



## mineral resources

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

# **FINAL BASIC 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 ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

**NAME OF APPLICANT: TTS DIAMOND (PTY) LTD**

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**FILE REFERENCE NUMBER SAMRAD: NC 30/5/1/1/2/12290 PR**

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## ABBREVIATIONS

AIA:Archaeological Impact Assessment  
ASAPA:Association of South African Professional Archaeologists  
BH:Borehole  
CRM:Cultural Resources Management  
DEA:Department of Environmental Affairs  
DMR:Department of Mineral Resources  
DWA:Department: Water Affairs  
DWS:Department of Water and Sanitation  
EIA:Environmental Impact Assessment  
EMPR:Environmental Management Programme Report  
ESA:Early Stone Age  
GN:Government Notice  
GPS:Global Positioning System  
HIA:Heritage Impact Assessment  
HIR:Heritage Impact Report  
HSR:Heritage Scoping Report  
I&AP:Interested & Affected Party  
LIA:Late Iron Age  
LSA:Later Stone Age  
MAE:Mean Annual Evaporation  
mamsl:metres above mean sea level  
MAP:Mean Annual Precipitation  
MAR:Mean Annual Runoff  
MIA:Middle Iron Age  
MPRDA:Minerals and Petroleum Resources Development Act, 2002  
MSA:Middle Stone Age  
NEM:WA:National Environmental Management: Waste Amendment Act, 2008  
NEMA:National Environmental Management Act, Act, 1998( Act 107 of1998) (as amended)  
NGDB:National Groundwater Database  
NHRA:National Heritage Resources Act  
NWA:National Water Act, 1998 (as amended)  
PASA:Petroleum Agency South Africa  
PHRA:Provincial Heritage Resources Authority  
PSSA:Palaeontological Society of South Africa  
RoD:Record of Decision  
SADC:Southern African Development Community  
SAHRA:South African Heritage Resources Agency  
SWL:Static Water Level  
TMM:Trackless Mobile Machinery  
TDS:Total Dissolved Solids  
WMA:Water Management Area  
WUL:Water Use Licence

## 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 an Environmental Authorisation 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 a format that may be determined by the Competent Authority and 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 applications.

**It is therefore an instruction that** the prescribed reports required in respect of applications for an environmental authorisation 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 Authorisation 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 thereof 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 of the applicant.

## **2. Objective of the basic assessment process**

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

- (a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- (b) identify the alternatives considered, including the activity, location, and technology alternatives;
- (c) describe the need and desirability of the proposed alternatives,
- (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 the 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) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—
  - (i) identify and motivate a preferred site, activity and technology alternative;
  - (ii) identify suitable measures to manage, avoid or mitigate identified impacts; and
  - (iii) identify residual risks that need to be managed and monitored.

**PART A**  
**SCOPE OF ASSSMENT AND BASICASSESSMENTREPORT**

**3. Contact Person and correspondence address**

**a) Details of**

**i) Details of the EAP**

Name of The Practitioner: M A Golaith

Tel No.: 0824523693

Fax No. : goliathmalcolm@yahoo.com

e-mail address:goliathmalcolm@yahoo.com

**ii) Expertise of the EAP.**

**(1) The qualifications of the EAP**

(with evidence).MMC/NHD/LSTD

**(2) Summary of the EAP's past experience.**

(In carrying out the Environmental Impact Assessment Procedure)

**CURRICULUM VITAE**

**MALCOLM ANGUS GOLIATH**

## ***PERSONAL DETAILS***

***Surname*** GOLIATH

***Full Names*** MALCOLM ANGUS

***Nationality*** SOUTH AFRICAN  
***Identity Number*** 6412145037082

***Home Language*** AFRIKAANS/ENGLISH

***Other Languages*** VERY BASIC TSWANA/FANAKALO

***Language Proficiency*** EXCELLENT IN BOTH ENGLISH/AFRIKAANS

***Married*** COP  
***Dependants*** 3

***Drivers Licence*** 08

***Health*** GOOD

**Home Address:** 23 GOEDEHOOP AVENUE, ROYLDENE, KIMBERLEY,  
8301

**CONTACT DETAILS:**  
**CELLPHONE:** 0824523693  
**E-MAIL:** [goliathmalcolm@yahoo.com](mailto:goliathmalcolm@yahoo.com)

**Criminal Record** None

## *Qualifications*

| <i>QUALIFICATION</i>                       | <i>INSTITUTION</i>                    | <i>YEAR</i> |
|--|---------------------------------------|-------------|
| <b>GRADE 12</b>                            | <b>WILLIAM PESCOD HIGH SCHOOL</b>     | <b>1981</b> |
| <b>TRADE TEST:</b>                         | <b>BLASTING TICKETS</b>               |             |
| <b>COLLEGE/ DIPLOMA:</b>                   |                                       |             |
| <b>UNIVERSITY: LSTD(SCIENCE) TECHNIKON</b> | <b>UNIVERSITY OF THE WESTERN CAPE</b> | <b>1984</b> |
| <b>NATIONAL DIP(METAL MINING)</b>          |                                       | <b>1994</b> |
| <b>NATIONAL HIGHER DIP(METAL MINING)</b>   | <b>WITWATERSRAND TECHNIKON</b>        |             |

## *Professional Qualifications*

MINE MANAGERS CERTIFICATE OF COMPETENCY

## *Other Qualifications & Courses*

SAMTRAC SAFETY COURSE  
BASIC GRAVEMETRIC SAMPLING COURSE  
HUMAN RESOURCES COURSE  
LEADERSHIP COURSE  
MINUTE TAKING

**COMPANY NAME: BNL Nnake**

**EMPLOYMENT DATES : 2017 to date**

**POSITION HELD : Consultant**

**EXPERIENCE RELATING TO THIS APPLICATION**

**RESPONSIBILITIES:**

**Consult on:**

**Mining**

**Health and Safety**

**Develop Business Plans**

**Mining Permit, Prospecting Right and Mining Right Applications(DMR)**

- **Lodge Environmental Authorisations**
- **Compile Scoping, Environmental Impact Assessment Reports and Environmental Management Programme Reports**
- **Environmental Impact Assessment Reports and Environmental Management Programme Reports Compiled :**

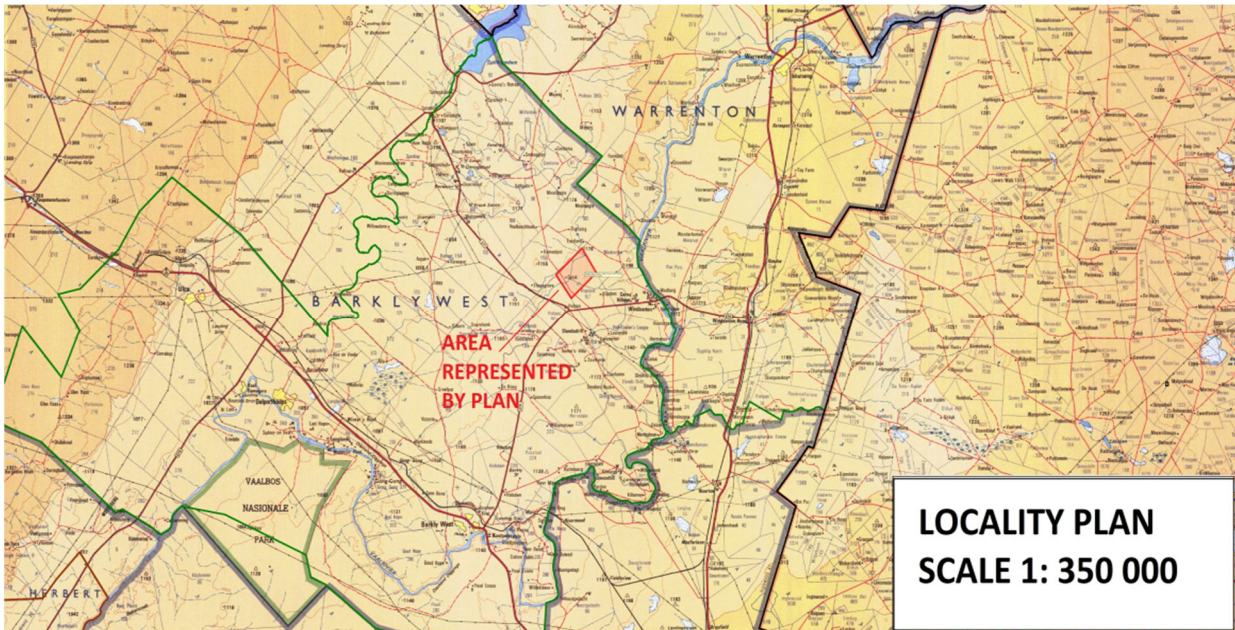
***Mynplaas 1120 Prospecting Right (Free State)***  
***Bucklands Mining Right (Northern Cape)***  
***Goodrock Hotazell Mining Right (Northern Cape)***  
***Tswelelang Mining Right (Northern Cape)***  
***Ventersville Prospecting Right (Northern Cape)***  
***Wynandsfontein Prospecting Right (Free State)***  
***Di Blesbokkantoer Prospecting Right (Free State)***  
***Longlands Prospecting Right Application x 2 (Northern Cape)***  
***Ormabex Prospecting Right ( Northern Cape)***  
***Rietfontein 11 Prospecting Right (Northern Cape)***  
***Dorstfontein 10 Mining Permit (Northern Cape)***  
***Erf 42 Windsorton Mining Permit (Northern Cape)***  
***Erf 99 Windsorton Mining Permit (Northern Cape)***  
***Bethel Project Prospecting Right (Free State)***  
***Alexanderfontein Project prospecting Right (Northern Cape)***  
***Blaauwkrantz Groenwater Prospecting Right (Northern Cape)***  
***Caravan Park Mining Permit (Northern Cape)***  
***Drakenstein Manganese Project Prospecting Right (Northern Cape)***  
***Doornpan Manganese Project Prospecting Right (Northern Cape)***  
***Nek 106 Manganese Prospecting Right (Northern Cape)***  
***Rorichshoop Prospecting Right (Free State)***

**b) Location of the overall Activity.**

|   |  |
|---|--|
| <b>Farm Name:</b>   | Farm Klipdam 157 Portion 4                             |
| <b>Application area (Ha)</b>                                | 1070.9965 ha   |
| <b>Magisterial district:</b>                                | Barkly West  |
| <b>Distance and direction from nearest town</b>             | 10km North East of Windsorton, Northern Cape Province. |
| <b>21 digit Surveyor General Code for each farm portion</b> | <b>C0070000000015700004</b>                            |

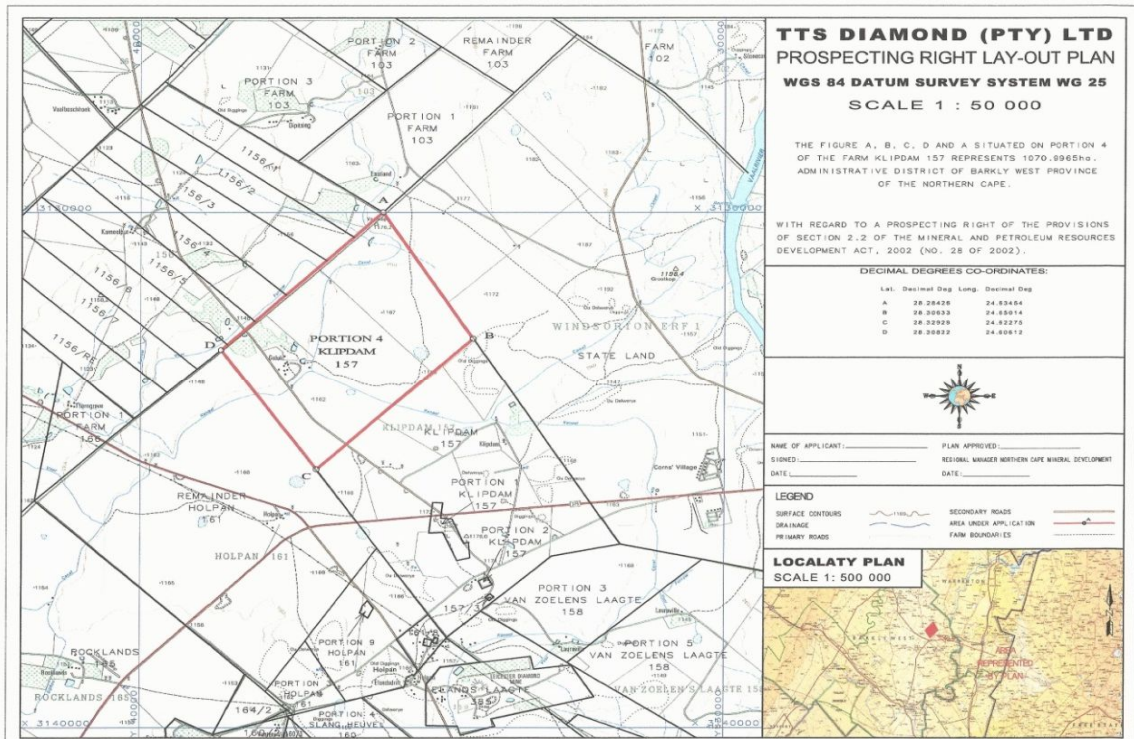


**c) Locality map**  
(show nearest town, scale not smaller than 1:250000).



**d) 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



**Development Footprint:** Store 25m<sup>2</sup>, Ablution Facility 4m<sup>2</sup>, Site Office 16m<sup>2</sup>, Drill Pads 81m<sup>2</sup>, Roads 132m<sup>2</sup>, Topsoil Stockpile 1000m<sup>2</sup> : Trenches 4200m<sup>2</sup>: Total Footprint 5458m<sup>2</sup>

**(i) Listed and specified activities**

| <b>NAME OF ACTIVITY</b><br><br>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc<br>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.) | <b>Aerial extent of the Activity</b><br><b>Ha or m<sup>2</sup></b>                | <b>LISTED ACTIVITY</b><br><br>(Mark with an <b>X</b> where applicable or affected). | <b>APPLICABLE LISTING NOTICE</b><br><br>(GNR 544, GNR 545 or GNR 546) | <b>WASTE MANAGEMENT AUTHORIZATION</b><br><br>(Indicate whether an authorisation is required in terms of the Waste Management Act).<br><br>(Mark with an <b>X</b> ) |
|---|---|---|---|--|
| Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Development Act, 2002 (Act No.28 of 2002), including- (a)associated infrastructure, structures and earthworks directly related to the extraction of a mineral resource:  | 1070.9965ha lodged for the surveyed portion only.<br>Drill Pads 9x9m <sup>2</sup> | <b>X</b>  | GNR 327 Activity 20 of Listing Notice 1                               |  |
| The removal and disposal of minerals contemplated in terms of section 20 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including- (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource:<br>( Activity 19 of Listing Notice 2)   | 1070.9965ha lodged for the surveyed portion only.                                 | <b>X</b>  | GNR 325 LN 2 Activity 19  |  |
| <b>NOT LISTED (FOOTPRINT)</b>   |   |   |   |  |
| Store Room  | 25m <sup>2</sup>  |   |   |  |
| Ablution Facilities   | 4m <sup>2</sup>   |   |   |  |
| Site Office   | 16m <sup>2</sup>  |   |   |  |
| Drill Pads  | 81m <sup>2</sup>  |   |   |  |
| Roads 4m wide   | 132m <sup>2</sup>   |   |   |  |
| Topsoil Stockpile   | 1000m <sup>2</sup>  |   |   |  |
| Trenches  | 4200m <sup>2</sup>  |   |   |  |

## **(ii) 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)

The commodity that would be prospected for is diamonds

- **Construction**

During the construction phase of the prospecting operation, the following infrastructure would be constructed on site: Site Office 16m<sup>2</sup>, Ablution Facilities 4m<sup>2</sup>, Store Room 25m<sup>2</sup>, Roads 4m wide 132m<sup>2</sup>

- **Drill Pads**

9 Drill pads would be erected for the drilling programme.

This infrastructure would be erected with the least disruption to the current economic activity of the land occupier and adjacent landowners, and taking into account the impact to the environment.

- **Operational**

The following drilling programme will be conducted:

5 percussion holes for anomaly testing, each to a depth of 50m

4 NQ diamond drill holes for kimberlite delineation and sampling, each to a depth of 50m

During the operational phase the topsoil where the trenches will be made, will be removed and stored on a topsoil stockpile. The trenches will be made to determine the extent of the orebody. Trenches will be a total of 14 and with the following dimensions 10m x30m . The trenches would be rehabilitated in sequence and only one trench would be made at any one time. The exact position of the trenches is not known at this stage and would be aided by the outcome of the drilling program. Total Footprint 4200m<sup>2</sup>

- **Decommissioning**

Once the prospecting activities have been completed, the company will start with the decommissioning and closure phase. During these phases all infrastructure and equipment will be removed and the compacted ground ripped and rehabilitated. All drill holes will be capped.

## **LINEAR FLOW OF PROCESS**

### **Not Linear**

Drilling

Trenching

## e) Policy and Legislative Context

| <b>APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT</b><br><br>(A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process); | <b>REFERENCE WHERE APPLIED</b><br><br>(i.e. Where in this document has it been explained how the development complies with and responds to the legislation and policy context)   | <b>HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE POLICY AND LEGISLATIVE CONTEXT</b><br><br>(E.g In terms of the National Water Act:- Water Use Licence has/has not been applied for). |
|--|--|--|
| Mineral and Petroleum Resource Development Act; 2002 (Act No.28 of 2002)(As Amended)   | A Prospecting Right application  | A Prospecting Right has been applied for and has been accepted by the DMR Northern Cape Province   |
| Mineral and Petroleum Resource Development Act; 2002 (Act No.28 of 2002)(As Amended)   | A Prospecting Right Environmental Authorisation  | In the process at DMR  |
| National Environmental Management Act, 1998( Act 107 of1998) (as Amended)NEMA  | Section 28 of the National Environmental Management Act, Act No. 107 of 1998 (As Amended) required duty of care where reasonable measures are taken to prevent pollution or degradation from occurring, continuing or recurring, or, where this is not possible, to minimise and rectify pollution or degradation of the environment. Section 29 addresses the protection of workers refusing to do environmentally hazardous work. Section 30 addresses procedure to be followed in the event of emergency incident which may impact on the environment. Access to environmental information and protection of whistle blowers are addressed in Section 31. | Part of Environmental Management Programme   |
| National Environmental Management Act, 1998 ( Act 107 of1998) Environmental Impact Assessment Regulations,2014(G38282-2982-985) (As Amendment 7 April  | GNR 983: 2014 Regulations promulgated in terms of NEMA, Act No.107 of 1998: GNR 982,983,984 and 985 Government Gazette No. 38282 Pretoria, in terms of Chapter 5 of the National Environmental Management Act, Act No 107 of   | In the process at DMR  |

|  |   |                 |
|--|---|-----------------|
| 2017)  | 1998 (as amended), contain the EIA Regulations, as well as a schedule of activities that may have substantial detrimental effects on the environment and therefor required authorisation from the competent environmental authority.  |                 |
| National Environmental Management Act: Biodiversity Act, 2004 (Act 10 of 2004) | Reforms the law regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development.   | To take note of |
| National Water Act, 1998( Act36 of 1998)                                       | <p>In terms of the definitions contained in Section 1 of the National Water Act, Act No.36of 1998, a 'water resource' includes a watercourse, surface water, estuary or aquifer. "Aquifer" means a geological formation which has structures or textures that hold water or permit appreciable water movement though them. "Watercourse" means a river or spring; a natural channel in which water flows regularly or intermittently; a wetland, lake or dam into which, or from which, water flows; and any collection of water which the Minister may, by notice in the Gazette declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks. The Minister of Water and Environmental Affairs is allowed to regulate activities which have a detrimental impact on water recourse by declaring them to be controlled activities. No person may undertake a controlled activity unless such person is authorised to do so by or under the Act. Duty of Care to prevent and remedy the effects of pollution to water recourse is addressed in Section 19. Section 20 address the procedure to be followed, as well as control of emergency incidents which may impact on a water resource.</p> <p>Recognised water uses are addressed in terms of section 21 and the requirements for registration of water uses are</p> | To take note of |

|   |   |  |
|---|---|--|
|   | stipulated in Section 26 and 34.  |  |
| Environmental Conservation Amendment Act, 2003 (Act 50 of 2003) G26023            | Section 25 of the Environmental Conservation Act, Act No 73 of 1989, as well as the National Noise Control Regulations GNR 154 dated 10 January 1992, regarding noise, vibration and shock, is applicable.  | This is also legislated by Mine Health and Safety from DMR and will be adhered to. |
| National Environmental Management Act: Protected Areas Act, 2003 (Act 57 of 2003) | To provide for the management, conservation of protected areas of ecologically viable (natural landscapes and seascapes) areas in South Africa.   | Take note  |
| In terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999)        | In terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), any person who intends to undertake “any development or other activity which change the character of a site – exceeding 5000m <sup>3</sup> in extent” and the “construction of a ..... Linear development or barrier exceeding 300m in length” must at the very earliest stages of initiating the development, notify the responsible heritage resources authority, viz, the South African Heritage Resources Agency and /or Department of Environment. | Consult Mc Gregor Museum   |
| Conservation of Agricultural Resources Act, Act No 43 of 1983                     | Section 5 of the Conservation of Agricultural Resources Act, Act No 43 of 1983, prohibits the spreading off weeds and Section 6 and Regulation 15 and 15E of GNR 1048 address the implementation of control measures for alien and invasive plant species.<br>This aspect has been addressed in the Environmental Management Programme. This Act also make provision for the conservation of agricultural land.   | Take note  |
| National Forest Act, 190 (Act No. 84 of 1998)                                     | National Forest Act, 190 (Act No. 84 of 1998) and Regulations, Section 7: No person may cut, disturb, damage or destroy any indigenous , living tree in a natural forest, except in terms of a licence issued under Section 7(4) or Section 23: or an exemption from the provisions of this subsection published by the Minister in the Gazette. Sections 12 – 16 deal with protected trees, with the Minister having the power to declare a particular   | Take note  |

|  |  |           |
|--|--|-----------|
|  | tree, a group of trees, a particular woodland, or trees belonging to a certain species, to be a protected tree, group of trees, woodlands or species. In terms of section 15, no person may cut, disturb, damage, destroy or remove any protected tree; or collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a licence granted by the Minister.   |           |
| Subdivision of Agricultural Land Act, Act 70 of 1970                         | Control the subdivision, and in connection therewith, the use of agricultural land. It also control long term leases over agricultural land. The applicant needs to apply for consent from the Department of Agriculture for these leases.   | Take note |
| Section 17 of the Fencing Act, Act No.31 of 1983                             | States that any person erecting a boundary fence may clean any bush along the line of the fence up to 1,5m on each side therefore and remove any tree standing in the immediate line of the fence. However, this provision must be read in conjunction with the environmental legal provisions relevant to protection of flora.  | Take note |
| Section 8 of the Atmospheric Pollution Prevention Act, Act No.45 of 1965     | Section 8 of the Atmospheric Pollution Prevention Act, Act No.45 of 1965 regulating controlled areas, as well as section 27, with regard to dust control is still applicable.  | Comply    |
| The Occupational Health and Safety act, Act 85 of 1993 GNR 22810f 1987-10-16 | Environmental Regulations for Workplaces are applicable.   | Comply    |
| The South African Civil Aviation Regulation Act, Act 13 of 2009.             | Controls marking of structures that may influence aviation through the Civil Aviation Technical Standards, SA-CATS-AH 139.01.33 Obstacle Limitations and Markings outside Aerodrome or Heliports. It states that any structure exceeding 45m above ground level, or structures exceeds 150m above the MEAN ground level, like on top of a hill, the mean ground level considered to be the lowest point in a 3km radius around such structure.<br>Structures lower than 45m, which are considered as a danger or a | Take note |

|  |   |  |
|--|---|--|
|  | <p>potential danger to aviation, shall be marked as such when specified. Overhead wires, cables, etc., crossing a river, valley or major roads shall be marked and in addition, their supporting towers marked and lighted if an aeronautical study indicate that it constitute a hazard to aircraft.</p> |  |
|--|---|--|

**f) 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 study area has alluvial diamond bearing material that can be economically exploited. The operation will create much needed employment opportunities, especially to women, and will compliment BEE enterprises in the town of Windsorton and Barkly West from where equipment and consumables will be sourced.

The diamond bearing sources is site specific and the prospecting program will ensure that these sources would not be sterilised.

