted areas.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

After closure		• Rehabilitation will be finalized by the spreading of tailing soil where necessary and planting of indigenous species with regular inspection for the removal of invader pioneer species.		
		• A 2 – 3 year after care plan is initiated to ensure a satisfying vegetation re-growth rate and the successful establishment of indigenous vegetation.	All mitigation measures within this document comply with the NEMA and DMR rules and regulations. Further does all mitigation measures proofs successful in impact management.	Upon commencement of activity.

OTHER MITIGATION MEASURES NOT LISTED WITH LISTED ACTIVITIES

- Vehicles will be equipped with a red flag on a long enough rod to be easily observed by the heavy vehicle drives and a roll bar
- Personnel will need to be trained on health and safety matters in line with the Health and Safety Act for mining and in the handling and remediation of chemical spills, fire and first aid
- Daily checking of oil/diesel leakages before any vehicle is operated
- Domestic waste containers will be installed and clearly marked for this purpose
- Waste storage containers shall be covered, tip-proof, weather proof and scavenger proof
- The waste storage area shall be fenced off to prevent windblown litter
- The mine shall ensure that all facilities are maintained in a neat and tidy condition and the site shall be kept fee of litter
- No burning, on site burring or dumping of waste shall occur
- Contracts with the local municipality / agencies will be signed for the removal of waste containers on an appropriate schedule of once a week, but if found necessary twice a week
- Access road maintenance throughout the entire project timeframe
- All mine roads will be cleared of foreign materials and ripped to loosen the ground for vegetation re-growth for rehabilitation purposes

1.5 Impact Management Outcomes

(A description of impact management outcomes, identifying the standard of impact management required for the aspects contemplated in paragraph ()

1.6 Impact Management Actions

(A description of impact management actions, identifying the manner in which the impact management objectives and outcomes contemplate in paragraphs (1.3) and (1.4) will be achieved)

ACTIVITY Whether listed or not listed. (E.g. Excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyers, etc... etc.... etc.)..	**POTENTIAL IMPACT** (E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc... etc... etc.	**MITIGATION TYPE** (modify, remedy, control, or stop) Through (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc) E.g. • Modify through alternative method • Control through noise control • Controlling through management and monitoring • Remedy through rehabilitation.	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented. Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation therefore state either:- Upon cessation of the individual activity Or Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations in 2.11.6 read with 2.12.and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
Drilling	Vegetation loss	Vegetation clearing control Restriction to roads	Upon commencement of activity. Integrated into the activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. vegetation clearing should be co-ordinated with activities and only the necessary area cleared.
	Geological change	-	-	-

	Topographical change	-	-	-
	Soil pollution	Immediate Rehabilitation Monitoring of drill areas	Integrated into the activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 if this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation. E.g. immediate cleanup should any spillage occur
	Grazing loss	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.
	Vegetation disturbance	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity. Integrated into the activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-

	Invader plants	Regular removal	Upon commencement of activity. Integrated into the activity	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis
	Fauna migration	Noise level control	Upon commencement of activity.	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented.
	Water quality loss	-	-	-
	Noise disturbance	Operation during office hours	Upon commencement of activity. Integrated into the activity	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented. E.g. Restrict operations to standard business hours
	Air quality degradation	Dampening of cleared Speed restriction	Upon commencement of activity.	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. Watering of the area with fresh/recycled water.

	Archaeological items	Avoid sites of significance	Before commencement of activity	Impact must be avoided at all times. Section A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.
	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Upon commencement of activity Integrated into activity	The degradation of any sensitive landscapes must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies
	Visual impact	-	-	-
	Waste disposal	Rehabilitation	Upon commencement of activity. Integrated into the activity Decommissioning of activity	Waste management procedures, as stipulated in Section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. Littering of any product will be seen as an offence and not tolerated.
	Re-vegetation	Regular inspections	Upon commencement of activity. Decommissioning of activity	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.

	Area rehabilitation	Closure standard	Integrated into activity Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated and Section A15.1.2 and B1.4 of this document area measures that when implemented will optimize this activity. E.g. rehabilitation of an area where no activity takes place.
Excavations	Vegetation loss	Vegetation clearing control Restriction to roads	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. vegetation clearing should be co-ordinated with activities and only the necessary area cleared.
	Geological change	-	-	-
	Topographic change	Rehabilitation	Integrated into activity	This impact that may occur cannot be avoided, but minimized through the implementation of and the strict adherence to the rehabilitation measures as stipulated in Section A15.1. 2 of this document. E.g. rehabilitation of prospecting excavations as the activity commences.

	Soil pollution	Immediate Rehabilitation Monitoring excavation areas	Integrated into activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 if this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation. E.g. immediate cleanup should any spillage occur
	Grazing loss	Vegetation clearing control Restriction to roads	Upon commencement of activity Integrated into the activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.
	Vegetation disturbance	Vegetation clearing control Restriction to roads	Upon commencement of activity. Integrated into the activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-
	Invader plants	Regular removal	Upon commencement of activity. Integrated into the activity	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis

	Fauna migration	Noise level control	Upon commencement of activity.	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented.
	Water quality loss	-	-	-
	Noise disturbance	Operations during office hours	Upon commencement of activity.	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented. E.g. Restrict operations to standard business hours
	Air quality degradation	Damping of cleared areas Speed restriction	Upon commencement of activity.	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. Watering of the area with fresh/recycled water.
	Archeological items	Avoid sites of significance	Before commencement of activity	Impact must be avoided at all times. Section A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.
	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Upon commencement of activity Integrated into activity	The degradation of any sensitive landscape must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies.

	Visual impact	-	-	-
	Waste disposal	Rehabilitation	Upon commencement of activity. Integrated into the activity Decommissioning of activity	Waste management procedures, as stipulated in Section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. Littering of any product will be seen as an offence and not tolerated.
	Re-vegetation	Regular inspections	Upon commencement of activity. Decommissioning of activity	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Integrated into activity Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated and Section A15.1.2 and B1.4 of this document are the measures that when implemented will optimize this activity. E.g. rehabilitation of an area where no activity takes place.
Topsoil Dump	Vegetation loss	Vegetation clearing control Restriction to roads	Upon commencement of activity.	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. vegetation clearing should be co-ordinated with activities and only the necessary area cleared.

	Geological change	-	-	-
	Topographic change	Rehabilitation	Integrated into activity Decommissioning of activity	The impact that may occur cannot be avoided, but minimized through the implementation of and the strict adherence to the rehabilitation measures as stipulated in Section A15.1.2 of this document. E.g. Rehabilitation of topsoil dumps as the activity commences
	Soil pollution	Immediate Rehabilitation Monitoring of areas	Integrated into the activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 of this documents needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and/or remediation. E.g. immediate cleanup should any spillage occur
	Grazing loss	Vegetation clearing control	Upon commencement of activity Integrated into the activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.

	Vegetation disturbance	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity. Integrated into the activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-
	Invader plants	Regular removal	Upon commencement of activity. Integrated into activity Decommissioning of activity	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis
	Fauna migration	-	-	-
	Water quality loss	-	-	-
	Noise disturbance	-	-	-
	Air quality degradation	Dampening of exposed areas Speed restriction	Upon commencement of activity. Integrated into activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. Watering of the area with fresh/recycled water.
	Archeological items	Avoid sites of significance	Before commencement of activity Integrated into activity	Impact must be avoided at all times. Section A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.

	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Upon commencement of activity Integrated into activity	The degradation of any sensitive landscape must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies
	Visual impact	-	-	-
	Waste disposal	Rehabilitation	Upon commencement of activity Integrated into activity Decommissioning of activity	Waste management procedures, as stipulated in Section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. littering of any product will be seen as an offence and not tolerated.
	Re-vegetation	Regular inspections	Integrated into activity. Decommissioning of activity	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place
	Area rehabilitation	Closure standards	Integrated into activity Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Section A15.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. rehabilitation of an area where no activity takes place.