**g) Motivation for the overall preferred site, activities and technology alternative.**

The proposed project area is demarcated to include the alluvial bodies as well as enough space for the construction of the offices and infrastructure. 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

**h) 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.

**i) Details of the development footprint alternatives considered.**

With reference to the site plan provided as Appendix 4 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

(a) There is no alternative to the location as the diamond bearing material is site specific in their location. The study area is surrounded by mining activities and no alternative site is known that is not currently occupied

(b) The activity would be drilling and trenching means of a back-actor. The applicant considered an application for a bulk sampling program but due



to the unknown factor of a quantifiable resource, decided to exclude the bulk sampling process at this stage.

(c) (d) (e) and (f)

### **Stockpiles (Topsoil and Overburden)**

The topsoil and overburden removed would be kept on a topsoil stockpile (1000m<sup>2</sup> footprint) for final rehabilitation of the trenched areas. No specific technology is used other than ensuring no contamination of the topsoil. If this activity is not implemented the prospecting activities cannot continue fluently affecting the cost effectiveness of the prospecting operation. The option of not implementing the activity cannot be considered.

### **Drilling**

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

#### **The drilling programme will entail:**

The drill pads will be 3mx3m dimension. A total of 9 holes will be drilled  
5 percussion holes for anomaly testing, each to a depth of 50m  
4 NQ diamond drill holes for kimberlite delineation and sampling, each to a depth of 50m. The outcome of the drilling programme will enable the applicant to plan the trenching programme.

### **Trenches**

Trenches will have estimated dimensions of 2 trenches at 3mx2m and will be in extent 12m<sup>2</sup>

The technology used in this activity will be a back-actor that will remove the topsoil and overburden to a dedicated topsoil stockpile. The virgin ground would be trenched to quantify the depth and extent of the diamondiferous gravels. The rehabilitation of the trenches would comprise of closing the trenches and introduce the overburden then the topsoil and aid regrowth of the natural vegetation through seedlings.

This activity forms a critical part of the proposed prospecting activities and therefore the option of not implementing the activity cannot be considered. The results of the trenches and drilling programme will allow the applicant to make an informed decision on whether to continue with an application for bulk sampling or alternatively mining.

### **Office Site**

The office block will be installed and have an approximate footprint of 16m<sup>2</sup>. This site will house a general office, mine health and safety office and first aid room.

The office site will be mobile offices fitted with relevant equipment/furniture for its specific task.

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

The best option is to keep the offices within the prospecting premises for proper managing, activity regulation, accident and damage control as well as optimizing productivity.

### **Ablution Facility**

The ablution (with a total footprint of approximately 4m<sup>2</sup>), is installed before prospecting operations start and will be active till the decommissioning of the prospecting programme.

Contractual agreements will be made and basic flushing chemical toilets installed.

These facilities are to support the sanitation protocol of the operation. During the prospecting operations a mobile chemical toilets be available.

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)

### **Diesel Storage**

No diesel storage will be done on-site.

### **Domestic Waste Facility (NOT ON-SITE)**

The domestic waste facility will be placed outside of the study area for collection by the municipality (approximate footprint of 16m<sup>2</sup>).

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.

(f) Income loss to the state and the local municipality in the form of taxes. Loss of job opportunities. No women in mining program that can be advanced. Poverty alleviation programme.

## **ii) Details of the Public Participation Process Followed**

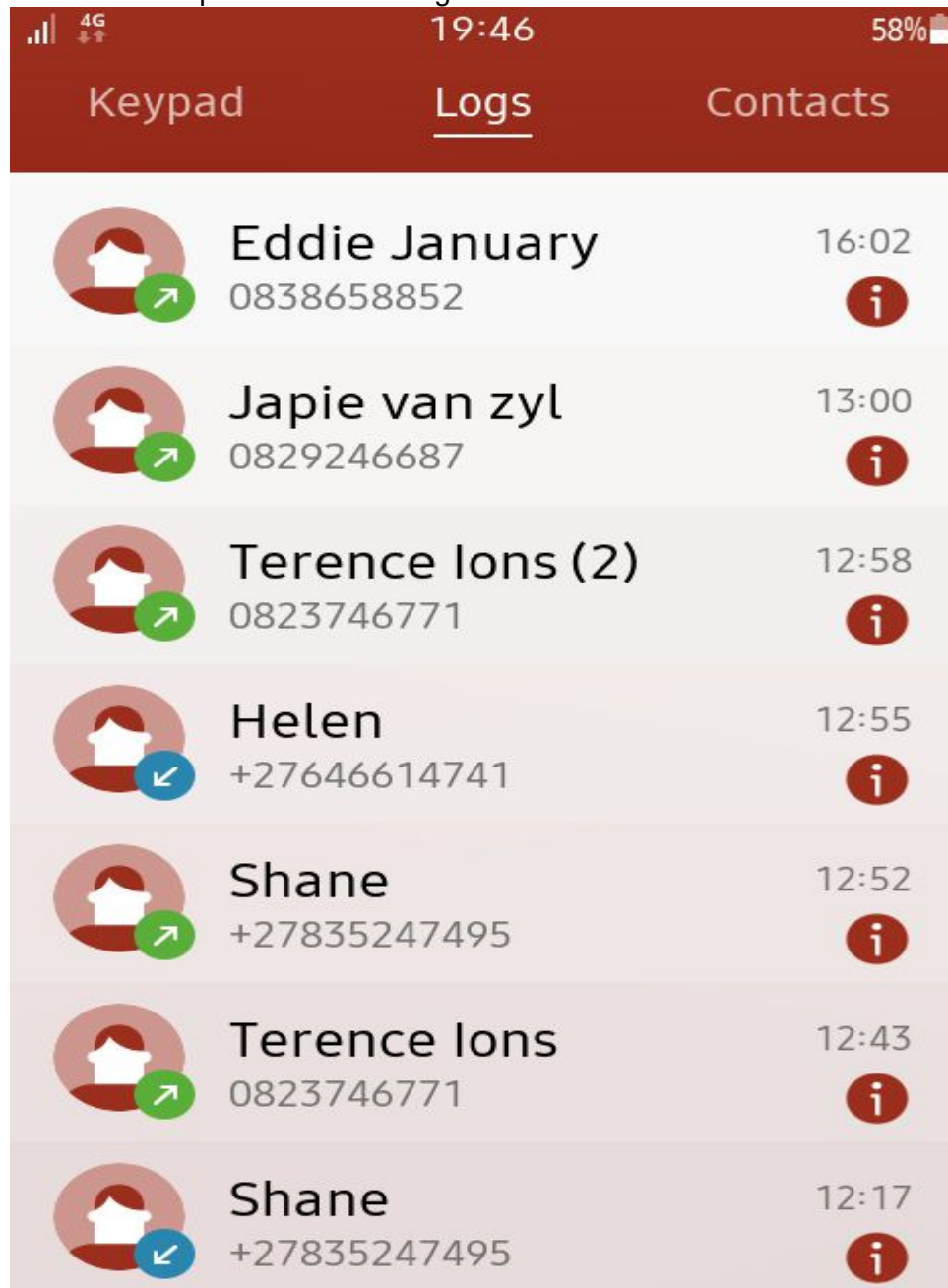
Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings.(Information to be provided to

affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.

The Title deed shows l'ONS RANCHING TRUST, REGISTRATION NUMBER IT87/2010 as the landowner.

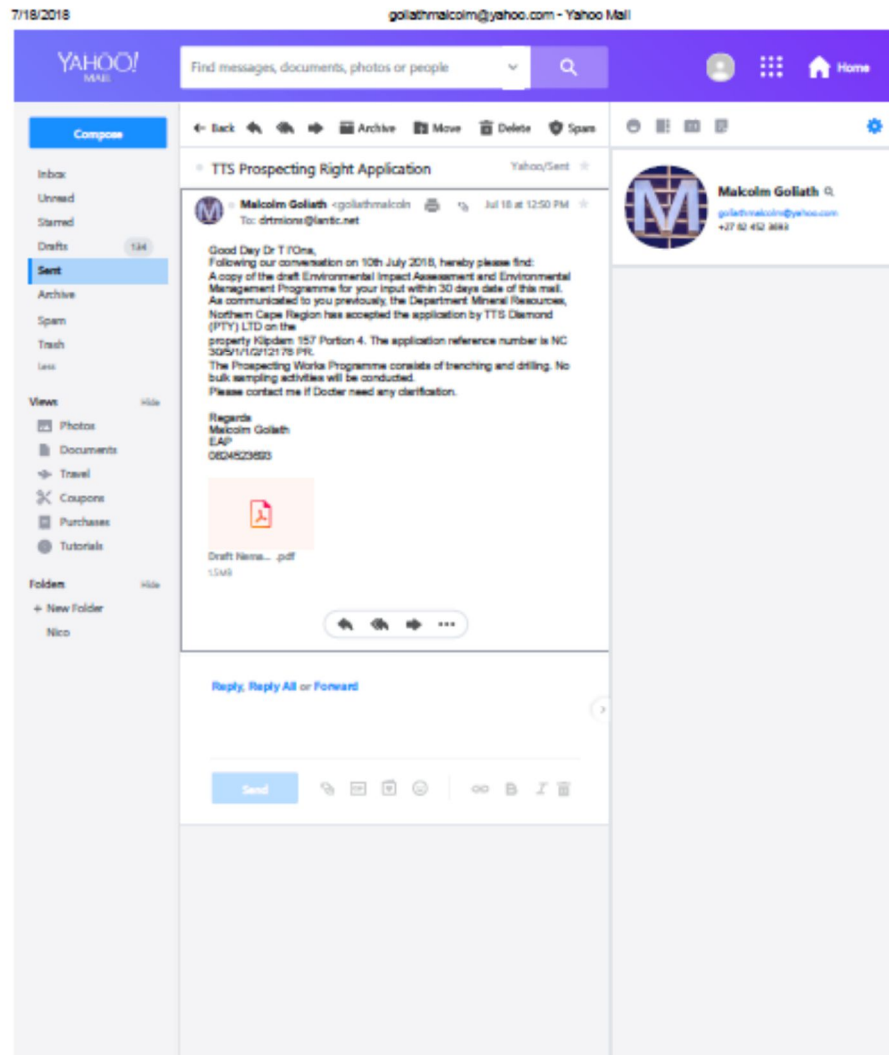
A Trustee, Doctor Terence was contacted telephonically and notified of the acceptance of the application.

Date and time of calls: Friday 6<sup>th</sup> July 2018 at 12:43 and two calls at 12:58. The Doctor refused discussion of the Prospecting Right Application and will refer the application to his legal representative. He raised concerns around the conduct of previous mineral right holders on the farm.



Doctor Terence l'ons was given written notice of the acceptance of this application from the Department Mineral Resources, Northern Cape Region. The details of the legal representative are still awaited as at 10 July 2018.

## Email send to Doctor l'onson 18 July 2018




The legal representatives of l'ONS RANCHING TRUST, forwarded emails with request of information from Mr M A Goliath and Mr Pieter Swart from the Department Mineral Resources. The letters are attached below for completeness. (Niel Voges Incorporated and De Villiers Attorneys)

6. We will within 30 days comment on the draft Basic Assessment Report and Environmental Management Program Report which was delivered to us on 18 July 2018, but we herewith record and reserve the right to supplement our comments upon receipt of the information requested above.

7. We trust that you find this to be in order and await your acknowledgement of receipt hereof.

Yours faithfully

  
**Niel Voges Incorporated**  
Per: D J Voges

The Directors  
TTS Diamonds (Pty) Ltd  
3 Golden Gate Street  
Carters Glen  
**KIMBERLEY**  
8301

**BY FAX: (053) 833 1209**

**Attention: Mr Malcolm Goliath**

Sir

**APPLICATION FOR PROSPECTING RIGHT BY TTS DIAMONDS (PTY) LTD // DMR  
REFERENCE NUMBER: NC 30/5/1/1/2/12178PR**

A copy for your information.

Yours faithfully

**Niel Voges Incorporated**  
Per: D J Voges

Your reference: NC 30/5/1/1/2/12178PR

Our reference: DJV/17-0103

20 July 2018

The Regional Manager  
Department of Mineral Resources  
Private Bag X6093  
**KIMBERLEY**  
8300

**BY FAX: (053) 830 0827**

**Attention: The Regional Manager**

Sir / Madam

**APPLICATION FOR PROSPECTING RIGHT BY TTS DIAMONDS (PTY) LTD // DMR  
REFERENCE NUMBER: NC 30/5/1/1/2/12178PR**

1. We refer to the above matter and confirm that we represent the I'Ons Ranching Trust in the present matter.
2. I'Ons Ranching Trust is the registered owner of Portion 4 of Farm 157, a subject property in terms of the aforesaid application. It is therefor first and foremost our instruction to record that our client is an interested and affected party in this application by TTS Diamonds. All further correspondence herein should please be addressed to us.
3. It is forthwith our instructions to record, as we hereby do, that our client intends to oppose the application by TTS Diamonds on at least one or more of the following grounds, which grounds should in no way be interpreted as all exhaustive, namely:
  - 3.1 the constitutionality of various provisions of the Mineral and Petroleum Resources Development Act ("MPRDA");
  - 3.2 the ecological degradation or damage to the environment;
  - 3.3 the reasonableness of the proposed corrective measures and non-compliance with the provisions of the National Environmental Management Act ("NEMA");
  - 3.4 the impact of the proposed activities on the protection of water resources as provided for in the National Water Act ("NWA");



PROKUREUR  
NOTARIS  
AKTEBESORGER



NIEL VOGES INGELYF Reg no.: K2011/100197/21  
Kantoor 6, Grensstraat 63, Jan Kempdorp, 8550  
Selfoon: 079 497 4483 Tel: 053 456 0190 Faks: 053 456 0122 Epos: niel@nvprok.co.za  
Direkteur: D.J Voges Bluris, LLB (UNISA), Nagraadse Diploma in Finansiële Beplanning (UOFS)  
In assosiasie met De Bruin & Strauss Ingelyf, Jan Kempdorp

- 3.5 common law nuisance;
  - 3.6 the common law right of lateral support;
  - 3.7 insufficient or non-compliance with sections 10 and/or 16(4)(b) of MPRDA; and
  - 3.8 the failure by TTS Diamonds to provide proper or adequate notice.
4. As was remarked by the Constitutional court in the *Bengwenyama* case during 2008, **prospecting represents a grave and considerable invasion of the rights of any landowner**. Therefor our client (in an attempt to protect his property rights) in terms of the Promotion of Access to Information Act ("PAIA"), requires the following documents or information in the possession or under the control of the Department of Mineral Resources or of the Applicant in order to formulate and submit his further comments or objections, namely:
- 4.1 who was the owner of the mineral rights on the affected property as on 30 April 2004;
  - 4.2 has any formal land claims been lodged in respect of any of the affected properties;
  - 4.3 did DMR receive any prior or simultaneous applications pertaining to the same mineral relating to the affected properties;
  - 4.4 who are the directors of TTS Diamonds;
  - 4.5 who are the shareholders of TTS Diamonds. A certified copy of the share register and full details of the beneficial owners of shares (if any) are required;
  - 4.6 if the shareholders have concluded a shareholders agreement, a copy thereof;
  - 4.7 the Memorandum of Incorporation of TTS Diamonds; and
  - 4.8 did TTS Diamonds give any indication of funding or expert advice that will be made available to interested and affected parties during the consultation process.
5. The documents and information requested in paragraph 4, above, must be delivered to us within the time periods stipulated in PAIA together with written reasons for any refusal or non-compliance. Thereafter we will lodge our client's comments and/or objections.



6. We will within 30 days comment on the draft Basic Assessment Report and Environmental Management Program Report which was delivered to us on 18 July 2018, but we herewith record and reserve the right to supplement our comments upon receipt of the information requested above.

7. We trust that you find this to be in order and await your acknowledgement of receipt hereof.

Yours faithfully

**Niel Voges Incorporated**

Per: D J Voges

The Directors  
TTS Diamonds (Pty) Ltd  
3 Golden Gate Street  
Carters Glen  
**KIMBERLEY**  
8301

**BY FAX: (053) 833 1209**

**Attention: Mr Malcolm Goliath**

Sir

**APPLICATION FOR PROSPECTING RIGHT BY TTS DIAMONDS (PTY) LTD // DMR  
REFERENCE NUMBER: NC 30/5/1/1/2/12178PR**

A copy for your information.

Yours faithfully

**Niel Voges Incorporated**

Per: D J Voges



# De Villiers

**PROKUREURS • ATTORNEYS**

Ons Verw / Our Ref: Prospecting Application

U Verw / Your Ref: 12178PR

Datum / Date : 23 August 2018

TTS Diamonds (Pty) limited

ttau@telkomsa.net

NOTICE IN TERMS OF DMR REFERENCE NUMBER NC30/5/1/1/2/12178PR

**NOTICE IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT NO. 27 OF 2002, SECTION 24 OF THE NATIONAL OF 1998, PUBLIC PARTICIPATION PROCESS FOR A PROSPECTING RIGHT DIAMONDS IN RESPECT OF PORTION 4 OF THE FARM KLIPDAM 157, WINDSORTON, SITUATED IN THE MAGISTERIAL DISTRICT OF BARKLEY WEST;**

With reference to the above and our letter dated 30 July 2018.

Please confirm that our client is registered as an interested and affected party to the abovementioned Prospecting Right Application.

We would like to inform that our client as the rightful landowner would like to object to the Prospecting

Barnardstraat 2 Barnard Street  
Posbus / P O Box 1673

POTCHEFSTROOM 2520

Tel: (018) 297-2090

Fax: (018) 297-2083

Internasionaal / International

Tel: (+27 18) 297-2090

Fax: (+27 18) 297-2083

E-pos / E-mail: : [aktesdivprok@gmail.com](mailto:aktesdivprok@gmail.com)

(Conveyancing)

E-pos / E-mail: [meyerpieter87@gmail.com](mailto:meyerpieter87@gmail.com)

(Commercial, Environmental)

E-pos / E-mail: [irisdivprok@gmail.com](mailto:irisdivprok@gmail.com) (Litigation,

Accounts)

E-pos / E-mail: [divprok@gmail.com](mailto:divprok@gmail.com) (Commercial,

Mining)

ttau@teikomsa.net

NOTICE IN TERMS OF DMR REFERENCE NUMBER NC30/5/1/1/2/12178PR

**NOTICE IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT NO. 27 OF 2002, SECTION 24 OF THE NATIONAL OF 1998. PUBLIC PARTICIPATION PROCESS FOR A PROSPECTING RIGHT DIAMONDS IN RESPECT OF PORTION 4 OF THE FARM KLIPDAM 157, WINDSORTON, SITUATED IN THE MAGISTERIAL DISTRICT OF BARKLEY WEST;**

With reference to the above and our letter dated 30 July 2018.

Please confirm that our client is registered as an interested and affected party to the abovementioned Prospecting Right Application.

We would like to inform that our client as the rightful landowner would like to object to the Prospecting Right application on the following grounds that were not addressed in the application till date.

1. Clearance of vegetation and reseedling of affected areas;
2. Access control of the property and security is of major concern to our client;
3. Land use agreement between applicant and the landowner – No proposals were received till date;
4. Listed activity 19 in terms of listing notice 2 (GN R 984) needs to conduct a full EIA process;
5. Use of roads - traffic management plan; the averment that the roads to be constructed will only be for 132m<sup>2</sup> is unfounded as it would be impossible to transport the machinery from the access gate to the relevant sites on the indicated area stipulated in the application;
6. Housing of employees was not addressed;

---

Partners / Vennote : Marius de Villiers – B.Com.LLB  
Engela de Villiers – B.Proc.

Assisted by / Bygestaan deur : Pieter Nicolaas Meyer – B.Com.LLB.LLM  
(Environmental Law and Governance)

PROKUREURS • AKTEVERVAARDIGERS • ATTORNEYS • CONVEYANCERS

---

7. Water use licence application in terms of affected drainage lines abstraction of water, ground water pollution dust suppression of roads;
  - a. If no bulk sampling will be conducted the need for process and reprocessed water is questioned;
  - b. Process water storage facility is not included in the areas to be disturbed.
8. Hydrocarbon management;
9. Waste disposal activities.

It must be noted that our client will be prejudiced if the application is granted as the property can't be used for agricultural purposes and will therefore have a detrimental economic effect on our client.

Please feel free to contact writer by email: [meyerpieter87@gmail.com](mailto:meyerpieter87@gmail.com) for a further discussion on the matter.

Regards



PIETER MEYER  
DE VILLIERS ATTORNEYS

RESPONSE FROM APPLICANT AND EAP TO THE CONCERNS RAISED BY THE  
LEGAL REPRESENTATIVE:



**TAU IMPERIAL TRADING**

2387 Phillip Mpiwa street, Vergenoeg, Kimberley

Company reg Number: 2012/212541/07

Income Tax ref number: 9478113179

Email: ttau@telkomsa.net

Cell: 084 929 6029

De Villiers Attorneys  
2 Barnard Street  
Potchefstroom  
2520  
Our Reference: 12178 PR  
BY email: meyerpieters87@gmail.com

Mr Pieter Meyer

**NOTICE RECEIVED IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES  
DEVELOPMENT ACT NO 27 OF 2002, SECTION 24 OF THE NATIONAL OF 1998 IN  
RESPECT OF APPLICATION WITH DMR REFERENCE NC 30/5/1/1/2/12178 PR.**

With reference to the above and your letter dated 23 August 2018:

We confirm that your client is registered as an interested and affected party to the abovementioned Prospecting Right Application lodged with the Department Mineral Resources, Northern Cape Region.

We confirm that your client is registered as an interested and affected party to the abovementioned Prospecting Right Application lodged with the Department Mineral Resources, Northern Cape Region.

We acknowledge your notification that your client is the rightful landowner and object to the application on certain grounds as stated in your letter dated 23 August 2018.

We therefor wish to address the concerns and challenges listed in the said letter.

1. Clearance of vegetation and reseeded of affected areas;

The request for access to the property, which was denied, have the result that no physical assessment of the area could be done. If access is allowed, the applicant and the landowner can then demarcate the specific areas that will be affected by the clearance of vegetation, if any. A reseeded programme can then be compiled to minimise the vegetation disturbance or mitigate such affects.

2. The access control and the implementation of such control do not rest on the applicant solely, and a great deal to address those measures should be discussed and a monitoring plan agreed to by both parties. The security risk which understandable from the view of the landowner should therefor form part of this discussion.

3. TTS is of the opinion that a draft agreement for discussion be made available from the landowner. In the absence, please notify the applicant to forward a draft to your client.

4. An EIA process will be undertaken inclusive of the specified activity.

5. The physical assessment when allowed, would give a clearer understanding of the current infrastructure. The concern listed display the importance of allowing for access and the mutual agreement of points of concern. Needless to say, the landowner can currently depart from a position of knowledge of the study area,

I trust you'll find the above in order.

where the opportunity to reach a mutual understanding of the study area at this stage, is not afforded to the applicant. We however appreciate the input to this regard and it is a clear indication of the importance of allowing access for physical evaluation and assessment, and proposing alternatives that will be acceptable to the landowner.

6. No housing or accommodation facilities will be erected on the property. Employees would be based in the neighbouring towns.

We request access to the farm to conduct the physical assessment and a joint meeting with the landowner to discuss the Draft BAR and also allow the discussion and finalisation of a surface use agreement.

For further information please contact us on Thato Tau or alternatively Malcolm Goliath at 0824523693.

I trust you'll find the above in order and anticipate your swift response.

applicant. We however appreciate the input to this regard and it is a clear indication of the importance of allowing access for physical evaluation and assessment, and proposing alternatives that will be acceptable to the landowner.

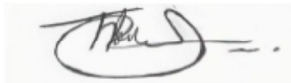
6. No housing or accommodation facilities will be erected on the property. Employees would be based in the neighbouring towns.

We request access to the farm to conduct the physical assessment and a joint meeting with the landowner to discuss the Draft BAR and also allow the discussion and finalisation of a surface use agreement.

For further information please contact us on Thato Tau or alternatively Malcolm Goliath at 0824523693.

I trust you'll find the above in order and anticipate your swift response.

Sincerely,



**Thato Tau**  
**Director of Tau Imperial**

- **Further consultation requests were made to the attorney representing the farm owner (Pieter Meyer) through telephonic discussions between the 1<sup>st</sup> February 2019 and 19<sup>th</sup> of March 2019.**

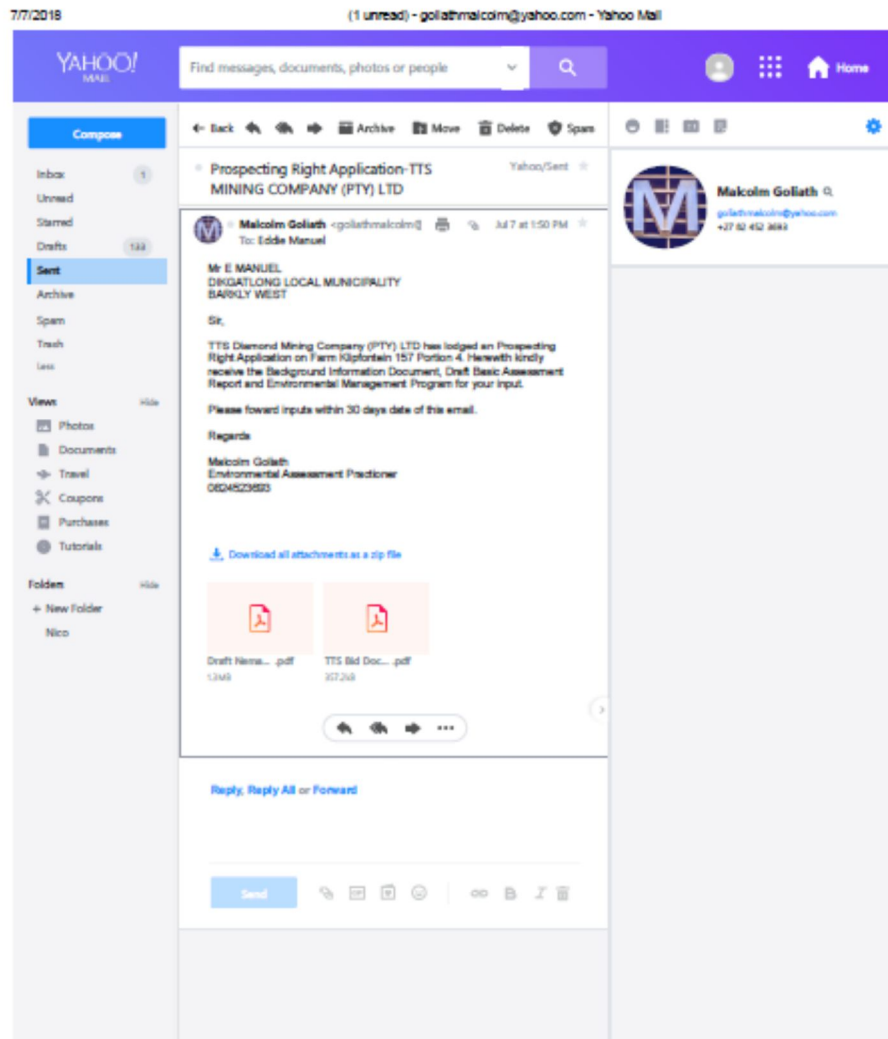
He further indicated that his client has no appetite for mining on his farm and he'll only speak to us once we have an offer on the table (to buy his farm).

I indicated to Mr Meyer that my client is under no obligation to buy a farm blindfolded; not knowing the mineral potential on the farm and the only way to discover the true potential of the farm is through prospecting explorations.

On the 19<sup>th</sup> of March 2019 I explained to Pieter that my client has no interest in farming, he indicated to me that he'll speak to his client to try and organise a meeting with us and that was the last we ever heard from Mr Meyer.

### The Dikgatlong Municipality

The Official of Dikgatlong Municipality, Mr Eddie Manuel was informed of the Prospecting Application by email. The BID Document and Draft EMPr was forwarded to him.

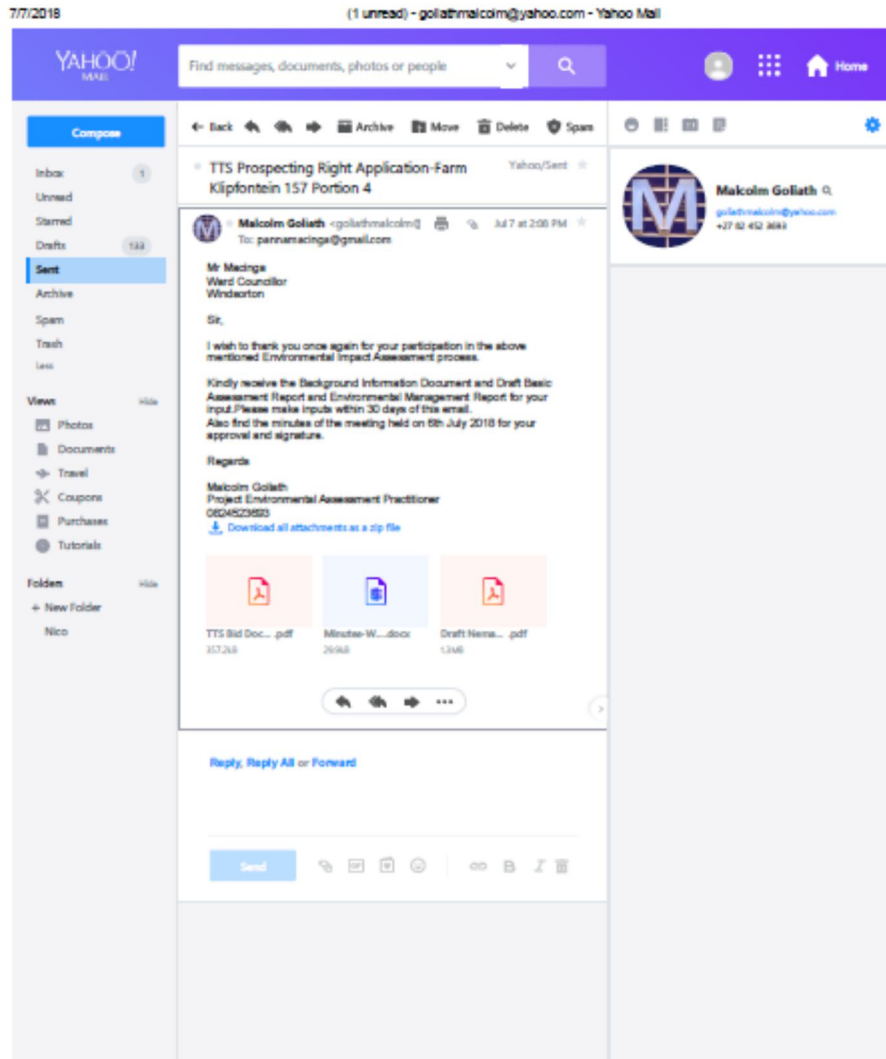




No Input was received as at 6<sup>th</sup> November 2018 which is the date of Final Submission of the Basic Assessment Report and Environmental Management Programme Report.

#### Ward Councillor

The wards for the application area are as yet not clearly demarcated. A discussion was held with the ward councillor (Holpan) Mr DANIEL MACINGA on 6<sup>th</sup> July 2018 at the Dikgatlong Municipal Offices, followed by email of the application documentation.



Ward Councillor Mr Thomas Saul (Windsorton) attended the public meeting held on 20<sup>th</sup> July 2018, at Hebron Hall, 10:00 Windsorton. Copy of the minutes are attached below.

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TTS Prospecting Right Application Yahoo/Sent


**Malcolm Goliath** <golathmalcolm>  
To: boetasul@gmail.com, lloydmodipi83@gmail.com  
Jul 21 at 10:36 AM


**Malcolm Goliath**   
golathmalcolm@yahoo.com  
+27 82 452 9883

**Messrs Saul and Modupi,**

I thank you once again for taking time to attend the Public Participation meeting held on 20th July 2018. I also thank you for your input. Herewith the Draft EIA and EMP. Please make inputs within 30 days date of this email.

Regards  
Malcolm Goliath  
0204529883

 Virus-free [www.avast.com](http://www.avast.com)

  
Draft Name... pdf  
15MB

Reply, Reply All or Forward

Send

M A GOLIATH  
23 GOEDEHOOP AVENUE  
ROYLDENE  
KIMBERLEY  
goliathmalcolm@yahoo.com  
8301

EMAIL:

CELL: 0824523693

---

## MINUTES OF MEETING

**DATE: 20<sup>th</sup> July 2018**

**VENUE: Hebron Hall, Windsorton**

**TIME: 10:00**

**CHAIRPERSON: M A GOLIATH**

**PRESENT: As per Attendance Register**

**AGENDA**

**As per minutes**

### **1. DISCUSSION OF PUBLIC PARTICIPATION PROCESS**

Mr Goliath informed the meeting that TTS Diamond (PTY) LTD has applied for a Prospecting Right on Klipdam 157 Portion 4. Mr Goliath explained that the ward councillors, Mr Daniel Macinga (Holpan) and Mr Thomas Saul (Windsorton), was identified as a Interested and Affected Parties. Mr Goliath explained to the meeting of the public participation process that he is currently conducting for the application. He informed the meeting that the EIA public Participation process was advertised in the Diamond Fields advertiser on 9<sup>th</sup> July 2018. In addition, Public Notice Boards have been placed on the farm gate and at JH Oppihoek Supermarket and Café in Windsorton. He further explained that the activities applied for is a section twenty to dispose of diamonds and authorisation to erect structure, infrastructure and earthworks to conduct the prospecting activities.

### **2. PROSPECTING WORK PROGRAM AND SITE INFRASTRUCTURE**

Mr Goliath explained that the prospecting programme will be drilling of 9 holes and a trenching programme. This will be done to quantify the extent of the orebody and make an inferred mineral resource statement. At least 9 people would be employed.

He further informed the meeting that the programme will definite impact on the environment in the following respects: destruction of the vegetation, possible migration of the fauna, increased noise and dust pollution. Mr Goliath explained that mitigation measures need to be put in place by the Company Management to mitigate these impacts. Mr Saul requested an explanation if the prospecting activities would be inclusive of bulk sampling as applicant apply for rights without bulk sampling and then perform bulk sampling. Mr Goliath explained that the prospecting right applied for currently is without bulk sampling. Mr Saul further request on how the community will benefit from the project. Mr Goliath explained that it would only be in the form of employment and consumables that is available in Windsorton. He further explained that the prospecting right does not have a social and labour plan as oppose to a mining right. Mr Modupi made enquiries about the application documents and the availability thereof.



**3. FUTURE ENGAGEMENT**

Mr Goliath informed the meeting that he will forward the application documentation (Draft EIA and EMPr) for input to Mr Saul and Modupi.

**4. INPUT AND**

**5. CONCERNS FROM MEETING**

**The following concerns, objections and challenges were raised by the meeting:  
SOCIAL/ECONOMIC/HERITAGE/CULTURAL/IMPACTS**




None recorded.

Mr Goliath thanked the meeting for their attendance and the meeting adjourned at 10:46

**ATTENDANCE REGISTER  
PUBLIC PARTICIPATION MEETING  
DATE: 20 JULY 2018**

*Handwritten scribble*

ATTENDANCE REGISTER  
CONSULTATION MEETING

| NAME                               | COMPANY                             | SIGNATURE   | CONTACT NUMBER/e-mail  |
|------------------------------------|-------------------------------------|---|--|
| THOMAS SAUL<br><i>(Boys Noddy)</i> | Dikgatoeng<br><i>Boise Holdings</i> |   | boetger@mail@gmail.com<br>0639555308<br>110yd.madup183@gmail.com |
| BENSON GONDIGENE<br>WILLEN VAN NIK | Dikgatoeng<br>DIKGATONG             | <br> | 0792993802<br>0767688240   |
|                                    |                                     |   |  |
|                                    |                                     |   |  |
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|                                    |                                     |   |  |

## Adjacent Farmers and Occupant

Discussion held with representatives of Klipdam Mining Company who are the owners and occupants of adjacent farms.

7/7/2018 goliathmalcolm@yahoo.com - Yahoo Mail

YAHOO! MAIL Find messages, documents, photos or people

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TTS Prospecting Right Application Yahoo/Sent

Malcolm Goliath <goliathmalcolm@...> To: bneil@kldmc.co.za, bneil@kldmc.co.za Jul 7 at 1:59 PM

Messrs B J Neil and L P Smit,

RE: TSS MINING COMPANY (PTY) LTD PROSPECTING RIGHT APPLICATION

Sirs,

I thank you once again for the reception I received from your company on 6 July 2018. I appreciate your input to the Environmental Impact Assessment Public Participation Process for the TSS Mining Application on Farm Klipdam 157 Portion 4.

Herewith a copy of the minutes for your perusal and signature. Please make amendments to the minutes if it is not a true reflection.

I also forward the Background Information Document and Draft EMP.

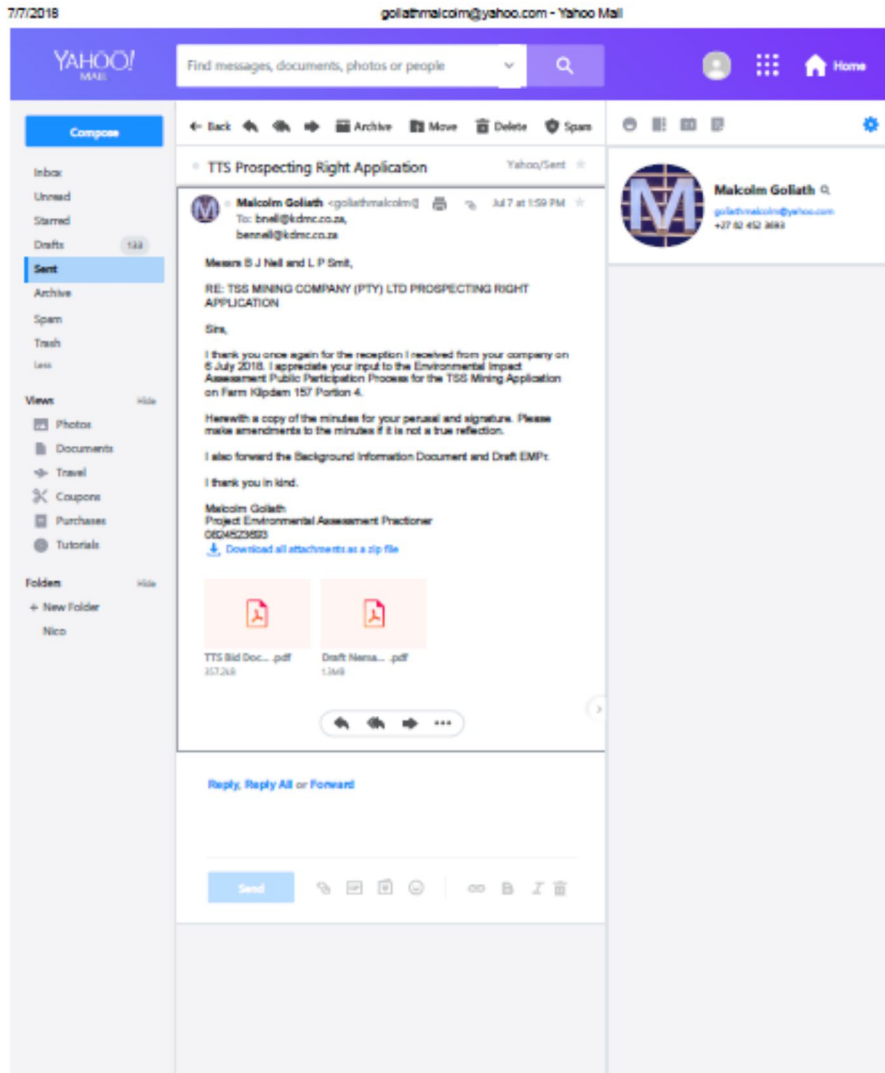
I thank you in kind.

Malcolm Goliath  
Project Environmental Assessment Practitioner  
0824520553  
[Download all attachments as a zip file](#)

TSS Bid Doc... .pdf 337,265  
Draft Nema... .pdf 1,368

Reply, Reply All or Forward

Send



## Minutes Of Meeting

M A GOLIATH  
23 GOEDEHOOP AVENUE  
ROYLDENE  
KIMBERLEY  
goliathmalcolm@yahoo.com  
8301

EMAIL:

CELL: 0824523693

---

### MINUTES OF MEETING

**DATE: 6 July 2018**

**VENUE: Klipdam Mining Managers Office**

**TIME: 12:00**

**CHAIRPERSON: M A GOLIATH**

**PRESENT: Mr B J Nell and Mr L P Smit**

**AGENDA**

**As per minutes**

#### **1. DISCUSSION OF PUBLIC PARTICIPATION PROCESS**

Mr Goliath informed the meeting that TTS Diamond (PTY) LTD has applied for a Prospecting Right on Klipdam 157 Portion 4. Mr Smit confirmed that it is the neighbouring property to their property Klipdam 157 Portion 1. Mr Nell confirmed that their property is the ownership of Mr Fourie and that they represent the company as the Mine Manager. Mr Goliath explained that it is a legal requirement that he need to consult with adjacent owners and occupants on the application by TTS Diamond. He notified the meeting of the public participation process which will be advertised in the Diamond Fields advertiser on 9<sup>th</sup> July 2018. In addition Public Notice Boards will be placed on the farm gate and at JH Oppihoek Supermarket and Café in Windsorton. He further briefed the meeting that a Public Meeting will be held at the Hebron Community Hall on the 30<sup>th</sup> July 10:00. He further explained that the activities applied for is a section twenty to dispose of diamonds and authorisation to erect structure, infrastructure and earthworks to conduct the prospecting activities.

#### **2. PROSPECTING WORK PROGRAM AND SITE INFRASTRUCTURE**

Mr Goliath explained that the prospecting programme will be drilling of 9 holes and a trenching programme. Mr Smit confirmed the importance of the trenching programme as no bulk sampling will be performed.

#### **3. FUTURE ENGAGEMENT**

Mr Goliath asked if Klipdam Mining Company wish to be registered on the application database to receive further correspondence around the application to which the officials confirm that they are satisfied and that they do not wish to be registered or receive future correspondence. Mr Goliath responded that he will keep them informed of the process.

#### **4. INPUT AND CONCERNS FROM MEETING**

**The following concerns, objections and challenges were raised by the meeting:**

#### **5. SOCIAL/ECONOMIC/HERITAGE/CULTURAL/IMPACTS**

The participants were to the meeting was asked how the Prospecting operation would affect them socially, economically, culturally or in any other way.

Mr Nell responded that the prospecting operation by TTS would not affect them in any respect. If any aspect of the operation would affect them in future they would notify the Chairperson.

Mr Goliath thanked the participants for their attendance and the meeting adjourned at 12:32

**Government Departments  
Environment and Nature Conservation**

Draft BAR and EMPr forwarded on 14<sup>th</sup> September 2018 as part of the consultation process. No input received as per 6 November 2018

The image part with relationship ID r1235 was not found in the file.



## **Agriculture, Land Reform and Rural Development**

Draft BAR and EMPr forwarded on 14<sup>th</sup> September 2018 as part of the consultation process. No input received as per 6 November 2018

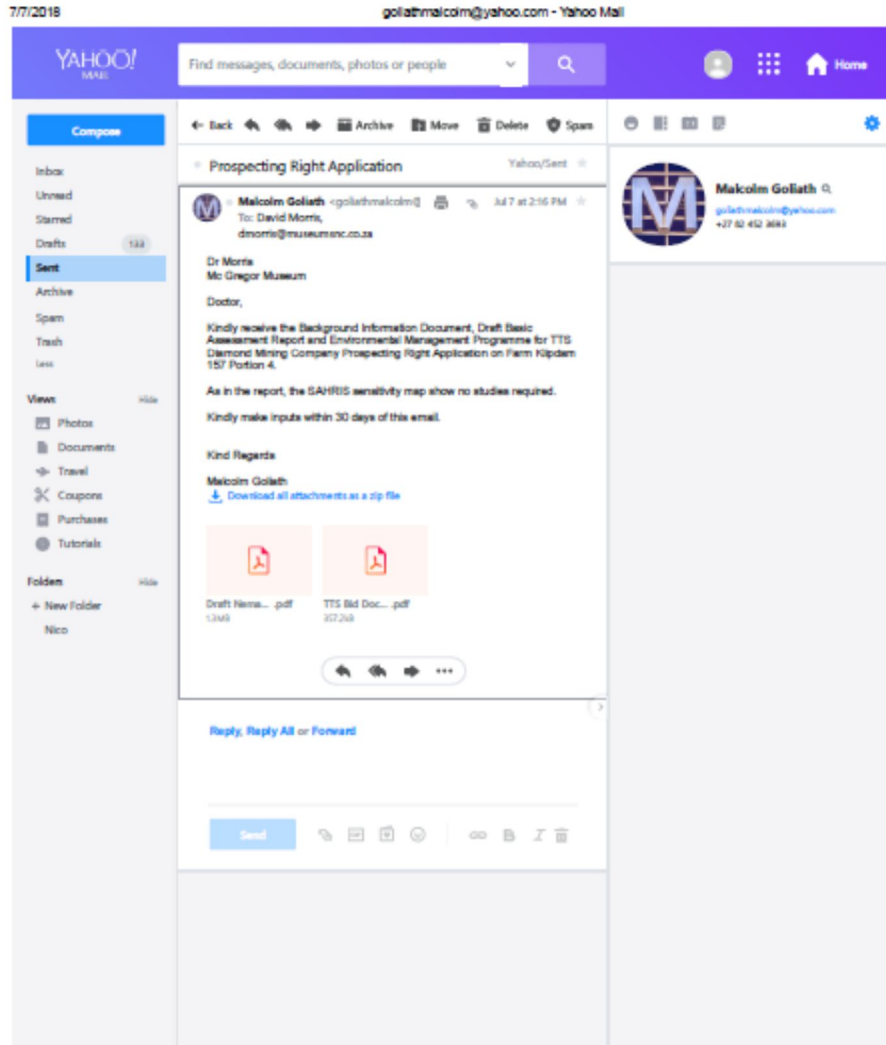
 The image part with relationship ID r1635 was not found in the file.

## **Water and Sanitation**

Draft BAR and EMPr forwarded on 14<sup>th</sup> September 2018 as part of the consultation process. Input received as per noted in the Consultation report with I&Aps.

 The image part with relationship ID r1625 was not found in the file.

## Mc Gregor Museum: email forwarded on 7<sup>th</sup> July 2018



## Commission for Land Restitution

Enquiry on any land claims forwarded on 15<sup>th</sup> August 2018

M A GOLIATH  
23 GOEDEHOOP AVENUE  
ROYLDENE  
KIMBERLEY  
8301

goliathmalcolm@yahoo.com  
15 August 2018

---

**THE LAND CLAIMS COMMISSIONER**  
Northern Cape Province  
BY email

Dear Sir/Madam

**RE: DEPARTMENT MINERAL RESOURCES APPLICATIONS**

Applications has been lodged in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), for a Mining Permits or Prospecting Right with The Department of Mineral Resources, Northern Cape Region on the following farms:



1. Koegas 324 and Hounslow 323, **ADMINISTRATIVE DISTRICT of HAY, DEPARTMENT MINERAL RESOURCES REFERENCE NUMBER NC 30/5/1/1/2/12212 PR**
2. Nek 106, Portion 1 Cairntoul 189, Remainder /Extent Cairntoul 189, **ADMINISTRATIVE DISTRICT of HAY, DEPARTMENT MINERAL RESOURCES REFERENCE NUMBER NC 30/5/1/1/2/12046 PR**
3. A Portion of Portion 10 of the farm Dorstfontein 77, **MAGISTERIAL DISTRICT of KIMBERLEY, DEPARTMENT MINERAL RESOURCES REFERENCE NUMBER NC 30/5/1/3/2/10697 MP**
4. Portion 4 of farm Klipdam 157, **MAGISTERIAL DISTRICT of BARKLY WEST, DEPARTMENT MINERAL RESOURCES REFERENCE NUMBER NC 30/5/1/1/2/12178 PR**
5. A Portion of ERF 12956 and Erf 135607 **MAGISTERIAL DISTRICT of KIMBERLEY**  
(Application not yet lodged)

Could you kindly inform if any land restitution claim has been lodged with your Commission and forward the outcome either by email address ([goliathmalcolm@yahoo.com](mailto:goliathmalcolm@yahoo.com)) or Postal Address 23 Goedehoop Avenue, Royldene, Kimberley, 8301.