Stockpiles	Vegetation loss	Vegetation clearing control	Upon commencement of activity.	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. vegetation clearing should be co-ordinated with activities and only the necessary area cleared.
	Geological change	-	-	-
	Topographic change	Rehabilitation	Integrated into activity Decommissioning of activity	The impact that may occur cannot be avoided, but minimized through the implementation of and the strict adherence to the rehabilitation measures as stipulated in Section A15.1.2 of this document. E.g. rehabilitation of stock dump areas
	Soil pollution	Immediate rehabilitation Monitoring of area	Integrated into activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and/or remediation. E.g. immediate cleanup should any spillage occur.

	Grazing loss	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.
	Vegetation disturbance	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-
	Invader plant	Regular removal	Integrated into the activity Decommissioning of activity	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis
	Fauna migration	-	-	-
	Water quality loss	-	-	-
	Noise disturbance	-	-	-

	Air quality loss	Dampening of exposed areas Speed restriction	Upon commencement of activity. Integrated into activity Decommissioning of activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. Watering of the area with fresh/recycled water.
	Archaeological items	Avoid sites of significance	Before commencement of activity Integrated into activity	Impact must be avoided at all times. Section A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.
	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Upon commencement of activity Integrated into activity	The degradation of any sensitive landscape must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies
	Visual impact	-	-	-
	Waste disposal	Rehabilitation	Integrated into activity Decommissioning of activity	Waste management procedures, as stipulated in Section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. littering of any product will be seen as an offence and not tolerated.

	Re-vegetation	Regular inspections	Integrated into activity Decommissioning of activity.	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Integrated into activity Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Section A15.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. rehabilitation of an area where no activity takes place.
Waste Dump	Vegetation loss	Vegetation clearing control Restriction to roads	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. vegetation clearing should be co-ordinated with activities and only the necessary area cleared.
	Geological change	-	-	-

	Topographic change	Rehabilitation	Integrated into activity Decommissioning of activity	The impact that may occur cannot be avoided, but minimized through the implementation of and the strict adherence to the rehabilitation measures as stipulated in section A15.1.2 of this document. E.g. Rehabilitation of mining excavations as the activity commences.
	Soil pollution	Immediate rehabilitation Monitoring of areas	Integrated into activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and/or remediation. E.g. immediate cleanup should any spillage occur.
	Grazing loss	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.
	Vegetation disturbance	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving

	Water table level	-	-	-
	Invader plant	Regular removal	Integrated into activity Decommissioning of activity	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis
	Fauna migration	-	-	-
	Water quality loss	-	-	-
	Noise disturbance	-	-	-
	Air quality degradation	Dampening of areas Speed restriction	Integrated into activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. Watering of the area with fresh/recycled water.
	Archaeological items	Avoid sites of significance	Before commencement of activity Integrated into activity	Impact must be avoided at all times. Section A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.
	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Upon commencement of activity Integrated into activity	The degradation of any sensitive landscapes must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies
	Visual impact	-	-	-

	Waste disposal	Rehabilitation	Integrated into activity Decommissioning of activity	Waste management procedures, as stipulated in Section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. littering of any product will be seen as an offence and not tolerated.
	Re-vegetation	Regular inspections	Integrated into activity Decommissioning of activity.	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Integrated into activity Decommissioning of activity	Rehabilitation of disturbed areas is crucial. Within the mitigation measures stipulated and Section A15.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. rehabilitation of an area where no activity takes place.
Settling dams	Vegetation loss	Vegetation clearing control Restriction to roads	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. only the necessary vegetation is cleared for the activity.
	Geological change	-	-	-

	Topographic change	Rehabilitation	Integrated into activity Decommissioning of activity	The impact that may occur cannot be avoided, but minimized through the implementation of and the strict adherence to the rehabilitation measures and closure standards as stipulated in Section A15.1.2 of this document. E.g. rehabilitation of settle waste material.
	Grazing loss	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.
	Vegetation disturbance	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-
	Invader plant	Regular removal	Integrated into activity Decommissioning of activity	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis

	Fauna migration	-	-	-
	Water Quality loss	Water reticulation Waste water management	Integrated into activity Decommissioning of activity	This impact can be minimized and/or avoided with proper operational procedures (Section A4.2) and mitigation measures stipulated in this document. E.g. Settling of solid materials and re-use of water in processing operations
	Noise disturbance	-	-	-
	Air quality degradation	Dampening of exposed areas Speed restriction	Integrated into activity Decommissioning of activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. water of the area with fresh/recycled water
	Archaeological items	Avoid sites of significance	Before commencement of activity Integrated into activity	Impact must be avoided as all times. Section A8.8 and B1.4 needs to be implemented and strictly adhered to in order to achieve successful impact avoidance
	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Upon commencement of activity	The degradation of any sensitive landscapes must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies
	Visual impact	-	-	-

	Waste disposal	Rehabilitation	Integrated into activity Decommissioning of activity	Waste management procedures, as stipulated in Section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. Settling of solids from puddle to obtain clean water and ease rehabilitation
	Re-vegetation	Regular inspections	Integrated into activity Decommissioning of activity.	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated and Section A15.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. continuous rehabilitation of activity by using settled materials where necessary
Office block	Vegetation loss	Vegetation clearing control Restriction to roads	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. vegetation clearing should be co-ordinated with activities and only the necessary area cleared.
	Geological change	-	-	-

	Topographic change	-	-	-
	Soil pollution	Immediate rehabilitation Regular inspections	Integrated into activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and/or remediation. E.g. immediate cleanup should any spillage occur
	Grazing loss	Vegetation clearing control Restriction to roads	Integrated into activity Decommissioning of activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.
	Vegetation disturbance	Vegetation clearing control Restriction to roads	Integrated into activity Decommissioning of activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-

	Invader plants	Regular removal	Upon commencement of activity.	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis
	Fauna migration	-	-	-
	Water quality loss	-	-	-
	Noise disturbance	-	-	-
	Air quality degradation	Damping of exposed areas Speed restriction	Integrated into activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. watering of the area with fresh/recycled water.
	Archaeological items	Avoid sites of significance	Before commencement of activity	Impact must be avoided at all times. Section A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.
	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Before commencement of activity	The degradation of any sensitive landscape must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies.
	Visual impact	-	-	-

	Waste disposal	Waste management Rehabilitation	Integrated into activity Decommissioning of activity	Waste management procedures, as stipulated in Section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. facilitate demarcated areas with waste containers.
	Re-vegetation	Regular inspections	Integrated into activity Decommissioning of activity	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Section A15.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. rehabilitation of an area where not activity takes place.
Plant Site	Vegetation loss	Vegetation clearing control Restriction to roads	Upon commencement of activity.	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only necessary vegetation needs to be cleared.
	Geological change	-	-	-
	Topographic change	-	-	-

	Soil pollution	Immediate Rehabilitation Monitoring of site	Integrated into activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 if this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation. E.g. immediate cleanup should any spillage occur
	Grazing loss	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.
	Vegetation disturbance	Vegetation clearing control Traffic restriction to roads	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-
	Invader plants	Regular removal	Integrated into activity Decommissioning of activity.	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis

	Fauna migration	Noise level control	Integrated into activity	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented.
	Water quality loss	Waste water management Water reticulation	Integrated into activity Decommissioning of activity	The installation of a settling dam as described in Section B1.4 of this document will aid in the optimal management of waste water. E.g. waste water is pumped into the settling dam for suspended materials to settle out and the water recycled.
	Noise disturbance	Operation only during office hours	Integrated into activity	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented. E.g. Restrict operations to standard business hours
	Air quality loss	Dampening of site area Speed restriction	Integrated into activity Decommissioning of activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. Watering of the area with fresh/recycled water.
	Archaeological items	Avoid sites of significance	Before commencement of activity	Impact must be avoided at all times. Sections A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance

	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Before commencement of activity	The degradation of any sensitive landscapes must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies
	Visual impact	-	-	-
	Waste disposal	Rehabilitation	Integrated into activity	Waste management procedures, as stipulated in Section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. littering of any product will be seen as an offence and not tolerated
	Re-vegetation	Regular inspections	Decommissioning of activity.	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulation in Section A15.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. rip and rehabilitated the area before closure of mine

Ablution	Vegetation loss	Vegetation clearing control Restriction to roads	Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. vegetation clearing should be co-ordinated with activities and only the necessary area cleared.
	Geological change	-	-	-
	Topographic change	-	-	-
	Soil pollution	Immediate Rehabilitation Regular maintenance	Integrated into activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 if this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation. E.g. regular inspection of the chemical toilets against leakage.
	Grazing loss	Vegetation clearing control Restriction to roads	Upon commencement of activity Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.