Kind Regards



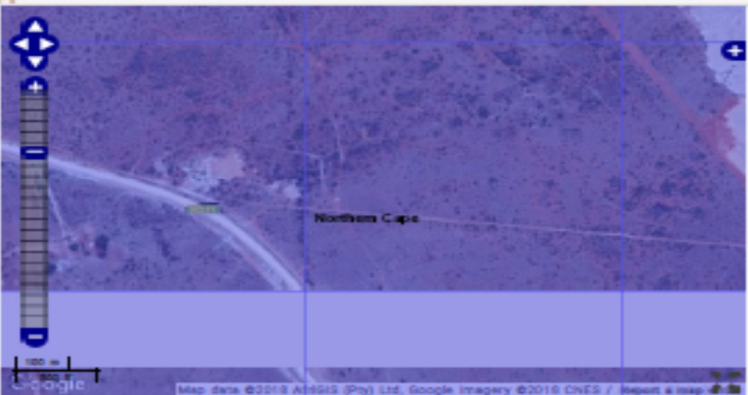
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M A Goliath  
Project Consultant

SAHRA  
SAHRIS MAP  
**SAHRIS**

Navigation

PalaeoSensitivity Map



| Colour        | Sensitivity        | Required Action   |
|---------------|--------------------|---|
| RED           | VERY HIGH          | field assessment and protocol for finds is required   |
| ORANGE/YELLOW | HIGH               | desktop study is required and based on the outcome of the desktop study, a field assessment is likely                               |
| GREEN         | MODERATE           | desktop study is required   |
| BLUE          | LOW                | no palaeontological studies are required however a protocol for finds is required   |
| GREY          | INSIGNIFICANT/ZERO | no palaeontological studies are required  |
| WHITE/CLEAR   | UNKNOWN            | these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map. |

Map data ©2018 AHRIS (Pty) Ltd, Google Imagery ©2018 CNES / Report a map

1 in 250 000 geological formation layers are courtesy of the Council for Geoscience (<http://www.geoscience.org.za/>)

For more information, go to [How to Use the Palaeontological \(fossil\) Sensitivity Map](http://www.sahra.org.za/content/how-use-palaeontological-fossil-sensitivity-map/) (<http://www.sahra.org.za/content/how-use-palaeontological-fossil-sensitivity-map/>).

Home Back to Top

The SAHRIS Map shows that no paleontological studies is required (BLUE)

**Notice Boards** (Dimension 60cmx42cm) of the proposed prospecting activity have been placed at the property gate, and JH OPI Hoek Supermarket in Windsorton where most community members frequent for purchasers. Notices are posted on the notice board, window and wall to inform the community of any notifications affect ting them.



NOTICE BOARD ON FARM ENTRY GATE



EIA PUBLIC PARTICIPATION BOARD PLACED AT JH OPPIHOEK SUPERMARKET

An advert was placed in the Diamond Fields Advertiser on 9 July 2018 to invite interested and affected parties to partake in the public participation process, register on the application database and attend a public meeting to be held on 20<sup>th</sup> July 2018.

Diamond Fields Advertiser... MONDAY JULY 9, 2018

**TOWNHOUSES TO LET:**  
Nadien Park:  
R8 000 pm + deposit  
Apartment - 2 bedrooms - cooling system - gas stove - double carport with remote entrance.  
CBD: R7 000 pm + deposit  
Spacious, 3 bedrooms, 2 baths with guest toilet, lock-up carport with small garden, back and front. Key available at office.  
**Leader Homes.**  
Call Betse (053) 631-3955 or  
Cathy (043) 600-7723

**There's POWER in Classified advertising**  
Classified is a powerful resource for connecting buyers and sellers. Whether it's a new car, a new house or a new job - **CLASSIFIED** can help you reach it.  
**Classifieds**  
053 832 6261

**Can you want The Agent you need.**  
**SOLD**  
053 832 6261  
**Team for your**

**Legals**  
**Town Planning**  
**Notice of Intention to Approve**  
**Subsidiary Use of Land**  
**Notice of Intention to Approve**  
**Subsidiary Use of Land**  
**Notice of Intention to Approve**  
**Subsidiary Use of Land**

**EIA PUBLIC PARTICIPATION PROCESS**  
TTS DIAMOND (PTY) LTD has in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002 as amended), the National Environmental Act, 1998 (Act 107 of 1998 as amended), lodged an application for a Prospecting Right with the Department of Mineral Resources, Northern Cape Region, on Portion 4 of the Farm 1316444, 1317 Windbarn situated in the Magisterial District of Barkly West.

**Listed Activities**  
GMR 327, Activity 20 of Listing Notice 1  
Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including (a) associated infrastructure, structures and earthworks directly related to the extraction of a mineral resource.  
GMR 325, Activity 19 of Listing Notice 2  
The removal and disposal of minerals contemplated in terms of section 20 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource.

**Reference Number:**  
NC 305/1/12/1178 PR  
**Mineral: Diamonds**  
All interested and/or affected parties are hereby invited to register on the application database (gotruevalcoim@yahoo.com), or lodge any complaints in writing to: Mr T Top  
2387 Philip Mphahle Street  
Veggenburg  
Kimberley  
8345  
Draft Basic Assessment Report available at the Barkly West Library from 23 July 2018.  
Notice is also given of a Public Meeting that will be held at Baboon Park Hall, Windbarn on 20 July 2018, Time 10:00 AM.

**Notice of Intention to Approve**  
**Subsidiary Use of Land**  
Notice is hereby given that the Municipality has received an application in accordance with section 22(1) of the Land Use Management Ordinance, 2016 (Act No. 15 of 2016) for the proposed use of land as a...  
Notice is hereby given that the Municipality has received an application in accordance with section 22(1) of the Land Use Management Ordinance, 2016 (Act No. 15 of 2016) for the proposed use of land as a...  
Notice is hereby given that the Municipality has received an application in accordance with section 22(1) of the Land Use Management Ordinance, 2016 (Act No. 15 of 2016) for the proposed use of land as a...



## DATABASE OF INTERESTED AND AFFECTED PARTIES

| NAME                            | INTERESTED/ AFFECTED BASE                                     | CONTACT DETAILS  |
|---------------------------------|---|--|
| Dr T IONS                       | Trustee: Landowner and Occupier                               | 0823746771   |
| Mr DANIELMACINGA                | Ward Councillor (HOLPAN)                                      | 0729519975<br>pannamacinga@gmail.com   |
| Mr THOMAS SAUL                  | Ward Councillor (Windsorton)                                  | boetasaul@gmail.com  |
| Mr Lloyd Modupi                 | Mining Forum Representative                                   | <a href="mailto:Lloyd.modupi83@gmail.com">Lloyd.modupi83@gmail.com</a><br>0635053057 |
| Mr EDDIE MANUEL                 | Dikgatlong Municipal Mining Official                          | 0720714995   |
| Messrs:<br>B J Nell<br>L P Smit | Adjacent farm Klipdam 157 Portion 1<br>Klipdam Mining Company | <a href="mailto:bennell@kdmc.co.za">bennell@kdmc.co.za</a><br>0723138134             |

## PUBLIC MEETING

**Held at the Hebron Hall, Windsorton on 20 July 2018 at 10:00**

M A GOLIATH  
23 GOEDEHOOP AVENUE  
ROYLDENE  
KIMBERLEY  
goliathmalcolm@yahoo.com  
8301

EMAIL:

CELL: 0824523693

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## MINUTES OF MEETING

**DATE: 20<sup>th</sup> July 2018**

**VENUE: Hebron Hall, Windsorton**

**TIME: 10:00**

**CHAIRPERSON: M A GOLIATH**

**PRESENT: As per Attendance Register**

**AGENDA**

**As per minutes**

### 6. DISCUSSION OF PUBLIC PARTICIPATION PROCESS

Mr Goliath informed the meeting that TTS Diamond (PTY) LTD has applied for a Prospecting Right on Klipdam 157 Portion 4. Mr Goliath explained that the ward councillors, Mr Daniel Macinga (Holpan) and Mr Thomas Saul (Windsorton), was identified as a Interested and Affected Parties. Mr Goliath explained to the meeting of the public participation process that he is currently conducting for the application. He informed the meeting that the EIA public Participation process was advertised in the Diamond Fields advertiser on 9<sup>th</sup> July 2018. In addition, Public Notice Boards have been placed on the farm gate and at JH Oppihoek Supermarket and Café in Windsorton. He further explained that the activities applied for is a section twenty to dispose of diamonds and authorisation to erect structure, infrastructure and earthworks to conduct the prospecting activities.

### 7. PROSPECTING WORK PROGRAM AND SITE INFRASTRUCTURE

Mr Goliath explained that the prospecting programme will be drilling of 9 holes and a trenching programme. This will be done to quantify the extent of the orebody and make an inferred mineral resource statement. At least 9 people would be employed.

He further informed the meeting that the programme will definite impact on the environment in the following respects: destruction of the vegetation, possible migration of the fauna, increased noise and dust pollution. Mr Goliath explained that mitigation measures need to be put in place by the Company Management to mitigate these impcts. Mr Saul requested an explanation if the prospecting activities would be inclusive of bulk sampling as applicant apply for rights without bulk sampling and then perform bulk sampling. Mr Goliath explained that the prospecting right applied for currently is without bulk sampling. Mr Saul further request on how the community will benefit from the project. Mr Goliath explained that it would only be in the form of employment and consumables that is available in Windsorton. He further explained that the prospecting right does not have a social and labour plan as oppose to a mining right. Mr Modupi made enquiries about the application documents and the availability thereof.

#### **8. FUTURE ENGAGEMENT**

Mr Goliath informed the meeting that he will forward the application documentation (Draft EIA and EMPr) for input to Mr Saul and Modupi.

#### **9. INPUT AND**

#### **10. CONCERNS FROM MEETING**

**The following concerns, objections and challenges were raised by the meeting:**

**SOCIAL/ECONOMIC/HERITAGE/CULTURAL/IMPACTS**





None recorded.

Mr Goliath thanked the meeting for their attendance and the meeting adjourned at 10:46

**ATTENDANCE REGISTER  
PUBLIC PARTICIPATION MEETING  
DATE: 20JULY 2018**

*Handwritten mark*

ATTENDANCE REGISTER  
CONSULTATION MEETING

| NAME              | COMPANY        | SIGNATURE  | CONTACT NUMBER/e-mail                   |
|-------------------|----------------|--|---|
| THOMAS SAUL       | DiklatHono     |  | boetarsaul@gmail.com                    |
| Riza Nooly        | Sreze Holdings |  | 06350553059<br>110401modapi83@gmail.com |
| BENSONIA CANDISAP | DiklatHono     |  | 2792993803                              |
| KILLEN VAN NYK    | DIKLATHONO     |  | 0767688240                              |
|                   |                |  |   |
|                   |                |  |   |
|                   |                |  |   |
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|                   |                |  |   |
|                   |                |  |   |

iii) **Summary of issues raised by I&Aps**  
 (Complete the table summarising comments and issues raised, and reaction to those responses)

| Interested and Affected Parties  |   | Date              | Issues raised  | EAPs response to issues as mandated by the applicant  | Section and paragraph reference in this report where the issues and or response were incorporated. |
|--|---|-------------------|--|---|--|
| List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted. |   | Comments Received |  |   |  |
| <b><u>AFFECTED PARTIES</u></b>   |   |                   |  |   |  |
| <b>Landowner/s</b>   |   |                   |  |   |  |
| IONS RANCHING TRUST  | X |                   | Complaint around security control and theft.<br>Rehabilitation concerns<br>Additional Information requested from applicant and the Regional Manager, DMR, Northern Cape Region.<br>Concerns raised from the legal representative and the response thereto from applicant is attached as APPENDIX 1.<br>Access was denied to the study area | Surface use agreement to include and address surface owners concerns and compensation where any damage is experienced due to the prospecting operators negligence |  |
| <b>Lawful occupier/s of the land</b>   |   |                   |  |   |  |
| IONS RANCHING TRUST  | X |                   | Complaint around security control and theft.<br>Rehabilitation concerns<br>Additional Information requested from applicant and the Regional Manager, DMR, Northern Cape Region.<br>Concerns raised from the legal representative and the response  | Surface use agreement to include and address surface owners concerns and compensation where any damage is experienced due to the prospecting operators negligence |  |

|  |          |  |  |  |  |
|--|----------|--|--|--|--|
|  |          |  | thereto from applicant is attached as APPENDIX 1.<br>Access was denied to the study area |  |  |
| <b>Landowners or lawful occupiers on adjacent properties</b>   |          |  |  |  |  |
| Adjacent farm Klipdam 157 Portion 1 Klipdam Mining Company Messrs: B J Nell and L P Smit                         | <b>X</b> |  | In support of application  |  |  |
| <b>Municipal councillor Mr D Macinga</b>   | <b>X</b> |  | Discussion held on 6 <sup>th</sup> July 2018   |  |  |
| <b>Municipal councillor Mr T Saul</b>  |          |  | Attended the Public Meeting held on 20th July 2018                                       |  |  |
| <b>Municipal councillor Mr D Macinga</b>   | <b>X</b> |  | No Input received  |  |  |
| <b>Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA</b> |          |  |  |  |  |
| <b>Departments: Eskom Environmental Division Telkom</b>  |          |  |  |  |  |
| <b>Communities</b>   |          |  |  |  |  |
| No Communities   |          |  |  |  |  |
| <b>Dept. Land Affairs</b>  | <b>X</b> |  | No Input received  |  |  |



|   |          |  |  |                               |  |
|---|----------|--|--|-------------------------------|--|
| <b>Dept. Water and Sanitation</b>                                   | <b>X</b> |  | Input received<br>Relates to:<br>Water authorisation<br>Site Plan<br>Floodline 1:100<br>Agreement with domestic waste facility<br>Sanitation service provider approved facility<br>Storm Water | Addressed in the BAR and EMPr |  |
| <b>Traditional Leaders</b>  |          |  |  |                               |  |
| No Traditional Leaders  |          |  |  |                               |  |
| <b>Dept. Environmental Affairs</b>                                  | <b>X</b> |  | No Input received  |                               |  |
| <b>Other Competent Authorities affected</b>                         |          |  |  |                               |  |
| <b>Commission for Land Restitution</b>                              | <b>X</b> |  | No Input received  |                               |  |
| <b>Department of Agriculture, Land Reform and Rural Development</b> | <b>X</b> |  | No Input received  |                               |  |
| <b><u>OTHER AFFECTED PARTIES</u></b>                                |          |  | <b>None Received</b>   |                               |  |
| <b><u>INTERESTED PARTIES</u></b>                                    |          |  | <b>None Received</b>   |                               |  |

- iv) **The Environmental attributes associated with the alternatives.**(The environmental attributed described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects)

**(1) Baseline Environment**

**(a) Type of environment affected by the proposed activity.**

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

**Geographical Environment**

The application area is situated within Central South Africa 10 km North east of the Town of Windsorton, Northern Cape Province.

**Physical Environment**

It must be noted that a physical inspection and assessment could not be performed as access to the property was denied.

**Biological Environment**

**Natural Vegetation**

According to Acocks (1988), the area falls within the Kimberley Thorn Bushveld vegetation type.



**Vegetation and Associating Soil Type.**

| Unit | Soil form  | Vegetation description   |
|------|--|--|
| 1a   | Red apedal soils with Alluvial pebble heaps (Area disturbed in mosaic pattern) - Mutton form | <i>Acacia tortilis</i> / <i>Acacia mellifera</i> subsp. <i>ditenens</i> - <i>Eragrostis lehmanniana</i> / <i>Enneapogons coparius</i> short closed shrubland |

|    |  |  |
|----|--|--|
| 2a | Yellow apedal soils underlain by hardpan carbonate - Askham form | <i>Acacia tortilis</i> - <i>Eragrostis lehmanniana</i> low open shrubland  |
| 2b | Shallow soils on hardpan carbonate - Coega form                  | <i>Acacia tortilis</i> - karroid short open shrubland  |
| 2a | Shallow soils on softcarbonate soils-Brandvlei form              | <i>Acacia tortilis</i> - <i>Eragrostis lehmanniana</i> low open and low/closed woodland  |
| 2a | Brandvlei form   | <i>Acacia tortilis</i> - <i>Eragrostis lehmanniana</i> - low open woodland   |
| 2a | Brandvlei form   | <i>Acacia tortilis</i> - karroid short open shrubland  |
| 1b | Shallowsoils on hard rock(Andesite)-Mispah form                  | <i>Acacia tortilis</i> 1 <i>Acacia mellifera</i> subsp. <i>ditenens</i> - <i>Eragrostis lehmanniana</i> low bushland on Andesite                           |
| 2b | Coega form   | <i>Acacia tortilis</i> 1 <i>Tarconanthus camphoratus</i> - <i>Fingerhuthia Africana</i> - karroid shrubland  |
| 2a | Red apedal soils underlain by soft carbonate - Kimberley form    | <i>Ziziphus mucronata</i> / <i>Rhus lancea</i> - <i>Eragrostis lehmanniana</i> high sparse shrubland   |
| 2a | Kimberley form   | <i>Acacia tortilis</i> / <i>Tarconanthus camphoratus</i> - <i>Eragrostis lehmanniana</i> / <i>Aristida congesta</i> subsp. <i>Barbicollis</i> low bushland |
| 2a | Kimberley form   | <i>Acacia tortilis</i> - <i>Eragrostis lehmanniana</i> short open / closed shrubland   |
| 1b | Hutton via pebble-bed  | <i>Acacia tortilis</i> / <i>Acacia mellifera</i> subsp. <i>ditenens</i> - <i>Eragrostis lehmanniana</i> -Karroid short open shrubland                      |
| 1b | Hutton via pebble-bed  | <i>Acacia tortilis</i> 1 <i>Acacia mellifera</i> subsp. <i>ditenens</i> - <i>Eragrostis lehmanniana</i> -Karroid bushland                                  |
| 1b | Hutton via pebble-bed  | <i>Acacia tortilis</i> 1 <i>Acacia mellifera</i> subsp. <i>ditenens</i> - <i>Eragrostis lehmanniana</i> -Karroid tall open shrubland                       |
| 1b | Hutton via pebble-bed  | <i>Tarconanthus camphoratus</i> - <i>Eragrostis lehmanniana</i> short open shrubland   |
| 2a | Brandvlei form   | <i>Acacia tortilis</i> 1 <i>Tarconanthus camphorates</i> / <i>Tarconanthus camphoratus</i> - <i>Eragrostis lehmanniana</i> short open shrubland            |
| 2a | Brandvlei form   | <i>Eragrostis lehmanniana</i> grassland  |
| 1b | Mispah & shallow Hutton  | <i>Tarconanthus camphoratus</i> - <i>Eragrostis lehmanniana</i> short open/closed shrubland  |
| 1b | Mispah form  | <i>Rhus lancea</i> / <i>Acacia tortilis</i> / <i>Acacia mellifera</i> subsp. <i>ditenens</i> - <i>Eragrostis rigidior</i> low bushland                     |
| 1b | Mispah & shallow Hutton forms                                    | <i>Rhus lancea</i> - <i>Eragrostis rigidior</i> low bushland   |
| 1b | Hutton via pebble-bed  | <i>Acacia mellifera</i> subsp. <i>ditenens</i> - <i>Eragrostis lehmanniana</i> short open shrubland  |
| 1b | Hutton via pebble-bed  | <i>Acacia tortilis</i> / <i>Acacia mellifera</i> subsp. <i>ditenens</i> - <i>Eragrostis lehmanniana</i> short open shrubland on Andesite                   |
| 2b | Coega form   | <i>Acacia tortilis</i> / <i>Tarconanthus camphoratus</i> - <i>Fingerhuthia Africana</i> - karroid shrubland  |
| 1b | Hutton via pebble-bed  | <i>Acacia tortilis</i> / <i>Tarconanthus camphoratus</i> - <i>Eragrostis lehmanniana</i> low open bushland   |
| 1b | Mispah & shallow Hutton forms                                    | <i>Acacia tortilis</i> - <i>Eragrostis lehmanniana</i> short open shrubland  |
| 1b | Mispah & shallow Hutton forms                                    | <i>Acacia tortilis</i> - <i>Eragrostis lehmanniana</i> short open shrubland  |

|    |                       |   |
|----|-----------------------|---|
| 1b | Hutton via pebble-bed | <i>Acacia tortilis</i> - <i>Eragrostis lehmanniana</i> short open shrubland |
| 1b | Hutton via pebble-bed | <i>Acacia tortilis</i> - <i>Eragrostis lehmanniana</i> short open shrubland |

### Endangered or Rare Species

No sensitive habitats or Red Data Book species were observed.

### Exotic and Invasive Species

The dominant alien tree species in the area are Pepper Tree (*Schinus molle*) and Wild Tobacco (*Nicotianaglauca*).

It is the legal duty of the landowner/land user to control invasive alien plants occurring on the land under their control.

### Animal Life

#### Common Species

In addition to domestic animals, it is to be expected that limited numbers of small mammals, reptiles and birdlife common to the area occur on the farm. Mongoose, Vervet Monkeys and Spring hares are common

#### 3.1.1.1 Mammals found in the area

| COMMON NAME             | SCIENTIFIC NAME              |
|-------------------------|------------------------------|
| Least Dwarf Shrew       | <i>Suncus infinitesimus</i>  |
| Reddish-grey Musk Shrew | <i>Crociduracynana</i>       |
| Golden Mole             | <i>Chlorotophasclater</i>    |
| Common Slit faced bat   | <i>Nycteristhebaica</i>      |
| Cape Serotine Bat       | <i>Eptesicus capensis</i>    |
| Hairy-footed Gerbil     | <i>Gerbillurus paeba</i>     |
| Domestic Mouse          | <i>Mus musculus</i>          |
| Striped Field Mouse     | <i>Rhabdomys pumillo</i>     |
| Spectacled Mouse        | <i>Grahiurusocularis</i>     |
| Pygmy Mouse             | <i>Mus minutoides</i>        |
| Common Mole Rat         | <i>Crytomushottentotus</i>   |
| Domestic Rat            | <i>Rattusrattus</i>          |
| Cape Hare               | <i>Lepus capensis</i>        |
| Shrub Hare              | <i>Lepus saxatillis</i>      |
| Springhare              | <i>Pedetes capensis</i>      |
| Smith's Red Rock Rabbit | <i>Pronologus rupestris</i>  |
| Yellow Mongoose         | <i>Cynicitis penicillata</i> |
| Slender Mongoose        | <i>Galerella sanguinea</i>   |
| Striped Polecat         | <i>Ictonyx striatus</i>      |
| Dwarf Mongoose          | <i>Helogale parvula</i>      |
| Water Mongoose          | <i>Atilax paludinosus</i>    |
| Ground Squirrel         | <i>Xerusinauris</i>          |
| Striped Ground Squirrel | <i>Funisciurus congicus</i>  |
| Meerkat                 | <i>Suricata suricata</i>     |
| Common Duiker           | <i>Sylvicapra grimmia</i>    |
| Caracal                 | <i>Felis caracal</i>         |
| African Wild Cat        | <i>Felis lybica</i>          |
| Small Spotted Cat       | <i>Felis nigripes</i>        |
| Bat-eared Fox           | <i>Otocyan megalotis</i>     |

|                     |                         |
|---------------------|-------------------------|
| Cape Fox            | Vulpescharma            |
| Black-backed Jackal | Canismesomelas          |
| Porcupine           | Hystixafricaeustralis   |
| Aardvark            | Orycteropusaffer        |
| Warthog             | Phacochoerusaethiopicus |
| Steenbok            | Raphiceruscampestris    |
| Common Duiker       | Sylvicapragrimmia       |
| Kudu                | Tragelaphsstrepsiceros  |
|                     |                         |

The following bird life has been spotted in and around the application area :

**BIRD LIFE SPOTTED IN THE AREA:**

| <b>COMMON NAME</b>     | <b>SCIENTIFIC NAME</b>   |
|------------------------|--------------------------|
| Feral Pigeon           | Columba livia            |
| Rock Pigeon            | Columba guinea           |
| Redeyed Dove           | Streptopeliasemitorquata |
| Cape Turtledove        | Streptopeliacapicola     |
| Diederick Cuckoo       | Chrysococcyxcaprius      |
| Barn Owl               | Tytoalba                 |
| ForktailedDrongo       | Cicurusadsimilis         |
| Stonechat              | Saxicolaporquata         |
| Little Swift           | Apus affinis             |
| Feral Pigeon           | Columba livia            |
| Laughing Dove          | Streptopelia             |
| Whiterumped Swift      | Apus caffer              |
| Brownhooded Kingfisher | Halcyon albiventris      |
| Clapper Lark           | Miraftaapiata            |
| Pied Barbet            | Tricholaemaleucomelas    |
| Common Quail           | Coturnixcoturix          |
| Crested Barbet         | Trachyphorusvaillantii   |
| European Swallow       | Hirundorustica           |
| Hoopoo                 | Upupaepops               |
| Purple Roller          | Coraciusnaevia           |
| Lilacbreasted Roller   | Coraciascoudata          |
| Cattle Egret           | Bululcus ibis            |
| Hammerkop              | Scopus umbretta          |
| Whitefaced Duck        | Dendrocygnaviduata       |
| Egyption Goose         | Alopoचनाegyptiacus       |
| Lanner Falcon          | Falco biarmicus          |
| Secretary Bird         | Sagittarius serpentarius |
| Black Crow             | Corvuscapensis           |
| Cape Robin             | Cossyphacaffta           |
| Fiscal Flycather       | Sigelussilens            |
| House Sparrow          | Passer                   |
| Great Sparrow          | Passer motitensis        |
| Grassveld Pip          | Anthuscinnamomeus        |
| Longtailed Widow       | Euplectespronge          |

|                 |                     |
|-----------------|---------------------|
| Melba Finch     | Pytiliamelba        |
| Redheaded Finch | Amdinaerythrocehala |
| Yellow Canary   | Serinusflaviventris |
| Whitefaced Duck | Dendrocygnaviduata  |
|                 |                     |

### 3.1.2 Endangered or Rare Species

No endangered animals are known to occur in the area.