	Vegetation disturbance	Vegetation clearing control Restriction to roads	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-
	Invader plants	Regular removal	Integrated into activity Decommissioning of activity	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis
	Fauna migration	-	-	-
	Water quality loss	Management standards	Integrated into activity Decommissioning of activity	Impact can be minimized with the adherence to the mitigation measures stipulated in Section B1.4 and operational standards (Section A4.2) of this document. E.g. chemical toilets (septic tanks) needs to be maintained on a regular basis.
	Noise disturbance	-	-	-

	Air quality degradation	Dampening of exposed areas Speed restriction	Integrated into activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. Watering of the areas with fresh/recycled water.
	Archaeological items	Avoid sites of significance	Before commencement of activity	Impact must be avoided at all times. Section A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.
	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Before commencement of activity	The degradation of any sensitive landscape must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies
	Visual impact	-	-	-
	Waste disposal	Rehabilitation	Integrated into activity Decommissioning of activity	Waste management procedures, as stipulated in Section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. regular removal of waste material by contracting agency

	Re-vegetation	Regular inspections	Decommissioning of activity.	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigations measures stipulated in Section A15.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. ripped and rehabilitate compacted area after removal of structure before closure of activity.
Vehicle parking	Vegetation loss	Vegetation clearing control	Upon commencement of activity.	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. vegetation clearing should be co-ordinated with activities and only the necessary area cleared.
	Geological change	-	-	-
	Topographic change	-	-	-

	Soil pollution	Immediate Rehabilitation Monitoring of areas Regular vehicle services Drip pan installation	Integrated into activity Decommissioning of activity.	Impact must be avoided as far as possible or remediated immediately. Section B1.4 if this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation. E.g. Installation of drip pans
	Grazing loss	Vegetation clearing control Restriction to area	Upon commencement of activity Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.
	Vegetation disturbance	Vegetation clearing control Restriction to area	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-
	Invader plants	Regular removal	Integrated into activity Decommissioning of activity.	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis

	Fauna migration	Noise level control	Integrated into activity	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented
	Water quality loss	Waste water management	Integrated into activity Decommissioning phase	Impact can be minimized with the adherence to the mitigation measures, stipulated in Section B1.4, and operational standards (Section A4.2) of this document. E.g. Waste water must be captured in sump / container to be removed with chemical waste
	Noise disturbance	Operation only during office hours	Integrated into activity	This impact can only be minimized and adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented. E.g. restrict operations to standards business hours.
	Air quality degradation	Dampening of exposed areas	Integrated into activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. watering of the area with fresh/recycled water.
	Archaeological items	Avoid sites of significance	Before commencement of activity	Impact must be avoided at all times. Section A8.8 and B1.4 and of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.

	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Before commencement of activity	The degradation of any sensitive landscape must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies.
	Visual impact	-	-	-
	Waste disposal	Rehabilitation	Integrated into activity Decommissioning of activity	Waste management procedures, as stipulated in section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. old parts containing diesel/oil will be discarded in a container provided for this purpose.
	Re-vegetation	Regular inspections	Decommissioning of activity.	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Section A15.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. rip and rehabilitated compacted areas during the decommissioning of the activity.

Stores	Vegetation loss	Vegetation clearing control	Upon commencement of activity.	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. vegetation clearing should be co-ordinated with activities and only the necessary area cleared.
	Geological change	-	-	-
	Topographic change	-	-	-
	Soil pollution	Immediate Rehabilitation Regular inspection Chemical handling control	Integrated into activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 if this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation. E.g. immediate cleanup should any spillage occur
	Grazing loss	Vegetation clearing control Restriction to roads	Upon commencement of activity Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.

	Vegetation disturbance	Vegetation clearing control Restriction to roads	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-
	Invader plant	Regular removal	Integrated into activity Decommissioning of activity.	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis
	Fauna migration	-	-	-
	Water quality loss	-	-	-
	Noise disturbance	-	-	-
	Air quality degradation	Dampening of expose areas Speed restriction	Integrated into activity Decommissioning of activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. water of the area with fresh/recycles water.
	Archaeological items	Avoid sites of significance	Before commencement of activity	Impact must be avoided at all times. Section A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.

	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Before commencement of activity	The degradation of any sensitive landscape must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies.
	Visual impact	-	-	-
	Waste disposal	Rehabilitation	Integrated into activity Decommissioning of activity	Waste management procedures, as stipulated in Section B1.4 will aid in the avoidance and/or remediation when implemented and adhered to. E.g. waste containers will be removed by contractual companies once 80% full
	Re-vegetation	Regular inspections	Decommissioning of activity.	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Section A15.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. ripped and rehabilitated compacted areas after structures are removed.

Diesel storage	Vegetation loss	Vegetation clearing control	Upon commencement of activity.	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. the only necessary vegetation needs to be cleared.
	Geological loss	-	-	-
	Topographic change	-	-	-
	Soil pollution	Immediate Rehabilitation Monitoring of area	Integrated into activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 if this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation. E.g. installation of a leak-proof bunker bay for the diesel tank
	Grazing loss	Restriction to cleared areas	Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.

	Vegetation disturbance	Restriction to roads	Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-
	Invader plants	Regular removal	Integrated into activity Decommissioning of activity.	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis
	Fauna migration	Noise level control	Integrated into activity	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this documents needs to be implemented.
	Water quality loss	Waste water management	Integrated into activity Decommissioning phase	Impact can be minimized with the adherence to the mitigation measures, stipulated in Section B1.4, and operational standards (Section A4.2) of this document. E.g. Waste water must be captured in sump / container to be removed with chemical waste

	Noise disturbance	Operations only during office hours	Integrated into activity	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented. E.g. restrict operations to standard business hours
	Air quality degradation	Dampening of exposed areas Speed restriction	Integrated into activity Decommissioning of activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. watering of the area with fresh/recycled water.
	Archaeological items	Avoid sites of significance	Before commencement of activity	The degradation of any sensitive landscapes must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies
	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Before commencement of activity	The degradation of any sensitive landscapes must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done e.g. avoidance of open surface water bodies
	Visual impact	-	-	-

	Waste disposal	Rehabilitation	Integrated into activity Decommissioning of activity	Waste management procedures, as stipulated in Section B1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. littering of any product will be seen as an offence and not tolerated.
	Re-vegetation	Regular inspections	Decommissioning of activity	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Section A5.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. rip and rehabilitated the area during decommissioning before closure of activity
Domestic waste	Vegetation loss	Vegetation clearing control	Upon commencement of activity.	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. vegetation clearing should be co-ordinated with activities and only the necessary area cleared.
	Geological change	-	-	-

	Topographic change	-	-	-
	Soil pollution	Immediate Rehabilitation Monitoring of areas	Integrated into activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 if this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation. E.g. immediate cleanup should any litter be seen
	Grazing loss	Restriction to cleared areas	Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.
	Vegetation disturbance	Restriction to cleared areas	Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-

	Invader plants	Regular removal	Integrated into activity Decommissioning of activity.	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis
	Fauna migration	-	-	-
	Water quality loss	-	-	-
	Noise disturbance	-	-	-
	Air quality degradation	Dampening of exposed areas	Integrated into activity Decommissioning of activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in section B1.4 needs to be done. E.g. watering of the area with fresh/recycled water.
	Archaeological items	Avoid sites of significance	Before commencement of activity	Impact must be avoided at all times. Section A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.
	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Before commencement of activity	The degradation of any sensitive landscapes must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies.
	Visual impact	-	-	-

	Waste disposal	Rehabilitation	Integrated into activity Decommissioning of activity	Waste management procedures, as stipulating in Section B1.4 and A4.2 will aid in the avoidance and/or remediation when implemented and adhered to. E.g. no onsite burring or burning may occur and waste must be discarded as the municipal dump site.
	Re-vegetation	Regular inspections	Decommissioning of activity	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section B1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.
	Area rehabilitation	Closure standards	Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Section A15.1.2 and B1.4 of this document area measures that when implemented will optimize this activity. E.g. rehabilitation of an area where no activity takes place.
Mine and access roads	Vegetation loss	Vegetation clearing control	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section 1.4 of this document. E.g. amount of mine roads needs to be kept to a minimum.
	Geological change	-	-	-