### CLIMATE WINDSORTON

Source Meteoblue 1998

The climate can generally be described as continental. The weather provides hot wet summers (December-February) and mild dry winters (June-August). 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 point.

### Mean Monthly Temperatures

Table 4. Average Temperature Variations.

| Month   | Jul | Aug  | Sep  | Oct  | Nov  | Dec  | Jan  | Feb  | Mar  | Apr  | May  | Jun  |
|---------|-----|------|------|------|------|------|------|------|------|------|------|------|
| Maximum | 19  | 22.2 | 24.7 | 29.2 | 30.4 | 32.7 | 32.9 | 31.2 | 29.2 | 25.8 | 22.4 | 19.2 |
| Minimum | 0.4 | 3.3  | 7.0  | 12.1 | 14   | 16.2 | 16.9 | 16.2 | 14.0 | 9.7  | 5.0  | 1.3  |

### Wind

The prevailing wind direction is north to north-north west for the months January-September and changing to southerly winds during October-December averaging 3.5m/s.

Table 5. Average Wind Rate.

| Month      | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Rate (m/s) | 4.0 | 4.3 | 4.6 | 4.8 | 4.9 | 4.7 | 4.4 | 4.0 | 3.8 | 3.7 | 3.6 | 3.8 |

Table 6. Dominant Wind Direction.

| Wind Direction       | N   | NE | E  | SE | S  | SW | W   | NW  |
|----------------------|-----|----|----|----|----|----|-----|-----|
| (frequency per 1000) | 159 | 98 | 39 | 35 | 55 | 78 | 110 | 155 |

Table 7. Mean Monthly and Annual Rainfall

| Month                 | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|-----------------------|-----|-----|-------|-------|-----|------|------|-----|------|-----|-----|-----|
| Average Rainfall (mm) | 58  | 62  | 65    | 40    | 18  | 7    | 0    | 8   | 15   | 28  | 41  | 52  |
| Temp Max              | 32  | 31  | 28    | 24    | 21  | 18   | 18   | 21  | 25   | 27  | 30  | 31  |
| Temp Min (Celsius)    | 17  | 17  | 15    | 10    | 6   | 3    | 2    | 4   | 8    | 11  | 14  | 16  |

Source Meteoblue 1998

## Mean Monthly Evaporation

The gross annual evaporation rate is on average 2365mm. Thus, with an annual average rainfall of 380,8mm, the nett evaporation may be calculated to be 1984mm.

This denotes extremely dry conditions.

### ***Incidents of Extreme Weather Conditions***

Hail: Hail is sometimes associated with thunderstorms and mainly occurs in early to late summer (November to February). It occurs on average three times a year and although these storms may sometimes be severe and cause much damage, they usually impact on a relatively small area.

Frost: The period during which frost can be expected lasts about 120 days (may to August). With extreme minimum temperatures to below  $-8^{\circ}\text{C}$  at night in the winter, frost development can be severe.

Droughts: Droughts are common and may vary from mild to severe. During these periods dust storms sometimes occur depending mainly on denudation of the surface.

Wind: high winds are unusual but when they do occur can uproot trees and take off roofs.

## Hydrology

There are noperennial drainage lines on the study area.

Topographical disturbance as a result of mining and prospecting during the past decade is evident over some portions of the study area.

The historic disturbances due to their age are considered *active mining areas*, *recently rehabilitated mining areas* and recentand *inactive un-rehabilitated mining areas*.

## Soils

### Soil depths:

The survey of the soils at revealed that mostly shallow soils with an average depth of less than 160 mm exist on the site, underlain by either a hardpan carbonate or a soft carbonate horizon.

Deeper soils (as deep as 600 mm below soil surface) are characterized by a red apedal sub-horizon. A pebble-bed stone layer often characterized the red sandy-loamy soils and is present within 300 mm below soil surface.

The average topsoil depth over the whole area that was assessed is 153.0 mm (the actual depths vary between 0mm and 350mm).

The *Coega* and *Mispah* soil forms have the shallowest topsoil. The topsoil of the *Brandvlei* form is slightly deeper, and the *Kimberley* and *Askham* forms have the deepest topsoils.

### Effective depths:

The soil depth of the disturbed areas where heaps of pebble beds are present varies between 0 and 200 mm between the heaps of pebbles.

Depth to the upper level of the *horizon which would limit root development or oxygen or nutrient availability to crops or plants*, in this case to the hardpan carbonate or soft carbonate horizons, over the whole area is 300mm.

### Soil textures:

Sandy loam textures (15-20% clay) are common for the topsoils of the alluvial pebblebed areas (i.e. the *Mutton* via stone-line, *Brandvlei*, *Askam*, and *Kimberley* forms).

Loamy sands (10-15% clay) are common for the sub-horizons of the shallow soils underlain by hardpan calcrete.



The clay content of the soil, together with soil depth and rainfall, influences productivity. The shallow *Coegasoil* therefore has a lower production potential than the deeper *Kimberley* of *Plooyburg*forms.



### **Surface water**

#### **Rivers or watercourses and dams:**

The Vaalharts canal is to the eastern side of the study area.





Details of surface water quality:

The surface water quality is not known. Access to the study area was denied.

River diversions:

There will be no river diversions.

Wetlands:

No wetlands through desktop study could be identified.

### **Groundwater**

*Mean Depth of Water-Table*

The mean depth of the water table is not known.

*Boreholes*

*A boreholes was noted and is present on the property*

### **Air Quality**

*Air Quality is good and generally unpolluted.*

*Areas of Impact*

The prevailing wind direction being north to North West for the months January to September and changing from north to sometimes westerly winds during October to December.

Affected areas would be the adjacent residential property.

The dust management programme recommended will include dosing of prospecting roads when required.

### **Noise**

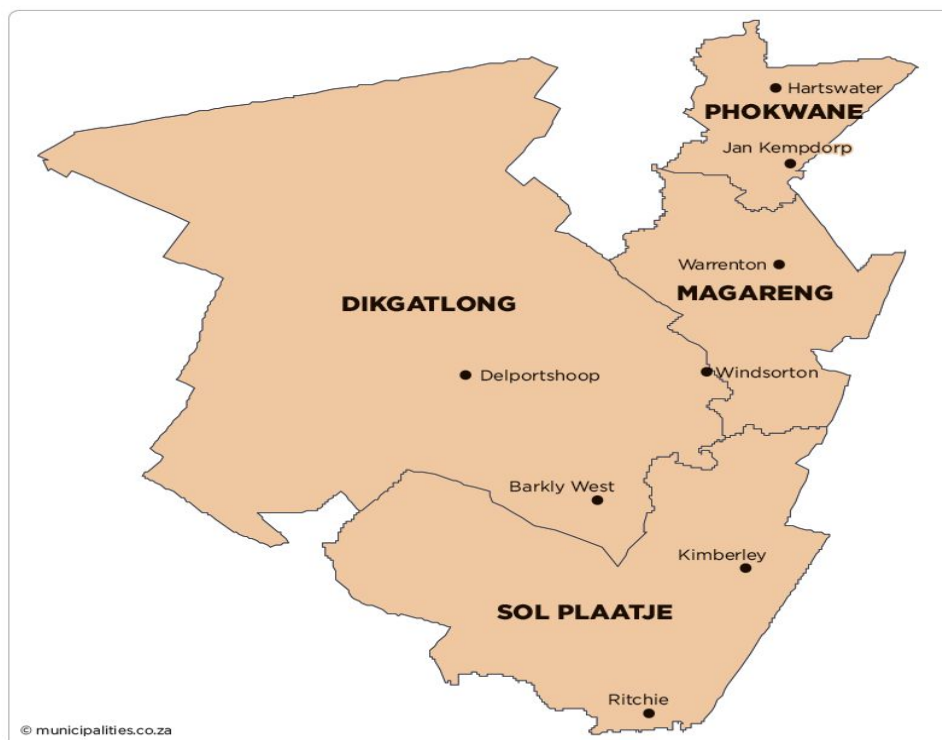
Noise on site will come from the self-propelled mobile machinery namely, BackActor.

The operation would be conducted during daytime 07:00-17:00 on a 5 day week cycle.

### **Visual Impacts**

Due to the dense vegetation the prospecting activities would not be visible from the dirt road R371 connecting Holpan/Windsorton with the Warrenton town.

### Dikgatlong Local Municipality



Dikgatlong Local Municipality is a Category B municipality in Frances Baard District Municipality in the Northern Cape. It has seven wards. The municipal areas are Barkly-West, Windsorton, Delpportshoop and a portion of the former Diamantveld District Council.

The head office of the municipality is situated in the town of Barkly West that is approximately 35 km north-west of the city of Kimberley on the northern bank of the Vaal River. Barkly West is situated on the Kimberley-Postmasburg growth corridor. The municipal area covers approximately 7 315 km<sup>2</sup> and borders with the Magareng Municipality in the north-east and Sol Plaatje in the south-east. Agriculture and mining form the economic basis of the area.

**Main Economic Sectors:** Agriculture (22%), mining (7%), manufacturing (7%)

|                           |  |
|---------------------------|--|
| <b>Population Profile</b> | <p><b>DEMOGRAPHIC</b></p> <p>The total population of Dikgatlong is estimated at 35765 people (Census, 2001). The estimate indicates that Dikgatlong is the second lowest municipality in the district in terms of the population size. The population represents 11.01% of the total population of the district which is approximately 324 798 persons and 4.4% of the province. The dominant population groups in Dikgatlong are Africans (60.2%) and Coloured (32.5%). The other two groups share the remaining 7.3%, with Indians constituting only 0.1% and Whites 7.2%.</p> <p>The province, the district and the municipality have experienced a declining growth rate of -2.09%, -0.22% and -3.21% respectively.</p> <p>An independent population count commissioned by Urban Dynamic (Independent Consultant) in 2003 the total population was actually found to be 63,258.</p> <p>The population pyramid of Dikgatlong is distinctive to other municipalities. It indicates a significant number of the economically active group (15 to 64 years) at the top of the pyramid and pensioners (over 65) at the bottom. The economically active group and pensioners</p> |
|---------------------------|--|

constitute 63.1% and 5.1% respectively. The remaining 31.8 % is comprised of pre-school and school going population

**The SDF for 2016 display the following statistics**

|                          | 2016( SDF) |
|--------------------------|------------|
| <b>Population</b>        | 48473      |
| <b>Age Structure</b>     |            |
| Population under 15      | 30.5%      |
| Population 15 to 64      | 61.7%      |
| Population over 65       | 7.8%       |
|                          |            |
| <b>Dependency Ratio</b>  |            |
| Per 100(15-64)           | 62.1       |
|                          |            |
| <b>Sex Ratio</b>         |            |
| Male per 100 Females     | 100.5      |
|                          |            |
| <b>Population Growth</b> |            |
| Per annum                | 0.78%      |

**Economic Profile**

The Northern Cape economy is anchored by the primary sector specifically the mining industry with the primary sector contributing 32.6%, secondary 6.2% and the tertiary sector 49.8% (Statistics SA: GDP p0441: 2010). Although the tertiary sector contributes almost 50%, the mining industry alone contributes 24, 6% to the provincial value addition.

Northern Cape recorded an average real annual economic growth rate of 2, 5% between 1996 and 2007. Average real annual economic growth rate of South Africa for the same period (1996 to 2007) was 3, 6%.

For the period 2005 to 2008 the Northern Cape Province had growth of 3,6%, 4,1%, 4% and 21% respectively.

This however, if put in perspective in terms of the average annual growth (see table below), the district is not comparing badly to the Province which had an average annual growth rate of 3,3% for the period 2002 to 2008 while South Africa for the same period had an average annual growth of 4,6% (Statistics SA: GDP p0441: 2010).

Average annual growth (% , Constant 2000 prices)  
Sector 1996-2008  
Agriculture 3.8%

**Education Levels**

Education prepares individuals so that they are able to play an active role in the labour market, which directly affects their quality of life as well as the economy of a country and the area they live in. Through the education level, one can then understand the skills that an area has and its potential to contribute positively to the economy (Stats SA). Dikgatlong Local Municipality has a large number of people with some secondary school followed by those with some primary levels. Those with Grade 12 constitute 12.83% while those higher than Grade 12 only constitute 1.64%. There are a limited number of skilled people from which the labour market can draw from.

**Employment Profile**

The number of those who are not economically active is very high, which means a large portion of the population is highly dependent on social grants or on those that work. The number of employed people has increased from 5 924 people

(2001) to 7 841 (2011). Thus the unemployment rate has decreased from 45.3% (2001) to 39.7% (2011).  
 The Stats SA 2011 indicates that more men are employed than their female counterparts. Furthermore women are the most discourage work seekers. Additionally, the economical not active female population is also higher than their male counterparts. There is a need to have initiatives that make it easy for women to find employment.

**Income Profile**

The majority of people in Dikgatlong Local Municipality do not gen an income, followed by those who get below R400 per month. Approximately 63% of the population live below the poverty line (R500). “Income variable is one of the variables that measure individual and household welfare. It is important variable that assists in generating indicators relating to poverty and development” (Statistics SA, 2012). Such information is important, as it assist in facilitating planning and the allocation of resources

| Income         | Population Percentage |
|----------------|-----------------------|
| No Income      | 43.48                 |
| R1-R800        | 22.65                 |
| R801-R3200     | 21.22                 |
| R3201-R6400    | 4.56                  |
| R6401-R12800   | 2.82                  |
| R12801-R51200  | 1.16                  |
| R51201-R102400 | 0.05                  |
| R102401+       | 0.03                  |
| Unspecified    | 6.83                  |

**Infrastructure**

“Good urban environments are, by definition, convenient. They allow inhabitants to conduct daily activities quickly and easily. Inconvenient environments, on the other hand, impose on lifestyles, reduce choices and increase costs. Access lies at the heart of convenience” (Redbook, 2000: 3). Settlements that perform well are settlements that are convenient and give people access to facilities (Redbook). The presence of the social facilities to the residents of Dikgatlong Local Municipality gives them a sense of belonging that they do not have. Below is an overview of the facilities that each ward has:

| Ward  | Schools              | Library | Health Services | Recreational    | Safety           | Community Facility |
|---|----------------------|---------|-----------------|-----------------|------------------|--------------------|
| 1<br>Mataleng   | 3 Schools            | 1       | Clinic          | 1 Sport Complex | None             | Community Hall     |
| 2<br>Blikkiesdorp,<br>De Beershoogte                      | 3 Schools<br>3 ECD's | 1       | Clinic          | Swimming Pool   | Magistrate Court | Community Hall     |
| 3<br>Rooirant,<br>Makweteng,<br>Pniel,<br>Spitskopweg     | 2 Schools<br>1 ECD   | None    | Hospital        | Resort          | Police Station   | None               |
| 4<br>Windsorton,<br>Kutlwano,<br>Hebronpark,<br>Stilwater | 3 Schools            | 1       | Clinic          | Park            | Police Station   | 2 Community Halls  |
| 5<br>Gong Gong,<br>Keisekama,                             | 2 Schools<br>1 ECD   | None    | Clinic          | None            | None             | None               |

|  |  |                      |      |        |                |                   |                   |
|--|--|----------------------|------|--------|----------------|-------------------|-------------------|
|  | Longlands  |                      |      |        |                |                   |                   |
|  | 6<br>Blikfontein,<br>Koopmansfontein,<br>Rooikoppies | 2 Schools<br>3 ECD's | 1    | None   | None           | Police<br>Station | Community<br>Hall |
|  | 7<br>Delportshoop,<br>Tidimalo,<br>7de Laan          | 2 Schools<br>3 ECD's | None | Clinic | Sports Complex | None              | Community<br>Hall |

**Housing**

The population of the municipal area lives in three different types of dwellings; formal, informal and traditional. The formal dwellings constitutes of 6 793 households which is 71.9% of the total number of households in the area. This is slightly lower than the district and Magareng, which have 80% and 78.9% respectively. More than a tenth (12.8%) of the households resides in informal and traditional houses. Each household has an average of 3.8 people.

**Water and Sanitation**

Access to clean water and proper sanitation are key environmental elements that affect health outcomes of households. From the graph below it is evident that a large number of households receive water from a regional/local water scheme. However there are still those households who drink water from the river/stream, dam/pool/stagnant water and those that could not be ascertained as to where they get their water from. Drinking water that has not been purified can make the households vulnerable to a number of communicable diseases such as diarrhoea. The municipality is the water service authority for Ward 6, 7 and portion of ward 5. The rest of the municipal area is supplied with water by Sedibeng Water.

**Access to water**

The majority of household (5 935) have access to piped water inside their year, followed by those who have access to piped water inside their dwelling (3 670). The concern is for those households that must travel more than 1km (more than 20 minutes) to access a community piped water stand (0.24%), as it technical indicates that such a service is not accessible. The concern is also for those who have no access to tap water (2.77%), as they might be drinking water that is un-purified and not good for health purposes.

**Sanitation**

The Millennium Development Goal states the need for “sustainable access to safe drinking water and basic sanitation.” 13.72% of households in the Dikgatlong LM do not have access to basic sanitation, while 1.84% still uses the bucket toilet. The 13.72% of none access, is higher than the Provincial one which is 8.04% of households with no access to basic sanitation.

From the table below it is clear that Ward 3 and Ward 5 have the highest number of households with no access to sanitation, while ward 2 and ward 7 have the highest number of households who still use the bucket system.

| Ward                                 | None | Bucket Toilet |
|--------------------------------------|------|---------------|
| 1<br>Mataleng                        | 78   | 4             |
| 2<br>Blikkiesdorp,<br>De Beershoogte | 87   | 58            |

|                                    | 3<br>Rooirant,<br>Makweteng,<br>Pniel,<br>Spitskopweg  | 533   | 27 |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
|------------------------------------|--|-------|----|--|------|------|------------------------------------|-------|-------|-----------------------|-------|-------|-----------------------------|-------|-------|
|                                    | 4<br>Windsorton,<br>Kutlwano,<br>Hebronpark,<br>Stilwater  | 202   | 3  |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
|                                    | 5<br>Gong Gong,<br>Keisekama,<br>Longlands   | 484   | 22 |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
|                                    | 6<br>Blikfontein,<br>Koopmansfontein,<br>Rooikoppies   | 158   | 18 |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
|                                    | 7<br>Delpoortshoop,<br>Tidimalo,<br>7de Laan   | 99    | 86 |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
|                                    | <p><b>Household Services</b></p> <table> <thead> <tr> <th></th> <th>2016</th> <th>2011</th> </tr> </thead> <tbody> <tr> <td>Flush toilet connected to sewerage</td> <td>72.6%</td> <td>65.7%</td> </tr> <tr> <td>Weekly refuse removal</td> <td>74.2%</td> <td>72.6%</td> </tr> <tr> <td>Piped water inside dwelling</td> <td>45.1%</td> <td>47.0%</td> </tr> </tbody> </table>  |       |    |  | 2016 | 2011 | Flush toilet connected to sewerage | 72.6% | 65.7% | Weekly refuse removal | 74.2% | 72.6% | Piped water inside dwelling | 45.1% | 47.0% |
|                                    | 2016   | 2011  |    |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
| Flush toilet connected to sewerage | 72.6%  | 65.7% |    |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
| Weekly refuse removal              | 74.2%  | 72.6% |    |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
| Piped water inside dwelling        | 45.1%  | 47.0% |    |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
| <b>Electricity</b>                 | <p>There has been an improvement on the energy use across the whole country. The majority of household (75.86%) use electricity as the source of energy for lighting, this was previously 68.5% (in 2001). The number of households that use candles has also decreased from 32% to 18.66% as well as those that use gas and paraffin. However there seems to be no visible efforts of using solar energy, to decrease the dependency of electricity</p>   |       |    |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
| <b>Unemployment</b>                | <p>The unemployment rate in Dikgatlong is lower than the province and country; it is currently estimate at 27.5% and 28.2% respectively. However, the statistics indicates that the unemployment in Dikgatlong has increased by 1.4% since 1996. Of the 22581 persons falling under the economically active group, only 26.2% are employed. This can be partly attributed to the lack of basic education and basic skills. A third or 32.1% of the educable population (5 to 65 years) have no schooling or some primary schooling. Unlike Magareng and FBDM, whereby community and social sectors provide work to more than a quarter of the currently employed people, in Dikgatlong, 26.2% of the employed portion of the labour force is mainly employed by Agriculture and Mining sectors. Furthermore, over 60% (25494) of the population of the area have no income and only 28.7% have income. Of the 28.7% 9271 persons earn less than R3200 per month.</p> |       |    |  |      |      |                                    |       |       |                       |       |       |                             |       |       |
| <b>HIV/AIDS</b>                    | <p>Over the past five years access to HIV treatment in the Frances Baard District Municipality has expanded rapidly. This has decreased the burden of HIV, with District prevalence rates remaining at about 20% for the last three years. Currently Frances Baard District has the highest prevalence rate in the Northern Cape Province (HIV &amp; AIDS Strategic Plan: 2010-2014).</p>  |       |    |  |      |      |                                    |       |       |                       |       |       |                             |       |       |

|                        |      |
|------------------------|------|
|                        |      |
| <b>Other (Specify)</b> | None |

## WINDSORTON

|  |                                   |              |                 |
|--|-----------------------------------|--------------|-----------------|
| Coordinates:                                 | 28°20'S 24°43'E                   | Coordinates: | 28°20'S 24°43'E |
| <b>Windsorton</b>                            |                                   |              |                 |
| <b>Country</b>                               | South Africa                      |              |                 |
| <b>Province</b>                              | Northern Cape                     |              |                 |
| <b>District</b>                              | Frances Baard                     |              |                 |
| <b>Municipality</b>                          | Dikgatlong                        |              |                 |
| <b>Area</b> <sup>[1]</sup>                   |                                   |              |                 |
| • <b>Total</b>                               | 51.1 km <sup>2</sup> (19.7 sq mi) |              |                 |
| <b>Population (2011)</b> <sup>[1]</sup>      |                                   |              |                 |
| • <b>Total</b>                               | 6,250                             |              |                 |
| • <b>Density</b>                             | 120/km <sup>2</sup> (320/sq mi)   |              |                 |
| <b>Racial makeup (2011)</b> <sup>[1]</sup>   |                                   |              |                 |
| • <b>Black African</b>                       | 67.5%                             |              |                 |
| • <b>Coloured</b>                            | 26.4%                             |              |                 |
| • <b>Indian/Asian</b>                        | 0.8%                              |              |                 |
| • <b>White</b>                               | 2.2%                              |              |                 |
| • <b>Other</b>                               | 3.2%                              |              |                 |
| <b>First languages (2011)</b> <sup>[1]</sup> |                                   |              |                 |
| • <b>Tswana</b>                              | 55.2%                             |              |                 |
| • <b>Afrikaans</b>                           | 36.5%                             |              |                 |
| • <b>English</b>                             | 1.9%                              |              |                 |
| • <b>S. Ndebele</b>                          | 1.9%                              |              |                 |
| • <b>Other</b>                               | 4.6%                              |              |                 |

Source Wikipedia

### **(b) Heritage, Cultural-historical or Archaeological Interest**

**ACCESS TO THE STUDY AREA WAS DENIED BY THE FARM OWNER**

Windsorton has a vast Heritage, Cultural-historical or Archaeological history.

The study area however has been disturbed before and the SAHRIS map show no paleo sensitivity and that no studies are required.

#### **CURRENT PROTECTION STATUS:**

Structures older than 60 years fall under the protection of Section 34(1) of the National Heritage Resources Act 25 of 1999. Additionally, in terms of Section 35(4) of the National Heritage Resources Act (25 of 1999), man-made features and artefacts older than 100 years are defined as being archaeological. In the same section, the act also states that such archaeological sites and objects may not be disturbed, altered, modified or destroyed without a suitable permit.



Graves and burial grounds fall under various legislative protections. Such legislation may include the National Heritage Resources Act 25 of 1999, the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925), the Human Tissue Act 65 of 1983, the Ordinance on Excavations (Ordinance no. 12 of 1980) as well as any local and regional provisions, laws and by-laws that may be in place.