	Topographic change	Rehabilitation	Integrated into activity Decommissioning of activity	The impact that may occur cannot be avoided, but minimized through the implementation of and the strict adherence to the rehabilitation measures as stipulated in Section A15.1.2 of this document. E.g. rip and rehabilitated unnecessary mine roads.
	Soil pollution	Immediate Rehabilitation Monitoring areas	Integrated into activity Decommissioning of activity	Impact must be avoided as far as possible or remediated immediately. Section B1.4 if this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation. E.g. immediate cleanup should any spillage occur
	Grazing loss	Vegetation clearing control Restriction to roads	Upon commencement of activity Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Only the necessary area cleared.
	Vegetation disturbance	Vegetation clearing control Restriction to roads	Upon commencement of activity. Integrated into activity	The impact that my occur cannot be avoided, but minimized through the implementation of and strict adherence to the mitigation measures as stipulated in Section B1.4 of this document. E.g. Restriction to mine roads and no off-road driving
	Water table level	-	-	-

	Invader plants	Regular removal	Integrated into activity.	The establishment of invader plant species can be avoided. The strict adherence to the mitigation measures as stipulated in Section B1.4 of this document will result in positive results. E.g. Removal of invader plant species on a regular basis
	Fauna migration	Noise control	Integrated into activity	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented
	Water quality loss	-	-	-
	Noise disturbance	Operations only during office hours Mine safety equipment	Integrated into activity	This impact can only be minimized and the adherence to the noise control measures as stipulated in Section B1.4 of this document needs to be implemented. E.g. restrict operations to standard business hours
	Air quality loss	Dampening of mine roads Speed and road restriction	Integrated into activity	The degradation of air quality must be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in Section B1.4 needs to be done. E.g. Watering of the area with fresh/recycled water.

	Archaeological items	Avoid sites of significance	Before commencement of activity Integrated into activity	Impact must be avoided at all times. Section A8.8 and B1.4 of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance.
	Sensitive landscape	Adherence to all mitigation measures Avoid significant sensitive sites	Before commencement of activity Integrated into activity	The degradation of any sensitive landscapes must be minimized as far as possible. Implementation and adherence to Section A8.8 and B1.4 needs to be done. E.g. avoidance of open surface water bodies
	Visual impact	-	-	-
	Waste disposal	Rehabilitation	Integrated into activity Decommissioning of activity	Waste management procedures, as stipulated in Section 1.4, will aid in the avoidance and/or remediation when implemented and adhered to. E.g. lettering of any product will be seen as an offence and not tolerated.
	Re-vegetation	Regular inspections	Integrated into activity Decommissioning of activity	Re-vegetation of a disturbed area is crucial. Within the mitigation measures stipulated in Section 1.4 of this document are measures that when implemented will optimize this activity. E.g. watering of areas where re-vegetation needs to take place.

	Area rehabilitation	Closure standards	Decommissioning of activity	Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Section A15.1.2 and B1.4 of this document are measures that when implemented will optimize this activity. E.g. rehabilitation of an area where no activity takes place.

1.7 Financial Provision

1.7.1 Determination of the amount of Financial Provision

1.7.1.1 Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation

The main closure objective is to create a post-operational environment through extensive rehabilitation to such an extent that it closely represents the original undisturbed environment.

The closure objective could not be aligned with the baseline environment as the project area has disturbed sites caused by historic mining activities which caused some damage to the environment that needs to be rectified.

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

The environmental objectives in relation to closure are still in the consultation process with the landowner.

1.7.1.3 Provide a rehabilitation plan that describes and shows the scale and aerial extent of the main mining activities, including the anticipated mining area at the time of closure

- Rehabilitation is planned to occur in the following manner:
  - Drilling
    - All drill holes will be rehabilitated before commencing to the following
    - The drill chips extracted will be backfilled in a reverse sequence as being drilled out
    - The rehabilitated area will be continuously inspected against invader / pioneer plant species and to monitor the indigenous vegetation regrowth
  - Bulk sampling
    - The rough material from the screens will be discarded back into the open excavation to initiate the rehabilitation process.
    - The fines (‘dry waste’) from the dewatering screens is discarded with the rough material to fill any possible gaps that may occur between the rough materials.
    - The waste and coarse materials for the sand auger as well as the the surplus from the diamond sorting plant and scrubber is then discarded into the excavation.
    - Once filled the overburden and topsoil is respectively spread over the area to finalize rehabilitation.
    - The rehabilitated area will be continuously inspected against invader / pioneer plant species and to monitor the indigenous vegetation regrowth rate.

- During the decommissioning of the mine the following will be done to ensure a successful closure
  - All infrastructure will be removed for the area and the compacted ground ripped and rehabilitated.
  - Mine roads will also be ripped and rehabilitated.
  - Where necessary will the settled material from the settling dam be used as a topsoil to finalize rehabilitation
  - All rehabilitated areas will be monitored and regularly inspected against invader / pioneer species as well as monitoring the indigenous vegetation regrowth rate.

1.7.1.4 Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives

Throughout the whole document during the environmental assessment and environmental management all possible management, remediation and mitigation measures were planned toward the rehabilitation of the environment to result in an outcome compatible with the closure objectives.

1.7.1.5 Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline

The calculated total amount necessary for the financial provision to manage and rehabilitate the environment is **R130 839.00.**

1.7.1.6 Confirm that the financial provision will be provided as determined.

The applicant will provide the total amount of **R130 839.00**in the form of a bank guarantee on the granting of this Prospecting Right application (see table below)

CALCULATION OF THE QUANTUM

Applicant: **MENTOZA HOLDING AND INVESTMENTS (PTY) LTD** **Ref 12220 PR**

Date:21-04-2019

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	15,94	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	221,99	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	327,14	1	1	0
3	Rehabilitation of access roads	m2	0	39,72	1	1	0
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	385,55	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	210,3	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	443,97	1	1	0
6	**Opencast rehabilitation including final voids and ramps**	**ha**	**0**	**225 957,57**	**1**	**1**	**0**
7	Sealing of shafts adits and inclines	m3	0	119,17	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	155 155,97	0,52	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	193 243,96	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	561 272,05	1	1	0
9	Rehabilitation of subsided areas	ha	0	129 919,76	1	1	0
10	General surface rehabilitation	ha	0,1	122 909,70	1	1	12290,97
11	River diversions	ha	0	122 909,70	1	1	0
12	Fencing	m	0	140,2	1	1	0
13	Water management	ha	0	46 733,73	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	5	16 356,80	1	1	81784
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		94074,97

1	Preliminary and General	11288,9964	**weighting factor 2** 1	11288,9964
2	Contingencies	9407,497		9407,497
			Subtotal 2	114771,46
			VAT (15%)	16068,00
			Grand Total	**130839**

1.8 Environmental awareness plan

1.8.1 Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work

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

Motivation:

- Inspections will be held on a regular basis against the do's and don'ts listed within this document. Immediate penalties can be given to offenders.

- On the discretion of the mine, motivation can be implemented

- By all-expenses paid, braai/function at the end of unbroken fixed environmental contamination hours.

1.8.2 Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment.

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

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

    No glass, paper, plastics and cigarette duds are to be littered during the duration of the mining operations. Garbage containers will be installed and maintained to prevent litter pollution.
  - Open fires – The Northern Cape is generally known as a semi-arid region with less than moderate rainfall per annum. It is however by law prohibited to start open fires.

    Due to the hot and dry conditions of the region is it very susceptible for runaway fires. No open fires will be tolerated during the mining period and as this is regarded by law as a criminal offence related penalties can be issued. The littering of self-ignitable substances or objects (e.g. matches)

are also not allowed as it will always pose a danger regarding field fires, and if such happen the person responsible to the littering will be charged with arson and related penalties can be issued.

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

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

  - ✓ Strict use and cleanliness of the toilette facilities will be enforced during the entire life of mine.

  - ✓ Employees will further be advised and educated on the importance of consuming clean and fresh water. Several sites will be identified and water tanks will be erected for safe human water consumption.