Archaeological remains can be defined as human-made artefacts, which reflect past ways of life, deposited on or in the ground. All archaeological remains, artificial features and structures older than 100 years and historic structures older than 60 years are protected by the National Heritage Resources Act (NHRA) (Act No. 25 of 1999). No archaeological artefact, assemblage or settlement (site) may be moved or destroyed without the necessary approval from the South African Heritage Resources Agency (SAHRA).

The graveyards are protected under the South African Heritage Resources Act (Act no. 25 of 1999), and by the Human Tissues Act, 1983 (Act No. 65 of 1983). No disturbance to these sites is permitted. If it is inevitable that prospecting will have an impact on this site, mitigation measures (i.e. exhumation and reburial) will have to be proposed as part of a Phase 2 investigation. This must be undertaken if proceeded with a prospecting right application with bulk sampling or any mining activity.

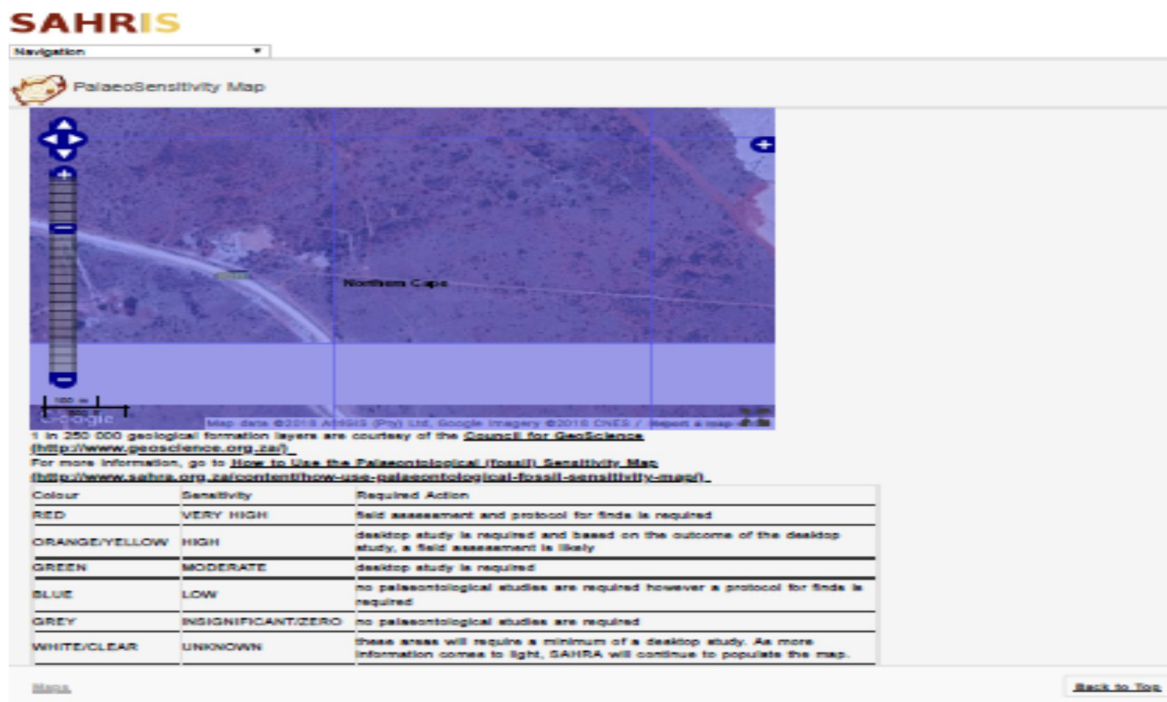
SAHRA  
SAHRIS

The SAHRIS Paleontological (fossil) Map indicate a sensitivity of INSIGNIFICANT/ZERO and no paleontological studies are required.

It does not exempt TSS Diamonds (PTY) LTD from obligation its obligation to suspend prospecting activity and immediately report to SAHRA, if some artefacts will be discovered during the prospecting operation

**BY SAHRIS**

The SAHRIS Paleontological (fossil) Map indicate a sensitivity of INSIGNIFICANT/ZERO and no paleontological studies are required for the study area.





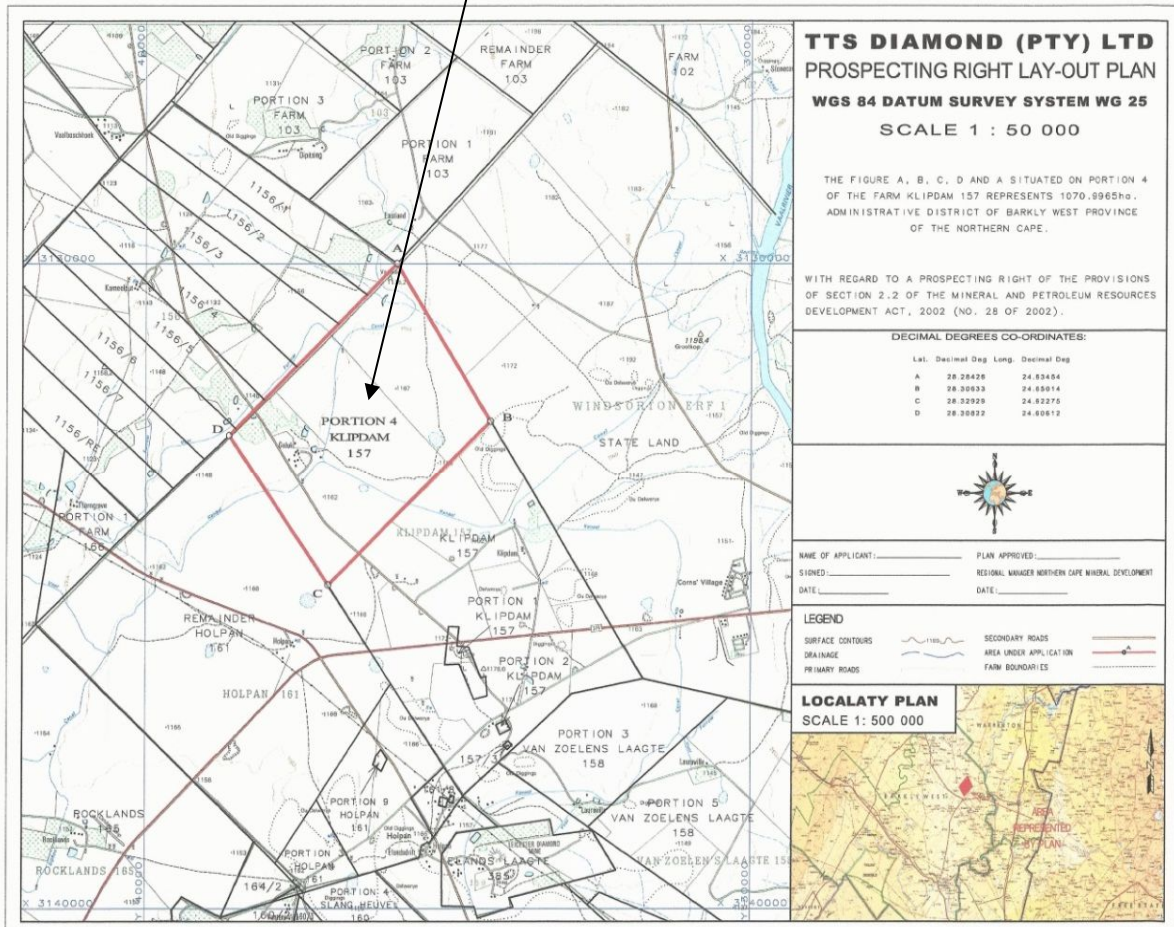
**(c) Description of specific environmental features and infrastructure on the site.**

Access to the study area was denied and the only environmental features observed the Vaalharts Canal on the eastern portion of the study area and the borehole.

**(d) Environmental and current land use map.**

(Show all environmental, and current land use features)

Livestock Farming



**v) Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts**

(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 |
|-------------------------------------|-------------|----|---|----|---|---|----|
| <b>1.CONSTRUCTION PHASE IMPACTS</b> |             |    |   |    |   |   |    |

|   |   |                |   |   |   |   |   |
|---|---|----------------|---|---|---|---|---|
| Drill Pads  | Loss of vegetation + habitat                    | NOT APPLICABLE |   |   |   |   |   |
| Infrastructure: Offices, Ablution facilities, store | Loss of vegetation + habitat                    | NOT APPLICABLE |   |   |   |   |   |
| <b>2.OPERATIONAL PHASE IMPACTS</b>                  |   |                |   |   |   |   |   |
| Trenching/Drilling                                  | Geological degradation                          | H              | H | L | L | H | H |
|   | Topographic change - Pit                        | M              | H | L | L | L | L |
|   | Soil pollution - accidental spills and leakages | M              | L | L | H | M | H |
|   | Noise-Earth moving equipment                    | M              | H | L | L | H | M |
|   | Sensitive landscapes                            | L              | L | L | L | L | L |
|   | Visual impact                                   | L              | L | L | L | L | L |
| Operation Back Actor                                | Soil pollution(Leaks)                           | H              | M | L | H | M | H |
| Operation Back Actor                                | Air Quality                                     | M              | H | L | L | H | L |
| <b>3.DECOMMISSIONING PHASE IMPACTS</b>              |   |                |   |   |   |   |   |
| Demolition  | Waste disposal                                  | POSITIVE       |   |   |   |   |   |
| Rehabilitation                                      | Topography                                      | POSITIVE       |   |   |   |   |   |
| <b>4.RESIDUAL IMPACTS AFTER CLOSURE</b>             |   |                |   |   |   |   |   |
| Vacated Site  | Rehabilitation of exposed areas                 | POSITIVE       |   |   |   |   |   |
| Vacated Site  | Safety risks                                    | POSITIVE       |   |   |   |   |   |

**vi) 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 that 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)

PROBABILITY-Low probability-1%-30% sure of particular fact or likelihood of impact occurring  
 Moderate – 31%-70% sure of particular fact or likelihood of impact occurring  
 High - 71%-100% sure of particular fact or likelihood of impact occurring

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      | L | Low negative impact    |
| SP                | Spatial Scale | M | Medium negative impact |
| Si                | Significance  | H | High negative impact   |
| D                 | Duration      |   | POSITIVE               |
| P                 | Probability   |   | NOT APPLICABLE         |

**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)

**Positive Impacts**

The socio-economic spin-offs through the creation of job opportunities would be a major positive impact.

Support of BEE entrepreneurs in the region for project consumables.

Employment of women in mining.

### **Negative Impacts**

Increase noise and air pollution

Possible disturbance to drainage patterns during project.

Possible surface water pollution.

The negative impacts in terms of noise, air, and water pollution is for the duration of the project. At the completion of the project these impacts would be positive.

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).

**No issues were raised by Interested and Affected Parties. The following concerns are intrinsic of a prospecting operation of this nature:**

**1.1 Noise:**

*Mitigation measures*

As a minimum, ambient noise levels emanating from the mining area will not exceed

82dB (A) at the site boundary.

Compliance to the Occupational Health and Safety Act, Act 85 of 1993.

Hearing protection to employees.

Machinery and Plant properly maintained and fitted with a silencer.

**1.2 Air quality:**

*Mitigation measures*

Routine spraying of unpaved site areas and roads with water when required.

iii. **Motivation where no alternative sites were considered.**

The prospecting resource is site specific, and neighbouring farms either have current mining operations or have been mined out.

**Statement motivating the alternative development location within the overall site.(Provide a statement motivating the final site layout that is proposed)**

As detailed in Part A Section (vi) points (i), (ii) and (iii) of this document no alternative developments towards prospecting processes and site plan are considered and will be kept as originally as proposed due to the fact that any alterations proof not to significantly minimize impacts but may rather add to it.

**i) 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).

| <b>ACTIVITY</b><br><br>Whether listed or not listed<br><br>(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, beams, roads, pipelines, power lines, conveyers, etc...etc...etc...) | <b>POTENTIAL IMPACT</b><br><br>(E.g. dust, noise ,drainage surface Disturbance, fly rock, surface water contamination, air pollution etc...etc) | <b>ASPECTS AFFECTED</b> | <b>PHASE</b><br>In which impact is anticipated<br><br>(e.g. Construction, commissioning, operational Decommissioning, closure, post-closure) | <b>SIGNIFICANCE if not mitigated</b> | <b>MITIGATION TYPE</b><br><br>(modify, remedy, control, or stop) through<br>(e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)<br><br>E.g.<br>Modify through alternative method.<br>Control through noise control<br>Control through management and monitoring through rehabilitation. | <b>SIGNIFICANCE if mitigated</b> |
|---|---|-------------------------|--|--------------------------------------|--|----------------------------------|
| Trenching/Drilling  | Geological  | Loss                    | Operational  | Low                                  | -  | Positive                         |
|   | Topographic   | Change                  |  | Low                                  | Rehabilitation   | Low                              |
|   | Soil  | Pollution               |  | High                                 | Immediate rehabilitation<br>Continuous Inspection  | Low                              |
|   | Water table   | Depressed               |  | -                                    | -  | -                                |
|   | Fauna   | Migration               |  | -                                    | -  | -                                |
|   | Water Quality   | Loss                    |  | -                                    | -  | -                                |
|   | Noise   | Elevated levels         |  | High                                 | Operation during office hours only   | Medium                           |
|   | Air quality   | Degradation             |  | Low                                  | Damping of mine roads.<br>Speed restriction  | Low                              |
|   | Archaeological items  | Loss                    |  | Medium                               | Avoid sites of significance  | Low                              |
|   | Sensitive landscape   | Destruction             |  | -                                    | -  | -                                |
|   | Visual impact   | Scenery loss            |  | Low                                  | Within Wall enclosure  | Low                              |
|   | Waste   | Disposal                |  | Low                                  | Decommissioning  | Management standards             |

|                   |                      |                 |                 |                              |                                      |                                       |
|-------------------|----------------------|-----------------|-----------------|------------------------------|--------------------------------------|---------------------------------------|
|                   | Re-vegetation        | Re-growth       | After closure   | -                            | No Vegetation required for after use | Positive                              |
|                   | Safety Risks         | Waste disposal  |                 | Positive                     | Closure standards                    | Positive                              |
| Topsoil Stockpile | Vegetation           | Loss            | Construction    | -                            | No Vegetation                        | -                                     |
|                   | Geological           | Loss            | Operational     | -                            | -                                    | -                                     |
|                   | Topographic          | Change          |                 | Low                          | Rehabilitation                       | Low                                   |
|                   | Soil                 | Pollution       |                 | Low                          | Immediate rehabilitation             | Low                                   |
|                   | Vegetation           | Invader plants  |                 | Low                          | Regular Removal                      | Low                                   |
|                   | Water table          | Depressed       |                 | -                            | -                                    | -                                     |
|                   | Fauna                | Migration       | Low             | -                            | Low                                  |                                       |
|                   | Water quality        | Loss            | -               | -                            | -                                    |                                       |
|                   | Noise                | Elevated levels | -               | -                            | -                                    |                                       |
|                   | Air quality          | Degradation     | Low             | Protect against wind erosion | Low                                  |                                       |
|                   | Archaeological items | Loss            | Decommissioning | Low                          | Avoid sites of significance          | Low                                   |
|                   | Sensitive landscape  | Destruction     |                 | Low                          | Avoid significant sensitive sites    | Low                                   |
|                   | Visual impact        | Scenery loss    |                 | Low                          | -                                    | Low                                   |
|                   | Waste                | Disposal        |                 | Low                          | Management standards                 | Positive                              |
|                   | Exposed area Rehab   | Re-vegetation   |                 | After closure                | Positive                             | No vegetation required for future use |
| Safety risks      | Waste disposal       |                 | Positive        | Closure standards            | Positive                             |                                       |
| Office Block      | Geological           | Loss            | Operational     | -                            | -                                    | -                                     |
|                   | Topographic          | Change          |                 | Low                          | Rehabilitation                       | Positive                              |
|                   | Soil                 | Pollution       |                 | Low                          | Immediate rehabilitation             | Positive                              |
|                   | Water table          | Depressed       |                 | -                            | Water reticulation                   | Positive                              |
|                   | Fauna                | Migration       |                 | Low                          | -                                    | Low                                   |
|                   | Water quality        | Waste water     |                 | Low                          | Water reticulation                   | Low                                   |
|                   | Noise                | Elevated levels |                 | Low                          | -                                    | Low                                   |
|                   | Air quality          | Degradation     |                 | -                            | -                                    | -                                     |
|                   | Archaeological items | Loss            | Low             | Avoid sites of significance  | Low                                  |                                       |
|                   | Visual impact        | Scenery loss    | Low             | Behind enclosed wall         | Low                                  |                                       |
| Waste             | Disposal             | Decommissioning | Low             | Management standards         | Positive                             |                                       |
| Safety risks      | Waste disposal       |                 | Positive        | Closure standards            | Positive                             |                                       |
| Diesel storage    | Vegetation           | Loss            | Construction    | -                            | Vegetation clearing control          | -                                     |

|                      |                      |                 |             |                 |                             |                      |          |
|----------------------|----------------------|-----------------|-------------|-----------------|-----------------------------|----------------------|----------|
|                      | Geological           | Loss            | Operational | -               | -                           | -                    |          |
|                      | Topographic          | Change          |             | Medium          | Rehabilitation              | Low                  |          |
|                      | Soil                 | Pollution       |             | Medium          | Immediate rehabilitation    | Low                  |          |
|                      | Grazing              | Loss            |             | Low             | Rehabilitation              | Low                  |          |
|                      | Water table          | Depressed       |             | -               | Water reticulation          | Positive             |          |
|                      | Fauna                | Migration       |             | Low             | -                           | Low                  |          |
|                      | Water quality        | Waste water     |             | Medium          | Water reticulation          | Low                  |          |
|                      | Noise                | Elevated levels |             | Low             | -                           | Low                  |          |
|                      | Air quality          | Degradation     |             | -               | -                           | -                    |          |
|                      | Archaeological items | Loss            |             | Medium          | Avoid sites of significance | Low                  |          |
|                      | Visual impact        | Scenery loss    |             | Low             | -                           | Low                  |          |
|                      | Waste                | Disposal        |             | Decommissioning | Low                         | Management standards | Positive |
|                      | Safety risks         | Waste disposal  |             | After closure   | Positive                    | Closure standards    | Positive |
|                      | Travel Roads         | Vegetation      |             | Loss            | Construction                | -                    | -        |
| Geological           |                      | Loss            | Operational | -               | -                           | -                    |          |
| Topographic          |                      | Change          |             | -               | Rehabilitation              | -                    |          |
| Soil                 |                      | Pollution       |             | Low             | Immediate rehabilitation    | Positive             |          |
| Water table          |                      | Depressed       |             | -               | Water reticulation          | Positive             |          |
| Fauna                |                      | Migration       |             | -               | -                           | -                    |          |
| Water quality        |                      | Waste water     |             | Medium          | Water reticulation          | Low                  |          |
| Noise                |                      | Elevated levels |             | Medium          | -                           | Low                  |          |
| Air quality          |                      | Degradation     |             | -               | -                           | -                    |          |
| Archaeological items |                      | Loss            |             | Medium          | Avoid sites of significance | Low                  |          |
| Visual impact        |                      | Scenery loss    |             | Low             | -                           | Low                  |          |
| Waste                |                      | Disposal        |             | Decommissioning | Low                         | Management standards | Positive |
| Safety risks         |                      | Waste disposal  |             | After closure   | Positive                    | Closure standards    | Positive |

**j) Summary of specialist reports.**

(This summary must be completed if any specialist reports informed the impact assessment and final site layout process and must be in the following tabular form):-

| <b>LIST OF STUDIES UNDERTAKEN</b> | <b>RECOMMENDATIONS OF SPECIALIST REPORTS</b> | <b>SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT<br/>(Mark with an X where applicable)</b> | <b>REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.</b> |
|-----------------------------------|--|---|---|
| No studies commissioned           |  |   |   |

Attach copies of Specialist Reports as appendices



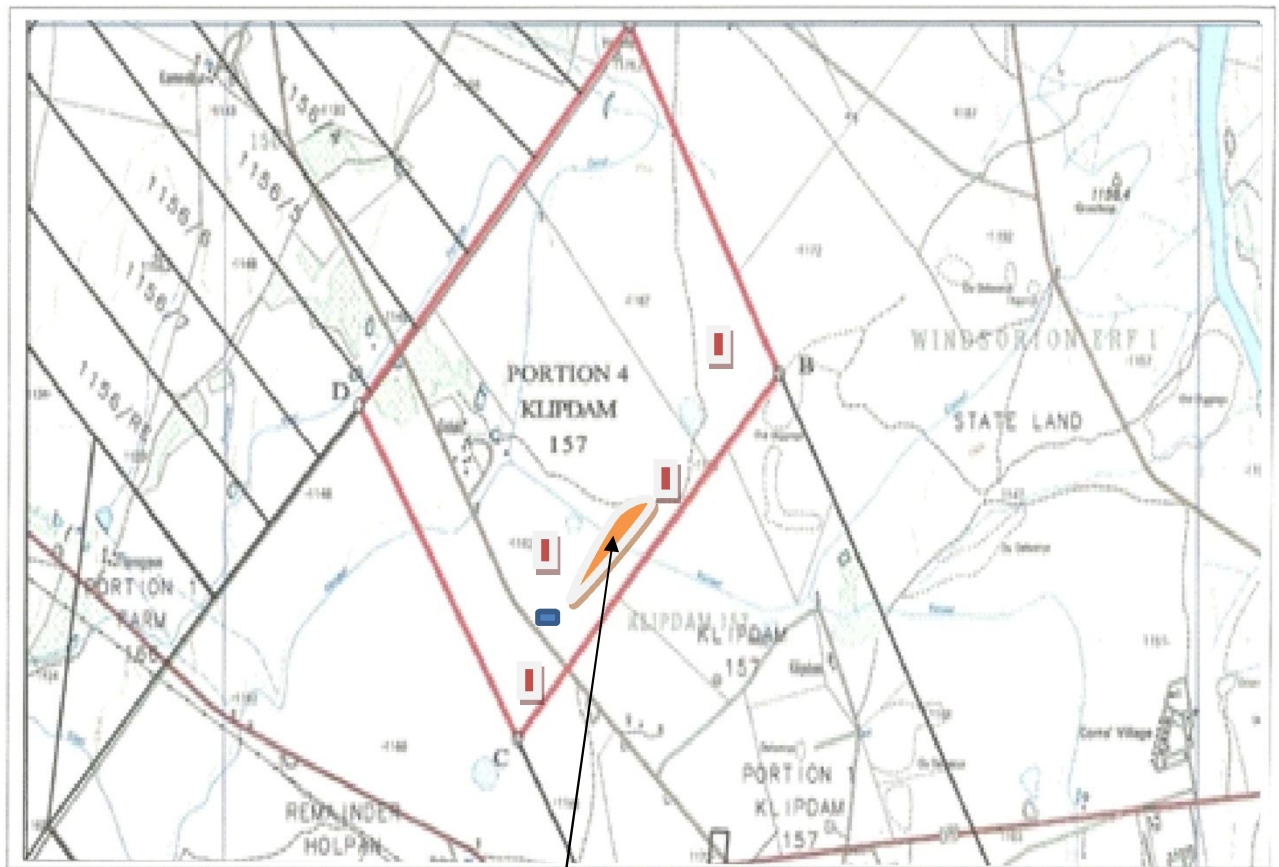
## k) Environmental impact statement


### (i) Summary of the key findings of the environmental impact assessment;

The prospecting operation will definitely have an impact on the environment. The main impacts relate to the increased in noise levels and air quality degradation due to the dust pollution from the Back actor used in the operation. The increased dust pollution can to great extend be mitigated using the spraying of the road ways used by the Front End Loader. No vegetation exists on the study area and the fauna will temporary migrate. Absolute care should be given not to extend the operation after 17:00 daily.


### (ii) 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 sensitivities of the preferred site indicating any areas that should be avoided, including buffers.