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

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

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

  - ✓ No indigenous shrubs of trees will be unnecessarily uprooted and utilized for firewood, the employees will rather be advised to utilize pioneer species and be educated on which plant species are indigenous, endangered or pioneer.

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

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

- Work Related Awareness
  - Work shops
    All work shop personnel will receive a basic information session regarding

the threats of diesel, oil and other related chemicals impose on the environment.

The following must be implemented or enforced:-

- ✓ Before cleaning the work shop, make sure all spillages have been treated.
- ✓ When handling related chemicals make sure of non-spillage procedures.
- ✓ Make sure boots are cleaned from chemicals before leaving the workshop into the unprotected environment.
- ✓ Vehicles must be in the workshop before removal of drip pans.
- ✓ When working on equipment outside the workshop, the appropriate measures needs to be implemented to prevent chemical spillage.
- ✓ Related waste/scrap must be dispose off in the appropriate manner.

- Wash bay

Although washing of vehicles do not pose a risk to the environment several pointers need to be adhered to:-

- ✓ Be sure that the electrical wires of the washing equipment do not make any contact with water used.
- ✓ Plastic and domestic wastes removed from the vehicles from the vehicles need to be discarded in the appropriate manner
- ✓ If any oil or diesel leakage is observed, immediate communication with the workshop and repair of vehicle needs to be done, before it is cleaned or can be cleaned in the workshop.
- ✓ Make sure boots are cleaned from chemicals before leaving the bay into the unprotected environment
- ✓ When a detergent is used it must be ensured that it is bio-degradable and allocated for this purpose.

- Heavy vehicle operators

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

The following must be implemented or enforced:-

- ✓ Daily checking for oil/diesel leakages before vehicle is operated
- ✓ Drip pans must be installed during “off-time”
- ✓ Immediate communication with the workshop when faults are observed.

- ✓ Strict adherence to the mine roads and no off-road driving to prevent trampling of vegetation

- ✓ Driving speed must be complied with. Beware of animals, workers and other vehicles.

- Machinery operators

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

  - Maintenance personnel

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

    Pointers that will be looked at:-

    - ✓ Electricians may not leave any cables unprotected scattered on the site – animals may get tangled up.

    - ✓ During fencing/rehabilitation common fence wires may not be left scattered as these rust over time – any cuts to animals and humans (sepsis and tetanus risk) can lead to suffering or great discomfort.

    - ✓ No metals may be left scattered as it pose the same threat as described directly above

    - ✓ All personnel handling chemical relating products must follow handling procedures – any spillage contaminating the ground will pose risk to environmental degradation

    - ✓ All chemical used must be put to storage afterwards – containers may leak and environmental contamination occurs.

1.9 Specific information required by the Competent Authority

(Among others, confirm that the financial provision will be reviewed annually)

- Annually renewal of financial provision
- Annual Monitoring and Compliance Report
- Annual Progress Report
- Annual Environmental Awareness Training Report

2. Undertaking

The EAP herewith confirms

a) the correctness of the information provided in the reports
b) the inclusion of comments and inputs from stakeholders and I&APs
c) the inclusion of inputs and recommendations from the specialist reports where relevant; and
d) that the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties are correctly reflected herein.

_____

Ms Tintswalo Simago
Date: **28 MAY May 2019**

***** END *****

APPENDIX 1

Department of Mineral Resources : Mentoza Holdings and Investments (Pty) Ltd-
Prospecting Right Acceptance Letter

mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA
Private Bag X 6093, Kimberley, 8300, 65 Phakamile Mabija Street, 1st Floor Permanent Building, Kimberley, 8301
Tel: 053 807 1773 Fax: 053 832 5671 Email:Vuyane.magwaca@dmr.gov.za Ref: NC 30/5/1/1/2/12220 PR
From: Mineral Regulation **Enquiries:** VJ Magwaca

Per Registered Mail

The Directors ·

Mentoza Holdings and Investment (Pty) Ltd

1798 Rhadebe Street
Galeshewe
Kimberley
8345

Fax: 0710432075
Email: Mentorza0@gmail.com

Dear Sir/Madam

APPLICATION FOR PROSPECTING RIGHT IN TERMS OF SECTION 16 AND PERMISSION TO REMOVE AND DISPOSE OF MINERALS IN TERMS OF SECTION 20 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT 28 OF 2002 AS AMENDED: FARM KALKFONTEIN 66: WITHIN THE ADMINISTRATIVE DISTRIC OF HERBERT.

1. This is to inform you that your application for a prospecting right in terms of **section 16 and section 20** of the Act (28 of 2002) to Prospect for and to remove and dispose of **Diamond (alluvial and general)** in terms of the Mineral and Petroleum Resources Development Act, 2002 as amended has been accepted.

2. In terms of section **12 (d)** of the Act, you are directed to comply with the following instructions:
   a. Notify and consult with the landowner, lawful occupier and any interested and affected party and include the result of the consultation in the environmental reports in line with Regulation 41(2) read with Section 24J of National Environment Management Act, 1998.

b. Lodge an application in terms of National Water Act No 36 of 1998 with the Department of Water Affairs with immediate effect.

3. Be advised that the Minister may having regard to the type of mineral concerned and the extent of the proposed prospecting project, direct the applicant to give effect to the objects of the section 2(d) of the Act. In order to comply with section 2(d) read together with **17(4) you are thus directed** to submit the following documents within 30 days from the date of this letter.

    a. Duly signed shareholders agreements with your empowerment partner in which provision shall be made for entrepreneurs, local community and employees,
    b. Share certificates,
    c. Details relating to the equity by the BEE shareholders,
    d. Any other agreement relating to the BEE shareholding including the voting pool agreement where applicable,
    e. Articles and memorandum of association of the company.

4. Further note that the acceptance of your application does not grant you the right to commence with prospecting activities. It only signify that your application will be processed, evaluated and the Minister or his delegate will make a decision within 197 days from the date of lodgement.

Yours faithfully

.....
REGIONAL MANAGER:
MINERAL REGULATION
NORTHERN CAPE REGION
DATE: 10/2/16

APPENDIX 2

PUBLIC CONSULTATION PROCESS-
NEWSPAPER ADVERT AND
NOTICE BOARD AT THE PROPERTY

Business

(404) Business Premises

BESIGHEIDS perseel te huur met vertoon lokaal. ±200 m². Langs Vermeulens. Kontak 082-855-4828 of (053) 831-5323.

Accommodation

(560) Accommodation

ACCOMMODATION FOR RENT
****
HOUSE FOR SALE
Phone
(053) 831-8889
082-493-6602

Rooms / Offices
Newly renovated
To Let in CBD
064-245-2464
(053) 831-1374

(565) Rooms To Let

KBLY NORTH: R1 600 pm + dep. One person. Phone 078-710-9772.

(565) Rooms To Let

NEW PARK: Small room, bathr, prepaid. R2 000. Tel 066-153-6641.

(567) To Let Flats

NEW PARK: 1 bedr flat, R5 000 pm. Tel 073-932-7513.

NEW PARK: 1 bedr, 1 bathr, open lounge / kitchen. R4 100 pm. No kids, no pets. Tel 066-153-6641.

(568) To Let Garden Cottages

NEW PARK: 1 bedroom flat. R4 500 pm plus dep. Water incl. Built-in stove. Tel 082-882-3955.

NEW PARK: 2 bedroom garden flat. R5 500 pm, excl elec. Phone (053) 832-4695.

(569) To Let Homes

BRAND new 3 bedroom, 2 bathroom to let in Hadison Park. Tel Irene at 072-187-0867 or Charity on 083-661-8251. Office (053) 832-1101.

(569) To Let Homes

Flats, Houses, Offices and Warehouses To Let
Tel: (053) 832-1101
Cell: 083-661-8251
Cell: 072-187-0867

GREENSIDE: 3 Semi bedr house. R5 500 pm + dep. Avail 1 Nov. Cell 083-697-9484.

JAN KEMPDORP: 2 bedr. R1 800 pm. Tel 082-609-6272.

There's a WARMTH in Classified advertising

Classified advertising provides the leads for your residential search. Whether you're looking for a flat or a cosy cottage - Classified offers the options to warm up your search

Classifieds 053 832 6261

For all your Legal Advertisements Contact us on Tel: 053 832 6261

Legals & Tenders

(711) Public Notices

NOTICE OF INTENDED PROSPECTING ACTIVITIES

Application for a Prospecting Right for Diamonds (Alluvial and General) on the Farm Kalkfontein 66, within the administrative district of Herbert.