 Prelim Drilling Target Area

 Prelim Trenches Target Area

 **Development Footprint:** Store 25m<sup>2</sup>, Ablution Facility 4m<sup>2</sup>, Site Office 16m<sup>2</sup>, Drill Pads 81m<sup>2</sup>, Roads 132m<sup>2</sup>, Topsoil Stockpile 1000m<sup>2</sup> : Trenches 4200m<sup>2</sup>: Total Footprint 5458m<sup>2</sup>

**(iii) Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;**

Once the proposed rehabilitation is finalised, the study area would have a nett positive result that the environment would be in an improved state and the prospected area could be use for previous activities. The impact area is relatively small and normal activities could continue during the prospecting activities.

| Positive Impacts and Risks                            | Description  |
|---|--|
| Socio-economic.<br>The creation of job opportunities. | No alternative- Creation of new jobs   |
| Topography  | Improved topography to original state before stockpiles                                      |
| Visual impact   | Unightly stockpiles  |
| Land use  | Current activities continued   |
| Increased revenue to state / Taxes                    | Taxes payable to state and local government  |
| Negative Impacts and Risks                            | Description  |
| Noise   | Increased noise pollution during project   |
| Dust Pollution  | More Nuisance dust created during project. Currently during storms dust blown from tailings. |
| Surface and Ground water pollution                    | Low possibility of occurrence  |
| Sterilisation of mineral resource                     | Diamond resource sterilised  |

**l) Proposed impact management objectives and the impact management outcomes for 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 authorisation.

The proposed impact management objectives is to create environmental sustainable prospecting operation by the management, remediation or elimination of the environment 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:

- Prevention of soil pollution due to chemical spillage
  - Regular maintenance of all TMM's
  - Immediate rehabilitation of an affected area
  - Suitable disposal of contaminated soil
- Reduction of noise levels caused by TMM's
  - Strict adherence to shift and operating hours
  - Noise reduction modifications to earth moving machinery
  - Zero tolerance approach to permissible
- Minimization of dust upliftment causing loss of air quality
  - Watering of all dirt roads
  - Adherence to speed limits
  - Proper loading practise
- Surface and ground water quality degradation
  - Implementation of ground water monitoring system
  - Storm water control
  - Adherence to water management guidelines
- Waste disposal
  - Implementation of waste disposal facilities

- Waste removal schedules
- Practise of good housekeeping

**m) Aspects for inclusion as conditions of Authorisation.**

Any aspects which must be made conditions of the Environmental Authorisation

All the aspects which must be included in the authorization are detailed in this document. If any aspect arise that need inclusion, the document will be updated accordingly and submitted to the DMR.

**n) 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 mining 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.

**o) Reasoned opinion as to whether the proposed activity should or should not be authorised**

**i) Reasons why the activity should be authorized or not.**

It is my opinion that the activity be authorised as the operation will positive impact on the on the upliftment of the Holpan/Windsorton community. The project ensures a positive socio-economic, physical and especially land use after the mining operation. The project would also assist BEE companies through consumables supply. The environmental concerns, if mitigated as addressed in this EMP, should ensure no long term detrimental effects remain. It is therefore my opinion that there is no reason why the activity should not be authorized.

**ii) Conditions that must be included in the authorisation**

None other than the implementation of the EMPr with particular reference to the mitigation measures as stipulated within the EMPr.

**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
- A one year monitoring programme must be implemented to monitor subsided areas..
- 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.

**p) Period for which the Environmental Authorisation is required.**

5 Years

**q) 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 Shane Mathebula, 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 Report.

**r) Financial Provision**

State the amount that is required to both manage and rehabilitate the environment in respect of rehabilitation. R48729.41

**i) Explain how the aforesaid amount was derived.**

| No    | Description  | Unit           | A        | B           | C                     | D                 | E=A*B*C*D    |
|-------|--|----------------|----------|-------------|-----------------------|-------------------|--------------|
|       |  |                | Quantity | Master Rate | Multiplication factor | Weighing factor 1 | Amount Rands |
| 1     | Dismantling of processing plant and structures   | m <sup>3</sup> | 450      | 15.94       | 1                     | 1                 | 7173.00      |
| 2(A)  | Demolition of steel buildings and structures   | m <sup>2</sup> | 0        | 221.99      | 1                     | 1                 |              |
| 2(B)  | Demolition of reinforced concrete buildings and structures                                 | m <sup>2</sup> | 0        | 327.14      | 1                     | 1                 |              |
| 3     | Rehabilitation of access roads m <sup>2</sup> remain for future use                        | m <sup>2</sup> | 0        | 39.72       | 1                     | 1                 |              |
| 4(A)  | Demolition and rehabilitation of electrical railway lines                                  | m              | 0        | 385.55      | 1                     | 1                 | 0            |
| 4(B)  | Demolition and rehabilitation of non-electrical railway lines                              | m              | 0        | 210.30      | 1                     | 1                 | 0            |
| 5     | Demolition of housing and/or administration facilities                                     | m <sup>2</sup> | 50       | 443.97      | 1                     | 1                 | 22198.50     |
| 6     | Opencast rehabilitation including final voids and ramps                                    | ha             | 0.014    | 225957.57   | 1                     | 1                 | 3163.41      |
| 7     | Sealing of shafts and inclines   | m <sup>3</sup> | 0        | 119.17      | 1                     | 1                 | 0            |
| 8(A)  | Rehabilitation of overburden and spoils  | ha             | 0.005    | 155155.97   | 1                     | 1                 | 1129.79      |
| 8(B)  | Rehabilitation of processing waste deposits and evaporation ponds(non-polluting potential) | ha             | 0.010    | 193243.96   | 1                     | 1                 | 1932.43      |
| 8(C)  | Rehabilitation of processing waste deposits and evaporation ponds(polluting potential)     | ha             | 0.00 ha  | 561272.05   | 1                     | 1                 | 0            |
| 9     | Rehabilitation of subsided areas   | ha             | 0.0004   | 1129919.76  | 1                     | 1                 | 451.97       |
| 10    | General surface rehabilitation   | ha             | 0.002346 | 122909.70   | 1                     | 1                 | 287.61       |
| 11    | River diversions   | ha             | 0        | 122909.70   | 1                     | 1                 | 0            |
| 12    | Fencing  | m              | 0        | 140.2       | 1                     | 1                 | 0            |
| 13    | Water management   | ha             | 0.05     | 46733.73    | 1                     | 1                 | 2,336.69     |
| 14    | 2 to 3 years of maintenance and after care   | ha             | 0.11     | 16356.80    | 1                     | 1                 | 1900.00      |
| 15(A) | Specialist study   | sum            |          |             |                       |                   |              |
| 15(B) | Specialist study   | sum            |          |             |                       |                   | 0            |
|       |  |                |          |             | Subtotal              |                   | 40,573.40    |
|       | Preliminary and General  |                |          |             | Weighing factor 2     |                   |              |
|       |  |                |          |             | 1                     |                   |              |
|       | Contingencies  | 1800           |          | Subtotal    | 42,373.40             |                   |              |

|  |  |  |  |             |           |  |  |
|--|--|--|--|-------------|-----------|--|--|
|  |  |  |  | VAT(15%)    | 6,356.01  |  |  |
|  |  |  |  | Grand Total | 48,729.41 |  |  |
|  |  |  |  |             |           |  |  |

The rehabilitation cost is determined by using the DMR guideline. The financial provision quantum guarantee will be paid at the DMR rehabilitation account to cover the rehabilitation and/or management of negative environmental impacts.

**ii) Confirm that this amount can be provided for from operating 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).

The above calculated amount can be provided from, as part of, the 1st years operating expenditure and is in the submitted Financial and Technical Ability Report anticipated as an operating cost and was provided for as such.

**s) Specific Information required by the competent Authority**

**i) 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 EIA report must include the:-**

**(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, attach the investigation report as an **Appendix** .

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

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

(Provide the results 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 that Act, attach the investigation report as **Appendix 2.19.2** and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6 and 2.12. herein).

The SAHRIS field map suggest that no paleontological resources are present on the study area. It must however be noted that no physical evaluation and assesment could be performed as access to the study area was denied.

**t) Other matters required in terms of sections 24(4)(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 EAP must attach such motivation as **Appendix 4**).

The compiler of this document, also the appointed EAP, has extensive knowledge of the surrounding area. A field visit was conducted and certain portions of the study area was assessed and an in-depth desktop study conducted using existing literature and data.

**PART B**

**ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT**

**1) Draft environmental management programme.**

- a) **Details of the EAP**, (Confirm that the requirement for the provision of the details and expertise of the EAP are already included in PART A, section 1(a) herein as required).

Confirmed by M A Goliath

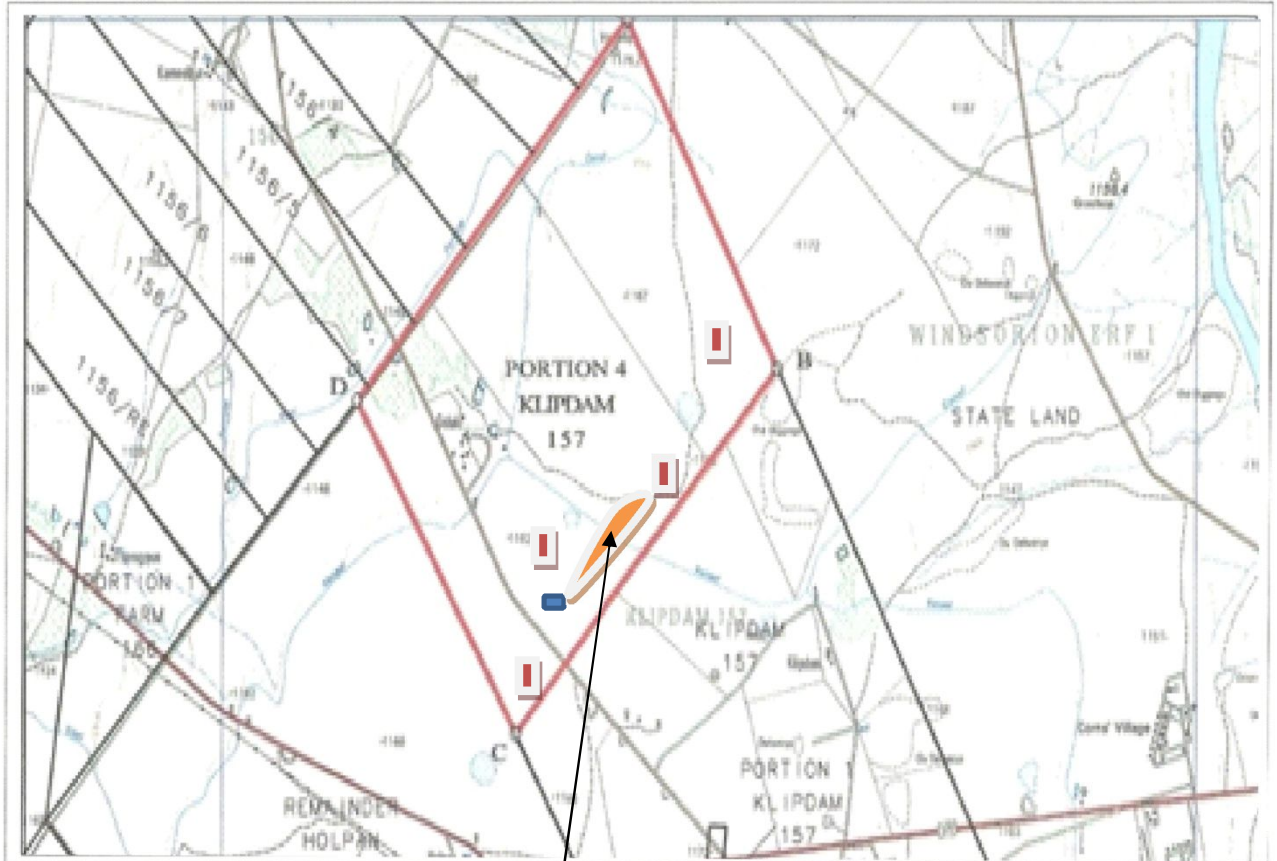
- b) **Description of the Aspects of the Activity** (Confirm that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (1)(h) herein as required).


Confirmed by M A Goliath

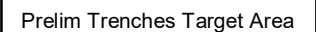
**c) Composite Map**

(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 should be avoided, including buffers)

Access was denied to the study area and the areas identified as per desktop study



 Prelim Drilling Target Area

 Prelim Trenches Target Area



**Development Footprint:** Store 25m<sup>2</sup>, Ablution Facility 4m<sup>2</sup>, Site Office 16m<sup>2</sup>, Drill Pads 81m<sup>2</sup>, Roads 132m<sup>2</sup>, Topsoil Stockpile 1000m<sup>2</sup> : Trenches 4200m<sup>2</sup>: Total Footprint 5458m<sup>2</sup>

**d) Description of Impact management objectives including management statements**

- i) **Determination of closure objectives.**(ensure that the closure objectives are informed by the type of environment described)

**Closure Objectives:**

The main objective would be to leave the environment in the same state as before the tailings were dumped on the property.  
 To prevent sterilization of ore reserves.  
 To prevent the erection of permanent structures.  
 To limit and rehabilitate any erosion features and prevent any damage to the soil capacity.  
 To limit and manage the visual impact.  
 Ensure health and safety of all humans and animals that may be affected by the activities.  
 The last closure objective is that the mine is closed efficiently, cost effectively and in accordance with government policy

- ii) **Volumes and rate of water use required for the operation.**



**Water used for drilling and dust allaying. Quantities not known.**

**iii) Has a water use licence has been applied for?**

Will be applied in future as the Department Water and Sanitation require an approved EMPr.

iv) Impacts to be mitigated in their respective phases

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

| ACTIVITIES  | PHASE   | SIZE AND SCALE of disturbance                              | MITIGATION MEASURES   | COMPLIANCE WITH STANDARDS   | TIME PERIOD FOR IMPLEMENTATION  |
|---|---|--|---|---|---|
| <p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc</p> <p>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.)</p> | <p>(of operation in which activity will take place.</p> <p>State;<br/>Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure).</p> | <p>(volumes, tonnages and hectares or m<sup>2</sup>)</p>   | <p>(describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)</p>   | <p>(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)</p> | <p>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.</p> |
| Operation   |   |  |   |   |   |
| Trenches Drilling   | Construction  | Trenches 4200m <sup>2</sup><br>Drill Pads 81m <sup>2</sup> | <p>Vegetation will be cleared</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> All infrastructure will be equipped with appropriate signs indicating function and potential dangers</li> <li><input type="checkbox"/> Overburden and topsoil will be stored separately next to the trenches</li> </ul> | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p>          | Upon commencement of activity   |
|   | Operational   | 4281m <sup>2</sup>   | <p>When working on equipment the appropriate measure needs to be implemented to prevent chemical spillage</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <input type="checkbox"/> Old diesel and related chemicals must be discarded within appropriate marked</li> </ul>                            | <p>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</p>                 | Upon commencement of activity.<br>Integrated into activity  |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  | <p>close containers and stored in the chemical storage facility till removal thereof</p> <ul style="list-style-type: none"><li><input type="checkbox"/> On accidental spillage the contaminated soil will be removed and appropriately stored till the removal there off.</li><li><input type="checkbox"/> Stored topsoil will be evenly spread to the recover the area</li></ul> <p>The area must be continuously inspected for spillages and remediated immediately</p> <ul style="list-style-type: none"><li><input type="checkbox"/> All vehicle traffic are restricted to the roads and demarcated traffic areas</li><li><input type="checkbox"/> Washing of equipment shall be restricted to urgent maintenance requirements only.</li><li><input type="checkbox"/> Employees will be advised to stay clear from any reptiles and not to disturb or provoke them in any manner.</li></ul> <p>A site will be identified and colour coded water tanks will be erected for safe human consumption.</p> <ul style="list-style-type: none"><li><input type="checkbox"/> The company shall be responsible for compliance with the relevant legislation in respect to noise.</li><li><input type="checkbox"/> Hearing protection will be made available to all employees where attenuation cannot be implemented.</li></ul> |  |  |
|--|--|--|--|--|--|

|  |  |   |  |  |
|--|--|---|--|--|
|  |  | <ul style="list-style-type: none"> <li><input type="checkbox"/> Every vehicle in operation will be equipped with a silencer on the exhaust system.</li> <li><input type="checkbox"/> Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water.</li> <li><input type="checkbox"/> Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated</li> <li><input type="checkbox"/> The company shall be responsible for any cleaning up resulting from the failure by his employees or suppliers.</li> </ul> <p>The company shall ensure that all vehicle and heavy vehicle drivers are aware of procedures and restrictions in terms of this document.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Fire extinguishers will be kept in good order and serviced regularly.</li> <li><input type="checkbox"/> Hard hats, earplugs, safety glasses, dust masks, gloves, hard point boots, reflector vests and reflective overalls is compulsory before entering this area.</li> <li><input type="checkbox"/> The entrance will be clearly marked will all regulatory signs, to indicate a potential dangerous zone.</li> </ul> |  |  |
|--|--|---|--|--|

|  |                 |  |   |  |  |
|--|-----------------|--|---|--|--|
|  |                 |  | <input type="checkbox"/> Related waste/ scrap must be dispose of in the appropriate manner  |  |  |
|  | Decommissioning |  | <p>The excavation will be filled with waste gravel and soil, with the topsoil and overburden in the correct order.</p> <input type="checkbox"/> All chemical spills will be rehabilitated immediately<br><input type="checkbox"/> Rip and rehabilitate all compacted areas.<br>Rehabilitation will be finalized by the spreading of tailing soil where necessary. | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | <p>Integrated into activity<br/> Upon decommissioning of activity.</p> |
|  | After Closure   |  | <p>A 1 year after care plan is initiated to ensure no subsidence of ground.</p>   | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | <p>During Closure of activity</p>                                      |
|  | Construction    |  | <input type="checkbox"/> All infrastructure will be equipped with appropriate signs indicating function and potential dangers   | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | <p>Upon commencement of activity</p>                                   |
|  | Operational     |  | <p>Employees will be advised to stay clear from any reptiles and not to disturb or provoke them in any manner.</p> <input type="checkbox"/> Littering of any product,   | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p>  | <p>Upon commencement of activity.<br/> Integrated into activity</p>    |

|                    |                 |                    |   |  |   |
|--------------------|-----------------|--------------------|---|--|---|
|                    |                 |                    | <p>including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated</p> <p><input type="checkbox"/> The company shall be responsible for any cleaning up resulting from the failure by his employees or suppliers.</p> <p><input type="checkbox"/> The company shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document</p> | Further does all mitigation measures proofs successful in impact management  |   |
|                    | Decommissioning |                    | Rip and rehabilitate all compacted areas.   | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | Integrated into activity<br>Upon decommissioning of activity. |
|                    | After Closure   |                    | A 1 year after care plan is initiated to ensure no subsidence of ground.  | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | During closure of activity                                    |
| Topsoil Stockpiles | Construction    | 1000m <sup>2</sup> | <p>Employees will be advised to stay clear from any reptiles and not to disturb or provoke them in any manner</p> <p>Littering of any product, including cigarette buds, at any operational site shall be</p>   | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful</p>                      | Upon commencement of activity                                 |

|  |                 |  |   |   |   |
|--|-----------------|--|---|---|---|
|  |                 |  | seen as an offence and will not be tolerated  | in impact management  |   |
|  | Operational     |  | <input type="checkbox"/> Employees will be advised to stay clear from any reptiles and not to disturb or provoke them in any manner<br>Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated<br><input type="checkbox"/> The company shall be responsible for any cleaning up resulting from the failure by his employees or suppliers.<br><input type="checkbox"/> The company 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.<br><br>Further does all mitigation measures proofs successful in impact management | Upon commencement of activity.<br>Integrated into activity    |
|  | Decommissioning |  | Rip and rehabilitate all compacted areas.   | All mitigation measures within this document comply with the NEMA and DMR rules and regulations.<br><br>Further does all mitigation measures proofs successful in impact management | Integrated into activity<br>Upon decommissioning of activity. |
|  | After Closure   |  | A 1 year after care plan is initiated to ensure no subsidence of ground.  | All mitigation measures within this document comply with the NEMA and DMR rules and regulations.<br><br>Further does all mitigation measures proofs successful                      | Upon closure of activity                                      |

|                   |              |                  |   |  |  |
|-------------------|--------------|------------------|---|--|--|
|                   |              |                  |   | in impact management   |  |
| Site Office/Store | Construction | 49m <sup>2</sup> | <p>All buildings will consist of appropriate signs indicating function and potential dangers</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 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</li> </ul>  | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | Upon commencement of activity                              |
|                   | Operational  |                  | <p>Suppression of dust on cleared areas will occur by the spraying of chemical bounded / fresh / recycled water.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated</li> <li><input type="checkbox"/> The company shall be responsible for any cleaning up resulting from the failure by his employees or suppliers.</li> <li><input type="checkbox"/> The company shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document.</li> <li><input type="checkbox"/> Fire extinguishers will be kept in good order and serviced regularly.</li> </ul> | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | Upon commencement of activity.<br>Integrated into activity |



|          |                 |                 |  |  |  |
|----------|-----------------|-----------------|--|--|--|
|          | Decommissioning |                 | <p>All structures will be broken down and removed from site.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> All chemical spills will be rehabilitated immediately</li> <li><input type="checkbox"/> Rip and rehabilitate all compacted areas.</li> </ul>  | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | <p>Integrated into activity</p> <p>Upon decommissioning of activity.</p> |
|          | After Closure   |                 | <p>A 1 year after care plan is initiated to ensure no subsidence of ground.</p>  | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | <p>Upon closure of activity</p>  |
| Ablution | Construction    | 4m <sup>2</sup> | <ul style="list-style-type: none"> <li><input type="checkbox"/> 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</li> </ul>  | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | <p>Upon commencement of activity</p>                                     |
|          | Operational     |                 | <p>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</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Sanitary material within the bins provided will be closed in colour plastics and disposed of with domestic waste</li> <li><input type="checkbox"/> Employees will be advised to stay clear from any reptiles</li> </ul> | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | <p>Upon commencement of activity.</p> <p>Integrated into activity</p>    |

|  |                 |  |   |  |   |
|--|-----------------|--|---|--|---|
|  |                 |  | <p>and not to disturb or provoke them in any manner.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Littering of any product, including cigarette buds, at any operational site shall be seen as an offence and will not be tolerated</li> <li><input type="checkbox"/> The company shall be responsible for any cleaning up resulting from the failure by his employees or suppliers.</li> <li><input type="checkbox"/> The company shall ensure that all suppliers and the delivery drivers are aware of procedures and restrictions in terms of this document.</li> <li><input type="checkbox"/> The entrance will be clearly marked with all regulatory signs</li> </ul> |  |   |
|  | Decommissioning |  | <p>All structures will be broken down and removed from site.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> All spills will be rehabilitated immediately</li> </ul> <p>Rip and rehabilitate all compacted areas.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Rehabilitation will be finalized by the spreading of tailing soil where necessary.</li> <li><input type="checkbox"/> On closure Department of Water Affairs will be consulted in aiding with the rehabilitation of the facility</li> </ul>  | <p>All mitigation measures within this document comply with the NEMA and DMR rules and regulations.</p> <p>Further does all mitigation measures proofs successful in impact management</p> | <p>Integrated into activity Upon decommissioning of activity.</p> |
|  | After Closure   |  | A 1 year after care plan is   | All mitigation measures  | Upon closure of activity  |

|  |  |  |  |   |  |
|--|--|--|--|---|--|
|  |  |  | initiated to ensure no subsidence of ground. | within this document comply with the NEMA and DMR rules and regulations.<br><br>Further does all mitigation measures proofs successful in impact management |  |
|--|--|--|--|---|--|