DMR Ref No: NC 30/5/1/1/2/12220 PR

Notification is hereby made of the public participation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No 28 of 2002) (as amended, 2008) and regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017).

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources (DMR) to prospect for Diamonds (Alluvial and General) on the farm Kalkfontein No 66, situated in the administrative district of Herbest, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **20 December 2018.**

Such representations or comments must be send to Mr LL Mocwagole at 071-043-2075, faxed to 086-536-4881 or e-mailed to: mentorza0@gmail.com

(711) Public Notices

NOTICE FOR PUBLIC MEETING

NOTIFICATION OF THE PUBLIC PARTICIPATION PROCESS TO ENSURE COMPLIANCE WITH REGARD TO THE REQUIREMENTS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002 AS AMENDED -"MPRDA"); THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998 AS AMENDED -"NEMA") WITH THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS 2014 ("EIA REGULATIONS – CHAPTER 6"); THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO 59 OF 2008) AND THE NATIONAL WATER ACT, 1998 (ACT 36 OF 1998) AS AMENDED WITH THE WATER USE LICENCE AND APPEALS REGULATIONS, 2017 WHERE APPLICABLE.

TO BE UNDERTAKEN BY:
Kimswa Mining (Pty) Ltd

PROPERTY UNDER APPLICATION
Unsurveyed State Land Vaal River adjacent to Farm 352, Barkly West Kimswa Mining (Pty) Ltd ("the applicant") has submitted an application for a Mining Permit for Diamonds (General and Alluvial) and Sand (General) in respect of the above mentioned farm situated in the magisterial district of Barkly West, Northern Cape Province.

The application was submitted to the Regional Manager, Department of Mineral Resources ("DMR") situated at 65 Phakamile Mabija Street, Kimberley, 8301. Contact number (053) 807-1700 with reference NC 30/5/1/3/2/10691MP.

The Environmental Impact Assessment and Environmental Management Programme will be submitted in line with the National Environmental ManagementAct, 1998 within the prescribed timeframes.

NATURE AND LOCATION OF THE ACTIVITY
The property is located 20 km north west of Barkly West on the R31 route to Postmasburg. The planned mining activities will involve the removal of alluvial gravels by means of opencast mining methods with heavy earthmoving equipment as well as the associated processing of the material with a diamond processing plant where the diamonds will be recovered and sold on the open market.

INVITATION TO PARTICIPATE AND COMMENT AT PUBLIC MEETING
All interested and affected parties are invited to a Public Participation meeting where information regarding this project will be shared and discussed:

VENUE: Gong-Gong – Kiessiekama Hall (APU) Church (24°28'5,01S and 24°24'22,69E)

DATE: 29 November 2018

TIME : 11h00

For more information or questions please contact:
Mr Willie Oosthuizen
Wadala Mining and Consulting (Pty) Ltd
Tel (053) 832-0029
E-mail: woosthuizen950@gmail.com

NOTICE OF THE APPLICATION FOR AN ENVIRONMENTAL AUTHORISATION, A WASTE MANAGEMENT LICENCE AND A WATER USE LICENCE FOR THE PROPOSED EXPANSION OF THE CTP FINE RESIDUE DEPOSIT AND BACKFILLING OF THE WESSELTON PIT FOR EKAPA MINERALS (PTY) LTD

This advertisement gives notice to potential Interested and Affected Parties ("I&APs") about where information in respect of the application for the proposed expansion of the CTP Fine Residue Deposit and Backfilling of the Wesselton Pit can be obtained, as well as the opportunity I&APs have to comment on the Scoping Report.

BACKGROUND TO THE PROJECT
Kimberley Ekapa Mining – Joint Venture (KEM-JV) intends to apply for a Waste Management Licence, Environmental Authorisation and a Water Use Licence. The project area is located partly in both the Northern Cape Province and the Free State Province, approximately 9 km south-east of the town of Kimberley. This notice pertains to the environmental authorisation application. The proposed activities include the expansion of the CTP Fine Residue Deposit as operated and managed by Kimberley Ekapa Mining (Pty) Ltd, over the

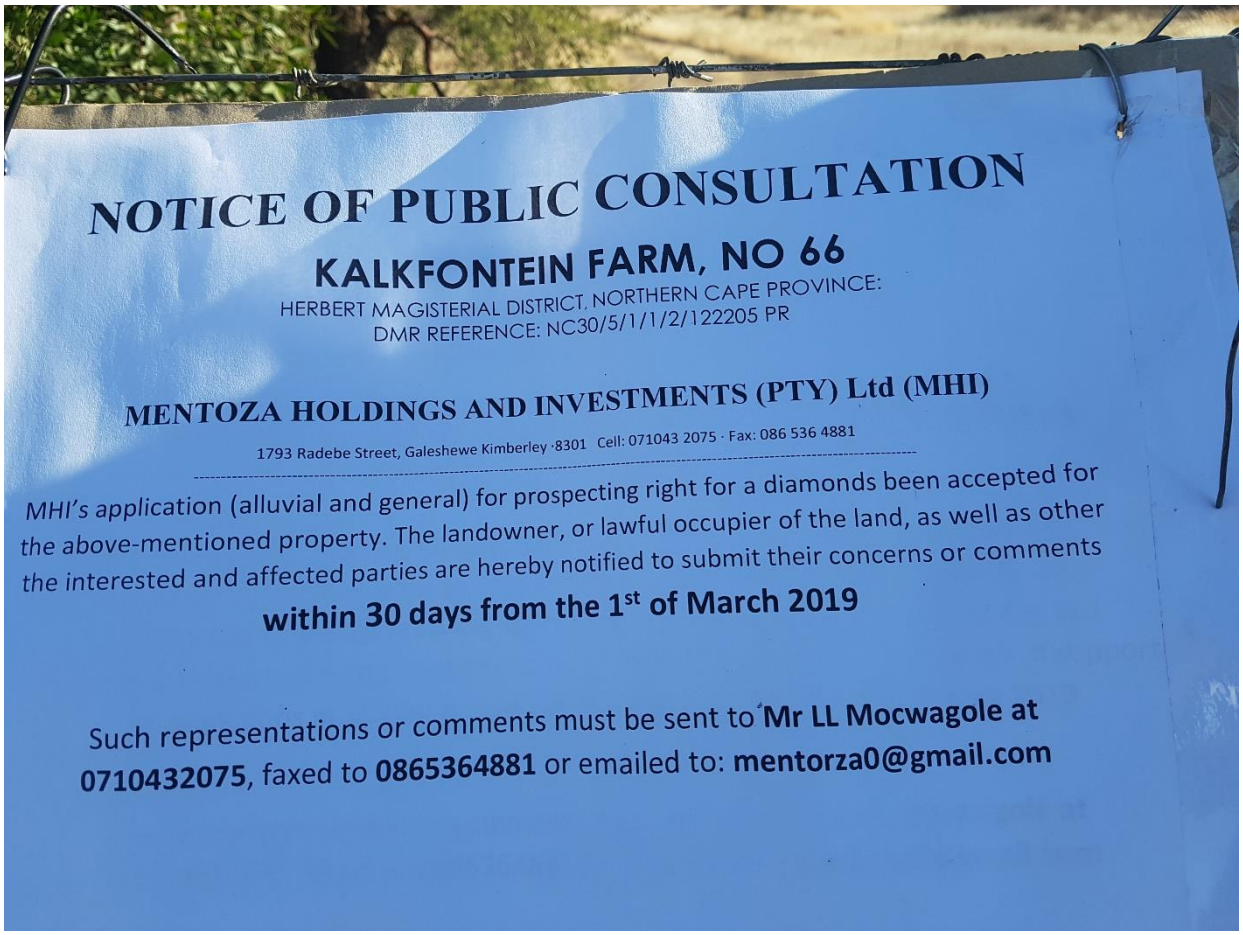
There's a PROMISE in Classified advertising

Classified advertising provides the jobs you need when you need them. Whether you are looking to advance your career or find the perfect employee classified promises the most reliable market place for investing in the future

Classifieds 053 832 6261

A Notice Board Affixed onto the Fence of the Farm Kalkfontein No. 66

Picture 1



A Notice Board Affixed onto the Fence of the Farm Kalkfontein No. 66

Picture 2

APPENDIX 3

PUBLIC CONSULTATION PROCESS-

1. Mentoza Holdings and Investments (MHI) Letter to Interested and Affected Parties
2. Forms for MHI Resources for I&A
3. Map and coordinates of the PR farm

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

21 November 2018

Mr G. H Faber
Kalkfontein Farm. No 66
DOUGLAS
8750

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully

M.M SETLOGELO
DIRECTOR

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

21 November 2018

The Municipal Manager
Siyacuma Municipality
P.O Box 27
DOUGLAS
8730

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

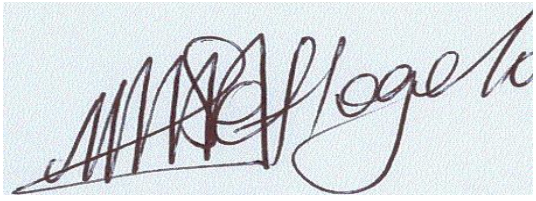
Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully



M.M SETLOGELO
DIRECTOR

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

21 November 2018

Head of Department
Department of Agriculture, Land Affairs and Rural Development
Private Bag 5018
KIMBERLEY
8300

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

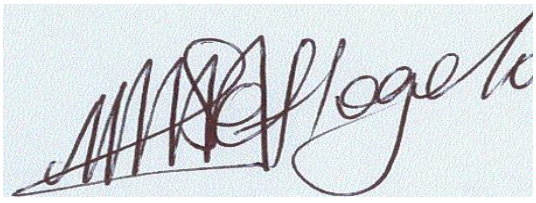
Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province.

All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements. The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully



M.M SETLOGELO
DIRECTOR

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

21 November 2018

Head of Department
Department of Environmental Affairs and Nature Conservation
Private Bag 6010
KIMBERLEY
8301

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

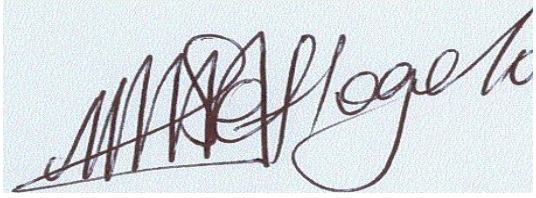
Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully



M.M SETLOGELO
DIRECTOR

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

21 November 2018

The Chief Director
Department of Land Affairs
Private Bag X2458
KIMBERLEY
8750

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

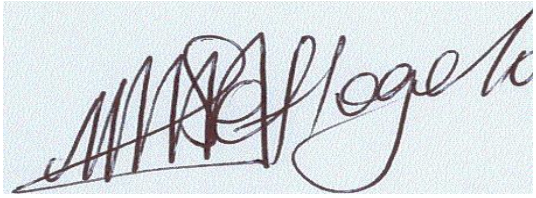
Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully



M.M SETLOGELO
DIRECTOR

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

21 November 2018

The Chief Director
Department of Water Affairs
Private Bag 6101
KIMBERLEY
8301

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

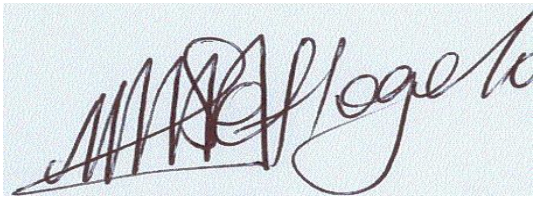
Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully



M.M SETLOGELO
DIRECTOR

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

20 November 2018

Head of Department
Department of Public Works
Private Bag X5002
KIMBERLEY
8301

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

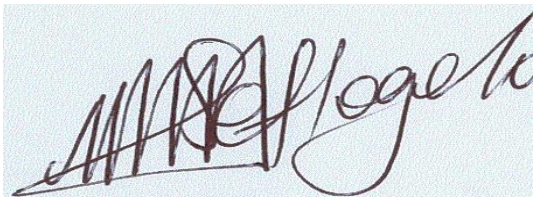
Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully



M.M SETLOGELO
DIRECTOR

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

20 November 2018

Land Development and Environmental Manager
ESKOM
P.O Box 606
KIMBERLEY
8301

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully

M.M SETLOGELO
DIRECTOR

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

21 November 2018

The Regional Manager
TRANSNET
P.O Box 1389
BLOEMFONTEIN
9300

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully

M.M SETLOGELO
DIRECTOR

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

21 November 2018

Chief Executive Office
SANRAL
Private Bag x19
BELLVILE
8000

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully

M.M SETLOGELO
DIRECTOR

Mentoza Holdings and Investments
Reg.: 2017/276568
1793 Radebe Street . Galeshewe . 8345
Tel: 071 043 2075 . Fax: 086 536 4881
mentorza0@gmail.com

21 November 2018

The Chief Executive Officer
South African Heritage Resources Agency
P.O Box 4637
111 Harrington Street
CAPE TOWN
8001

Dear Sir/Madam

PUBLIC CONSULTATION: PROSPECTING RIGHT APPLICATION PROCESS: DMR REF NO: NC 30/5/1/1/2/12220 PR

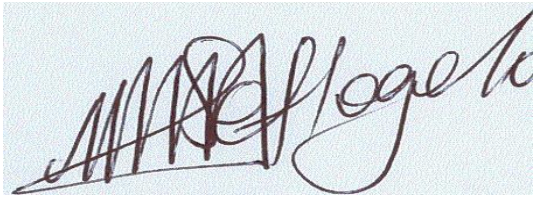
Notification is hereby made of the public consultation process as required in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)(as amended, 2008) and Regulation 40 to 43 of the National Environmental Management Act (NEMA), 1998 and the Environmental Impact Assessment Regulations 2014 (amended 2017)

An application lodged by Mentoza Holdings and Investments (Pty) Ltd has been accepted by the Department of Mineral Resources to prospect for diamonds (alluvial and general) on the farm Kalkfontein No. 66, situated in the Administrative District of Herbert, Northern Cape Province. All the prescribed environmental reports will be submitted to the DMR Kimberley for compliance and authorisation in accordance with the prescribed NEMA requirements.

The landowner, or lawful occupier of the land, as well as other the interested and affected parties are hereby notified to submit their concerns or comments of support or objections in writing no later than **24 December 2018**.

Such representations or comments must be sent to Mr LL Mocwagole at 0710432075, faxed to 0865364881 or emailed to: mentorza0@gmail.com

Yours faithfully



M.M SETLOGELO
DIRECTOR

2. Form for Interested and Affected Parties

MENTOZA HOLDINGS AND INVESTMENTS (PTY) LTD

1793 Radebe Street, Galeshewe. Kimberley 8345
Cell: 0710432075 Fax: 0865 364 881

PUBLIEKE DEELNAME PROSES VAN DIE VOORGESTELDE PROSPECTING RIGHT OPDIE PLAAS: KALKFONTEIN. MAGISTERIAL DISTRIEK VAN HERBERT, PROVINSIE NOORDKAAP. DMR REFERENCES: NC30/5/1/1/2/12220 PR

REGISTRASIE EN KOMMENTAAR VORM VIR DIE PUBLIEKE DEELNAME PROSES

VOLTOOI ASSEBLIEF EN STUUR NA:

Mr Lesedi Mocwagole 1793 Redebe Street Kimberley 8345	Fax: 086 536 4881 Cell: 0710432075 e-pos: mentoza0@gmail.com

Titel: _____ Voorleters: _____ Eerstenaam: _____

Van: _____

E-pos: _____

Telefoon: _____ Fax: _____

Organisasie: (in dien waan toopasings): _____

Hoedaanigheid: _____

Pos Adres: _____

Dorp/Stad: _____Kode:_____

KOMMENTAAR / BESWARE:

1. **Waat is U belange in die voorgenome projek?**
   _____
   _____
   _____

2. **Het U enige rede vir besware of ondersteuning vir die bogenoemde?**
   JA / NEE

   Indien "JA" som asseblief kortliks op.

_____
_____
_____
_____

3. **Is daar in U opinie inige ander geintereseerde en/of geafekteerde partye waat gekontak moet word in verband met die voorgenome projek?**
   JA/NEE

   Indien "JA" som asseblief kortliks die name en kontak nommers:

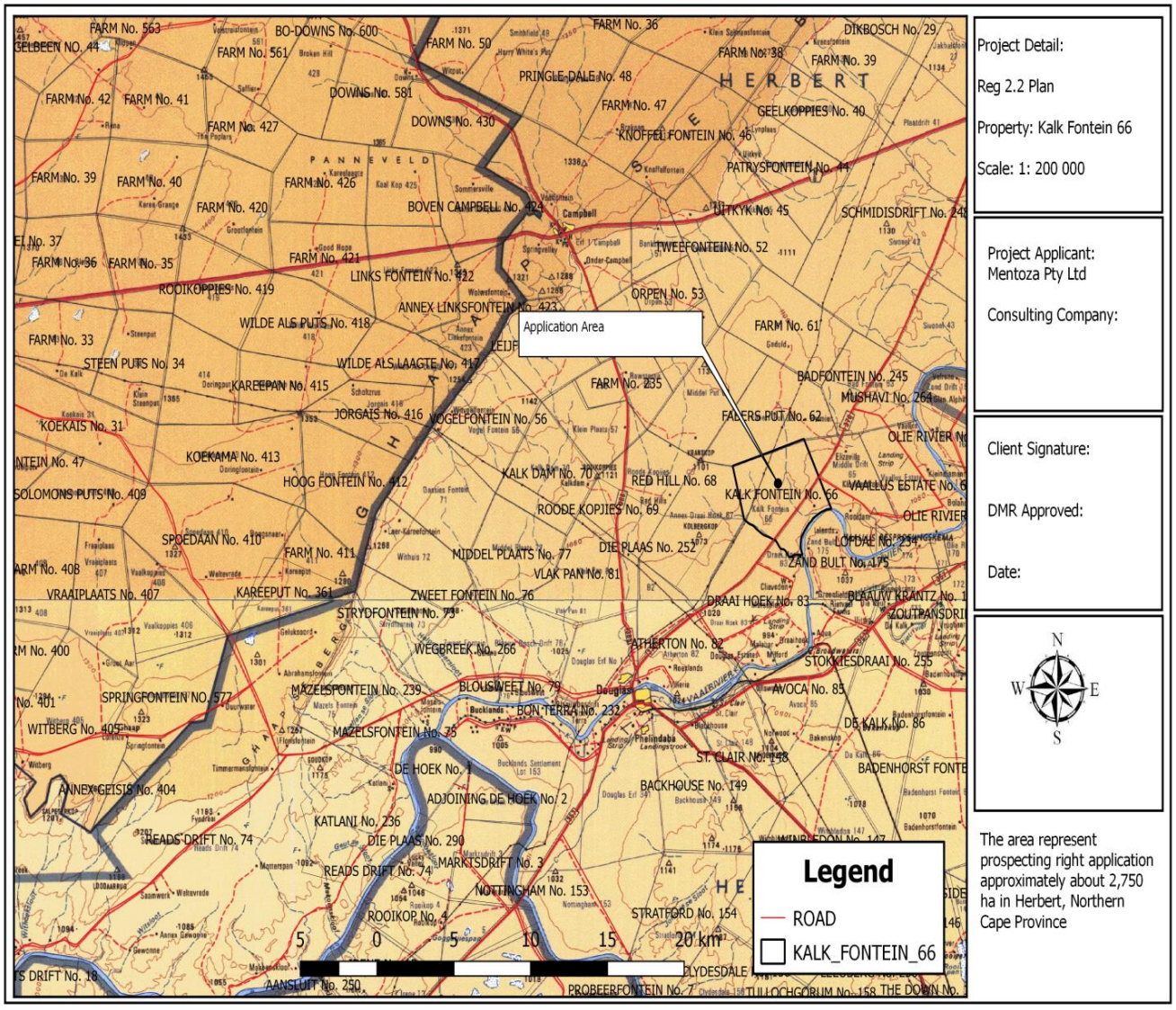
   _____
   _____
   _____
   _____

   Geteken op die _____ dag van _____2019

   _____ _____

   Naam **Handtekening**

Locality Map: Kalkfontein farm



APPENDIX 4

PUBLIC CONSULTATION PROCESS-
Correspondence to Interested and Affected Parties

1. Proof of Correspondence (registered mail) to
2. Signed Register for I&A parties

List of REGISTERED LETTERS
Lys van GEREGISTREERDE BRIEWE
(with an insurance option/met 'n versekeringsopsie)

Full tracking and tracing/Volledige volg en spoor

Post Office

Name and address of sender: M. M Setlogelo
Naam en adres van afsender: Mpintoza Holdings & Investments
1793 Radebe Street, Galeshewe
Public Consultation: Kalkfontein No 66

Enquiries/Navrae
Toll-free number
Tolvry nommer
0800 111 502

No	Name and address of addressee / Naam en adres van geadresseerde	Insured amount / Versekerde bedrag	Insurance fee / Versekeringsgeld	Postage / Posgeld	Service fee / Diensgeld	Affix Track and Trace customer copy / Plak Volg-en-Spoor-kliëntafskrif
1	Dept of Agreulture P/Bag 5018 Kimberley					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC317396938ZA CUSTOMER COPY 301028R
2	Dept Land Affairs P/Bag X2458 Kimberley					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC317397054ZA CUSTOMER COPY 301028R
3	Dept Water Affairs P/Bag 6101 Kimberley					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC317397111ZA CUSTOMER COPY 301028R
4	Dept of Public Works P/Bag X5002					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC317396999ZA CUSTOMER COPY
5	Eskom. P.O Box 606 Kimberley					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC317396819ZA CUSTOMER COPY 301028R
6	Transnet PO Box 1389 Bloemfontein					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC317396875ZA CUSTOMER COPY
7	SANRAL. P/Bag X19 Bellville					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC317397045ZA CUSTOMER COPY
8	SAHRA. P.O Box 4637 Cape Town					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC317397108ZA CUSTOMER COPY 301028R
9	Dept Environmental Affairs P/Bag 6010.					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC317396924ZA CUSTOMER COPY 301028R
10	Siyacuma Municipality P.O Box 8730					REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC317396986ZA CUSTOMER COPY 301028R
	Total / Totaal	R	R	R	R	

Number of letters posted / Getal briewe gepos: 10

Signature of client / Handtekening van kliënt: M. M Setlogelo

Signature of accepting officer / Handtekening van aanneembeampte:

Date stamp / Datumstempel: KIMBERLEY 10 24 NOV 2018 8300

The value of the contents of these letters is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100,00. No compensation is payable without documentary proof. Optional insurance of up to R200,00 is available and applies to domestic registered letters only.

Die waarde van die inhoud van hierdie briewe is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100,00. Geen vergoeding is sonder dokumentere bewys betaalbaar nie. Opsionele versekering van tot R2 000,00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.

MASIQHAME PRINTERS

701248

APPENDIX 5

PUBLIC CONSULTATION PROCESS- Correspondence from Landowners, and Interested and Affected Parties

Shakes Setlogelo

From: LESEDI MOCWAGOLE <mentorza0@gmail.com>
Sent: Friday, 14 December 2018 09:34
To: Shakes Setlogelo; ssetlogelo@solplaatje.com
Subject: Fwd: DMR REF: NC30/5/1/1/2/12220 PR
Attachments: image007.png

---------- Forwarded message ---------
From: **Nicole Abrahams (WR)** <AbrahamsN@nra.co.za>
Date: Thu, 13 Dec 2018, 3:28 PM
Subject: DMR REF: NC30/5/1/1/2/12220 PR
To: LESEDI MOCWAGOLE <mentorza0@gmail.com>

DEAR MR MOCWAGOLE

The above listed project bears reference. I have received background information about the prospecting of alluvial diamonds. May I request that you please furnish me with a locality plan indicating the nearest national road in order to determine whether SANRAL could be impacted.

Regards

Nicole Abrahams
Environmental Coordinator
Western Region
, Bellville, Western Cape, 7530,
T: 021 957 4602 | **M:** 062 215 8945
AbrahamsN@nra.co.za | **www.sanral.co.za**
Fraud Hotline Number - 0800 204 558