**e) Impact Management Outcomes**

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

| <b>ACTIVITY</b><br><br>Whether listed or not listed<br><br>(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, beams, roads, pipelines, power lines, conveyers, etc...etc...etc...) | <b>POTENTIAL IMPACT</b><br><br>(E.g. dust, noise ,drainage surface Disturbance, fly rock, surface water contamination, air pollution etc...etc) | <b>ASPECTS AFFECTED</b> | <b>PHASE</b><br>In which impact is anticipated<br><br>(e.g. Construction, commissioning, operational Decommissioning, closure, post-closure) | <b>MITIGATION TYPE</b><br><br>(modify, remedy, control, or stop) through<br>(e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)<br><br>E.g. Modify through alternative method.<br>Control through noise control<br>Control through management and monitoring through rehabilitation. | <b>STANDARDS TO BE ACHIEVED</b> (IMPACT AVOIDED, NOISE LEVELS, DUST LEVELS, REHABILITATION STANDARDS, END USE OBJECTIVE ETC) |
|---|---|-------------------------|--|---|--|
| Trenching/Drilling  | Geological  | -                       | Operational  | -   | -  |
|   | Topographic   | Trenches                |  | Rehabilitation  | Impact remedied  |
|   | Soil  | Pollution               |  | Immediate rehabilitation<br>Continuous Inspection   | Impact managed<br>Impact avoided   |
|   | Water table   | -                       |  | -   | -  |
|   | Fauna   | Migration               |  | -   | -  |
|   | Flora   | Loss                    |  | Rehabilitation  | Impact Remedied  |
|   | Water Quality   | Loss                    |  | -   | -  |
|   | Noise   | Elevated levels         |  | Operation during office hours only  |  |

|   |                      |                 |                                       |   |                                  |
|---|----------------------|-----------------|---------------------------------------|---|----------------------------------|
|   | Air quality          | Degradation     |                                       | Damping of mine roads.<br>Speed restriction                                 | Impact minimised                 |
|   | Archaeological items | Loss            |                                       | Avoid sites of significance   | Impact avoided                   |
|   | Sensitive landscape  | Destruction     |                                       | -   | Impact avoided                   |
|   | Visual impact        | Scenery loss    |                                       | Within Wall enclosure   | Impact minimised                 |
|   | Waste                | Disposal        | Decommissioning                       | Management standards  | Impact avoided                   |
|   | Re-vegetation        | Re-growth       | After closure                         | No Vegetation required for after use  | -                                |
|   | Safety Risks         | Waste disposal  |                                       | Closure standards   | Impact remedied                  |
| Topsoil<br>Stockpile/Overburden         | Vegetation           | Loss            | Construction                          | -   | -                                |
|   | Geological           | Loss            | Operational                           | -   | -                                |
|   | Topographic          | Change          |                                       | Rehabilitation  | Impact remedied                  |
|   | Soil                 | Pollution       |                                       | Immediate rehabilitation  | Impact managed<br>Impact avoided |
|   | Vegetation           | Invader plants  |                                       | Regular Removal   | -                                |
|   | Water table          | -               |                                       | -   | -                                |
|   | Fauna                | Migration       |                                       | -   | -                                |
|   | Flora                | Loss            |                                       | Rehabilitation  | Impact Remedied                  |
|   | Water quality        | Loss            |                                       | -   |                                  |
|   | Noise                | Elevated levels |                                       | Maintenance, Silencer and hearing protection/Operations during office hours | Impact minimised                 |
|   | Air quality          | Degradation     |                                       | Protect against wind erosion  | Impact avoided                   |
|   | Archaeological items | Loss            |                                       | Avoid sites of significance   | Impact avoided                   |
|   | Sensitive landscape  | Destruction     |                                       | Avoid significant sensitive sites   | Impact avoided                   |
|   | Visual impact        | Scenery loss    |                                       | -   | Impact avoided                   |
| Waste                                   | Disposal             | Decommissioning | Management standards                  | -   |                                  |
| Exposed area Rehab                      | Re-vegetation        | After closure   | No vegetation required for future use | -   |                                  |
| Safety risks                            | Waste disposal       |                 | Closure standards                     |   |                                  |
| Site Office<br>Store/Ablution Facilitye | Vegetation           | Loss            | Construction                          | Rehabilitation  | Impact Remedied                  |
|   | Geological           | Loss            | Operational                           | -   | -                                |

|            |                      |                 |              |   |                                  |                  |
|------------|----------------------|-----------------|--------------|---|----------------------------------|------------------|
|            | Topographic          | Change          |              | Rehabilitation  | Impact remedied                  |                  |
|            | Soil                 | Pollution       |              | Immediate rehabilitation  | Impact managed<br>Impact avoided |                  |
|            | Water table          | Depressed       |              | -   | -                                |                  |
|            | Fauna                | Migration       |              | -   | Impact minimised                 |                  |
|            | Water quality        | Waste water     |              | -   | Impact minimised                 |                  |
|            | Noise                | Elevated levels |              | Maintenance, Silencer and hearing conservation/Operations during office hours | Impact minimised                 |                  |
|            | Air quality          | Degradation     |              | -   | Impact minimised                 |                  |
|            | Archaeological items | Loss            |              | Avoid sites of significance   | Impact avoided                   |                  |
|            | Visual impact        | Scenery loss    |              | Behind enclosed wall  | Impact minimised                 |                  |
|            | Waste                | Disposal        |              | Decommissioning   | Management standards             | Impact remedied  |
|            | Safety risks         | Waste disposal  |              |   | Closure standards                | Impact remedied  |
|            | Vegetation           | Loss            | Construction | -   | -                                |                  |
| Mine roads | Vegetation           | Loss            | Construction | -   | -                                |                  |
|            | Geological           | Loss            | Operational  | -   | Impact remedied                  |                  |
|            | Topographic          | Change          |              | Rehabilitation  | Impact managed<br>Impact avoided |                  |
|            | Soil                 | Pollution       |              | Immediate rehabilitation  | Impact remedied                  |                  |
|            | Water table          | Depressed       |              | Water reticulation  | Impact minimised                 |                  |
|            | Fauna                | Migration       |              | -   | -                                |                  |
|            | Water quality        | Waste water     |              | Water reticulation  | -                                |                  |
|            | Noise                | Elevated levels |              | -   | -                                |                  |
|            | Air quality          | Degradation     |              | -   | -                                |                  |
|            | Archaeological items | Loss            |              | Avoid sites of significance   | Impact avoided                   |                  |
|            | Visual impact        | Scenery loss    |              | -   | Impact avoided                   |                  |
|            | Waste                | Disposal        |              | Decommissioning   | Management standards             | Impact minimised |
|            | Safety risks         | Waste disposal  |              | After closure   | Closure standards                | Impact remedied  |

**f) Impact Management Actions**

(A description of impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (c) and (d) will be achieved).

| <b>ACTIVITY</b><br><br>Whether listed or not listed<br><br>(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, beams, roads, pipelines, power lines, conveyers, etc...etc...etc...) | <b>POTENTIAL IMPACT</b><br><br>(E.g. dust, noise ,drainage surface Disturbance, fly rock, surface water contamination, air pollution etc...etc) | <b>MITIGATION TYPE</b><br>(modify, remedy, control, or stop) through<br>(e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)<br><br>E.g.<br>Modify through alternative method.<br>Control through noise control<br>Control through management and monitoring through rehabilitation. | <b>TIME PERIOD FOR IMPLEMENTATION</b><br><br>Describe the time period when the measures in the environmental management programme must be implemented. Measures Must be implemented when required.<br><br>With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation therefore state either.<br><br>Upon cessation of the individual activity<br>Or<br>Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be. | <b>COMPLIANCE WITH STANDARDS</b><br><br>(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)  |
|---|---|--|--|--|
| Trenching/Drilling  | Geological loss   | -  | -  | -  |
|   | Topographic change  | Rehabilitation   | Integrated into activity<br>Decommissioning of the activity  | The impact that may occur cannot be avoided, but minimized through the implementation of the mitigation measure as stipulated in Part B (d)(iv) of the document. E.g Mined-out areas needs to be backfilled and rehabilitated as mining commences.                         |
|   | Soil pollution  | Immediate rehabilitation<br>Continuous Inspection  | Integrated into activity<br>Decommissioning of the activity  | Impact must be avoided as far as possible or remediated immediately. Part B (d)(iv)of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation, E.g immediate clean-up should any spillage occur |
|   | Depressed water table   | -  | -  | -  |

|                         |   |   |   |
|-------------------------|---|---|---|
| Fauna migration         | Noise level control   | Integrated into activity  | This impact can only be minimised and the adherence to the noise control measures as stipulated in in Part B (d)(iv) of this document needs to be implemented.  |
| Water quality loss      | -   | -   | -   |
| Noise disturbance       | Operations during office hours  | Integrated into activity  | This impact can only be minimised and the adherence to the noise control measures as stipulated in in Part B (d)(iv) of this document needs to be implemented.E.g Restrict operations to standard business hours.                   |
| Air quality degradation | Dampening of mine roads<br>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 in Part B (d)(iv) needs to be done E.g Watering of the area with fresh/recycled water. |
| Archaeological items    | Avoid sites of significance   | Before commencement of activity<br>Integrated into activity                                     | Impact must be avoided at all times, Part A (iv) and in Part B (d)(iv) of this document needs to be implemented And strictly adhered to in order to achieve successful impact avoidance.  |
| Sensitive landscape     | Operations outside wet season<br>Adherence to all mitigation measures | Upon commencement of activity<br>Integrated into activity                                       | The degradation of any sensitive landscapes must be minimized as far as possible Implementation and adherence to Part A(iv) and in Part B (d)(iv) needs to be done E.g avoidance of open surface water bodies.                      |
| Visual impact           | -   | -   | -   |
| Waste disposal          | Management standards  | Upon commencement of activity.<br>Integrated into activity.<br>Decommissioning of the activity. | Waste management procedures, as stipulated in in Part B (d)(iv) 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.             |

|  |                       |   |   |   |
|--|-----------------------|---|---|---|
|  | Area rehabilitation   | Closure standards                                 | Integrated into activity<br>Decommissioning of activity<br>During closure of activity | Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Part A (iv) and in Part B (d)(iv) of this document are measures that when implemented will optimize this activity E.g rehabilitation of an area where no activity takes place.  |
|  | Geological loss       | -   | -   | -   |
|  | Topographic change    | Rehabilitation                                    | Integrated into activity<br>Decommissioning of the activity                           | The impact that may occur cannot be avoided, but minimized through the implementation of the mitigation measure as stipulated in in Part B (d)(iv) of the document. E.g Mined-out areas needs to be backfilled and rehabilitated as mining commences.                       |
|  | Soil pollution        | Immediate rehabilitation<br>Continuous Inspection | Integrated into activity<br>Decommissioning of the activity                           | Impact must be avoided as far as possible or remediated immediately. Part B (d)(iv) of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation, E.g immediate clean-up should any spillage occur |
|  | Depressed water table | -   | -   | -   |
|  | Fauna migration       | Noise level control                               | Integrated into activity  | This impact can only be minimised and the adherence to the noise control measures as stipulated in in Part B (d)(iv) of this document needs to be implemented.  |
|  | Water quality loss    | -   | -   | -   |
|  | Noise disturbance     | Operations during office hours                    | Integrated into activity  | This impact can only be minimised and the adherence to the noise control measures as stipulated in in Part B (d)(iv) of this document needs to be implemented.E.g Restrict operations to standard business hours.   |
|  | Air quality           | Dampening of mine roads                           | Integrated into activity  | The degradation of air quality must   |



|            |                      |   |   |  |
|------------|----------------------|---|---|--|
|            | degradation          | Speed restriction   |   | be minimized as far as possible. Implementation and adherence to the mitigation measures as stipulated in in Part B (d)(iv) needs to be done E.g Watering of the area with fresh/recycled water.   |
|            | Archaeological items | Avoid sites of significance   | Before commencement of activity<br>Integrated into activity                                     | Impact must be avoided at all times, Part A(iv) and in Part B (d)(iv) of this document needs to be implemented And strictly adhered to in order to achieve successful impact avoidance.  |
|            | Sensitive landscape  | Operations outside wet season<br>Adherence to all mitigation measures | Upon commencement of activity<br>Integrated into activity                                       | The degradation of any sensitive landscapes must be minimized as far as possible Implementation and adherence to Part A (iv) and in Part B (d)(iv) needs to be done E.g avoidance of open surface water bodies.                                  |
|            | Visual impact        | -   | -   | -  |
|            | Waste disposal       | Management standards  | Upon commencement of activity.<br>Integrated into activity.<br>Decommissioning of the activity. | Waste management procedures, as stipulated in Part B (d)(iv) 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.                             |
| Stockpiles | Geological loss      | -   | -   | -  |
|            | Topographic change   | Rehabilitation  | Integrated into activity<br>Decommissioning of the activity                                     | The impact that may occur cannot be avoided, but minimized through the implementation of the mitigation measure as stipulated in Section B1.4 of the document. E.g Mined-out areas needs to be backfilled and rehabilitated as mining commences. |
|            | Soil pollution       | Immediate rehabilitation<br>Continuous Inspection                     | Integrated into activity<br>Decommissioning of the activity                                     | Impact must be avoided as far as possible or remediated immediately. Part B (d)(iv) in this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or                                    |

|                         |   |   |   |   |
|-------------------------|---|---|---|---|
|                         |   |   |   | remediation, E.g immediate clean-up should any spillage occur   |
| Depressed water table   | -   | -   | - | -   |
| Fauna migration         | Noise level control   | Integrated into activity                                    |   | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv)of this document needs to be implemented.  |
| Water quality loss      | -   | -   | - | -   |
| Noise disturbance       | Operations during office hours  | Integrated into activity                                    |   | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented.E.g Restrict operations to standard business hours.                    |
| Air quality degradation | Dampening of mine roads<br>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 Part B (d)(iv) needs to be done E.g Watering of the area with fresh/recycled water. |
| Archaeological items    | Avoid sites of significance   | Before commencement of activity<br>Integrated into activity |   | Impact must be avoided at all times, Part A(iv) and Part B (d)(iv) of this document needs to be implemented And strictly adhered to in order to achieve successful impact avoidance.  |
| Sensitive landscape     | Operations outside wet season<br>Adherence to all mitigation measures | Upon commencement of activity<br>Integrated into activity   |   | The degradation of any sensitive landscapes must be minimized as far as possible Implementation and adherence to Part A (iv) and Part B (d)(iv) needs to be done E.g avoidance of open surface water bodies.                      |
| Visual impact           | -   | -   | - | -   |
| Waste disposal          | Management standards  | Upon commencement of activity.<br>Integrated into activity. |   | Waste management procedures, as stipulated in Part B (d)(iv) will aid in  |

|                   |                       |   |   |   |
|-------------------|-----------------------|---|---|---|
|                   |                       |   | Decommissioning of the activity.  | 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.   |
|                   | Area rehabilitation   | Closure standards                                 | Integrated into activity<br>Decommissioning of activity<br>During closure of activity | Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Part A (iv) and Part B (d)(iv) of this document are measures that when implemented will optimize this activity E.g rehabilitation of an area where no activity takes place.     |
| Site Office/Store | Geological loss       | -   | -   | -   |
|                   | Topographic change    | Rehabilitation                                    | Integrated into activity<br>Decommissioning of the activity                           | The impact that may occur cannot be avoided, but minimized through the implementation of the mitigation measure as stipulated in Part B (d)(iv) of the document. E.g Mined-out areas needs to be backfilled and rehabilitated as mining commences.                          |
|                   | Soil pollution        | Immediate rehabilitation<br>Continuous Inspection | Integrated into activity<br>Decommissioning of the activity                           | Impact must be avoided as far as possible or remediated immediately. Part B (d)(iv) of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation, E.g immediate clean-up should any spillage occur |
|                   | Depressed water table | -   | -   | -   |
|                   | Fauna migration       | Noise level control                               | Integrated into activity  | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented.   |
|                   | Water quality loss    | -   | -   | -   |
|                   | Noise disturbance     | Operations during office hours                    | Integrated into activity  | This impact can only be minimised and the adherence to the noise control measures as stipulated in  |

|  |                         |   |   |   |
|--|-------------------------|---|---|---|
|  |                         |   |   | Part B (d)(iv) of this document needs to be implemented.E.g Restrict operations to standard business hours.   |
|  | Air quality degradation | Dampening of mine roads<br>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 Part B (d)(iv) needs to be done E.g Watering of the area with fresh/recycled water.                                       |
|  | Archaeological items    | Avoid sites of significance   | Before commencement of activity<br>Integrated into activity                                     | Impact must be avoided at all times, Part A(iv) and Part B (d)(iv) of this document needs to be implemented And strictly adhered to in order to achieve successful impact avoidance.  |
|  | Sensitive landscape     | Operations outside wet season<br>Adherence to all mitigation measures | Upon commencement of activity<br>Integrated into activity                                       | The degradation of any sensitive landscapes must be minimized as far as possible Implementation and adherence to Part A(iv) and Part B (d)(iv) needs to be done E.g avoidance of open surface water bodies.   |
|  | Visual impact           | -   | -   | -   |
|  | Waste disposal          | Management standards  | Upon commencement of activity.<br>Integrated into activity.<br>Decommissioning of the 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.  |
|  | Area rehabilitation     | Closure standards   | Integrated into activity<br>Decommissioning of activity<br>During closure of activity           | Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Part A (iv) and Part B (d)(iv) of this document are measures that when implemented will optimize this activity E.g rehabilitation of an area where no activity takes place. |

|          |                         |   |   |   |
|----------|-------------------------|---|---|---|
| Ablution | Geological loss         | -   | -   | -   |
|          | Topographic change      | Rehabilitation                                    | Integrated into activity<br>Decommissioning of the activity | The impact that may occur cannot be avoided, but minimized through the implementation of the mitigation measure as stipulated in Part B (d)(iv) of the document. E.g Mined-out areas needs to be backfilled and rehabilitated as mining commences.                          |
|          | Soil pollution          | Immediate rehabilitation<br>Continuous Inspection | Integrated into activity<br>Decommissioning of the activity | Impact must be avoided as far as possible or remediated immediately. Part B (d)(iv) of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation, E.g immediate clean-up should any spillage occur |
|          | Depressed water table   | -   | -   | -   |
|          | Fauna migration         | Noise level control                               | Integrated into activity                                    | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented.   |
|          | Water quality loss      | -   | -   | -   |
|          | Noise disturbance       | Operations during office hours                    | Integrated into activity                                    | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented. E.g Restrict operations to standard business hours.   |
|          | Air quality degradation | Dampening of mine roads<br>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 Part B (d)(iv) needs to be done E.g Watering of the area with fresh/recycled water.   |
|          | Archaeological          | Avoid sites of significance                       | Before commencement of activity                             | Impact must be avoided at all times,  |

|            |                     |   |   |   |
|------------|---------------------|---|---|---|
|            | items               |   | Integrated into activity  | Part A(iv) and Part B (d)(iv) of this document needs to be implemented And strictly adhered to in order to achieve successful impact avoidance.   |
|            | Sensitive landscape | Operations outside wet season<br>Adherence to all mitigation measures | Upon commencement of activity<br>Integrated into activity                                       | The degradation of any sensitive landscapes must be minimized as far as possible Implementation and adherence to Part A(iv) and Part B (d)(iv) needs to be done E.g avoidance of open surface water bodies.   |
|            | Visual impact       | -   | -   | -   |
|            | Waste disposal      | Management standards  | Upon commencement of activity.<br>Integrated into activity.<br>Decommissioning of the activity. | Waste management procedures, as stipulated in Part B (d)(iv) 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.  |
|            | Area rehabilitation | Closure standards   | Integrated into activity<br>Decommissioning of activity<br>During closure of activity           | Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Part A (iv) and Part B (d)(iv) of this document are measures that when implemented will optimize this activity E.g rehabilitation of an area where no activity takes place. |
|            | Area rehabilitation | Closure standards   | Integrated into activity<br>Decommissioning of activity<br>During closure of activity           | Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Part A (iv) and Part B (d)(iv) of this document are measures that when implemented will optimize this activity E.g rehabilitation of an area where no activity takes place. |
| Mine Roads | Geological loss     | -   | -   | -   |
|            | Topographic change  | Rehabilitation  | Integrated into activity<br>Decommissioning of the activity                                     | The impact that may occur cannot be avoided, but minimized through the implementation of the mitigation   |

|                         |   |   |   |   |
|-------------------------|---|---|---|---|
|                         |   |   |   | measure as stipulated in Part B (d)(iv) of the document. E.g Mined-out areas needs to be backfilled and rehabilitated as mining commences.  |
| Soil pollution          | Immediate rehabilitation<br>Continuous Inspection |   | Integrated into activity<br>Decommissioning of the activity | Impact must be avoided as far as possible or remediated immediately. Part B (d)(iv) of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation, E.g immediate clean-up should any spillage occur |
| Depressed water table   | -   | - | -   | -   |
| Fauna migration         | Noise level control                               |   | Integrated into activity                                    | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented.   |
| Water quality loss      | -   | - | -   | -   |
| Noise disturbance       | Operations during office hours                    |   | Integrated into activity                                    | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented.E.g Restrict operations to standard business hours.  |
| Air quality degradation | Dampening of mine roads<br>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 Part B (d)(iv) needs to be done E.g Watering of the area with fresh/recycled water.   |
| Archaeological items    | Avoid sites of significance                       |   | Before commencement of activity<br>Integrated into activity | Impact must be avoided at all times, Part A (iv) and Part B (d)(iv) of this document needs to be implemented And strictly adhered to in order to achieve successful impact avoidance.   |
| Sensitive               | Operations outside wet season                     |   | Upon commencement of activity                               | The degradation of any sensitive  |

|  |                     |                                      |   |   |
|--|---------------------|--------------------------------------|---|---|
|  | landscape           | Adherence to all mitigation measures | Integrated into activity  | landscapes must be minimized as far as possible Implementation and adherence to Part A(iv) and Part B (d)(iv) needs to be done<br>E.g avoidance of open surface water bodies.   |
|  | Visual impact       | -                                    | -   | -   |
|  | Waste disposal      | Management standards                 | Upon commencement of activity.<br>Integrated into activity.<br>Decommissioning of the activity. | Waste management procedures, as stipulated in Part B (d)(iv) will aid in the avoidance and/or remediation when implemented and adhered to<br>E.g Littering of any product will be seen as an offence and not tolerated.   |
|  | Area rehabilitation | Closure standards                    | Integrated into activity<br>Decommissioning of activity<br>During closure of activity           | Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Part A (iv) and Part B (d)(iv) of this document are measures that when implemented will optimize this activity E.g rehabilitation of an area where no activity takes place. |



## g. 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)

| <b>ACTIVITY</b><br><br>Whether listed or not listed<br><br>(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, beams, roads, pipelines, power lines, conveyers, etc...etc...etc...) | <b>POTENTIAL IMPACT</b><br><br>(E.g. dust, noise ,drainage surface Disturbance, fly rock, surface water contamination, air pollution etc...etc) | <b>MITIGATION TYPE</b><br>(modify, remedy, control, or stop) through<br>(e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)<br><br>E.g.<br>Modify through alternative method.<br>Control through noise control<br>Control through management and monitoring through rehabilitation. | <b>TIME PERIOD FOR IMPLEMENTATION</b><br><br>Describe the time period when the measures in the environmental management programme must be implemented. Measures Must be implemented when required.<br><br>With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation therefore state either.<br><br>Upon cessation of the individual activity<br>Or<br>Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be. | <b>COMPLIANCE WITH STANDARDS</b><br><br>(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)    |
|---|---|--|--|---|
| Trenching/Drilling  | Geological loss   | -  | -  | -   |
|   | Topographic change  | Rehabilitation   | Integrated into activity<br>Decommissioning of the activity  | The impact that may occur cannot be avoided, but minimized through the implementation of the mitigation measure as stipulated in Part B (d)(iv) of the document. E.g Mined-out areas needs to be backfilled and rehabilitated as mining commences.                          |
|   | Soil pollution  | Immediate rehabilitation<br>Continuous Inspection  | Integrated into activity<br>Decommissioning of the activity  | Impact must be avoided as far as possible or remediated immediately. Part B (d)(iv) of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation, E.g immediate clean-up should any spillage occur |
|   | Depressed water table   | -  | -  | -   |

|                         |   |   |  |
|-------------------------|---|---|--|
| Fauna migration         | Noise level control   | Integrated into activity  | This impact can only be minimised and the adherence to the noise control measures as stipulated in in Part B (d)(iv) of this document needs to be implemented.   |
| Water quality loss      | -   | -   | -  |
| Noise disturbance       | Operations during office hours  | Integrated into activity  | This impact can only be minimised and the adherence to the noise control measures as stipulated in in Part B (d)(iv) of this document needs to be implemented. E.g Restrict operations to standard business hours.                   |
| Air quality degradation | Dampening of mine roads<br>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 in Part B (d)(iv) needs to be done E.g Watering of the area with fresh/recycled water. |
| Archaeological items    | Avoid sites of significance   | Before commencement of activity<br>Integrated into activity                                     | Impact must be avoided at all times, Part A (iv) and in Part B (d)(iv) of this document needs to be implemented And strictly adhered to in order to achieve successful impact avoidance.   |
| Sensitive landscape     | Operations outside wet season<br>Adherence to all mitigation measures | Upon commencement of activity<br>Integrated into activity                                       | The degradation of any sensitive landscapes must be minimized as far as possible Implementation and adherence to Part A (iv) and in Part B (d)(iv) needs to be done E.g avoidance of open surface water bodies.                      |
| Visual impact           | -   | -   | -  |
| Waste disposal          | Management standards  | Upon commencement of activity.<br>Integrated into activity.<br>Decommissioning of the activity. | Waste management procedures, as stipulated in in Part B (d)(iv) 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.              |

|                                  |                       |   |   |   |
|----------------------------------|-----------------------|---|---|---|
|                                  | Area rehabilitation   | Closure standards                                 | Integrated into activity<br>Decommissioning of activity<br>During closure of activity | Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Part A (iv) and in Part B (d)(iv) of this document are measures that when implemented will optimize this activity E.g rehabilitation of an area where no activity takes place.  |
| Topsoil Stockpiles<br>Overburden | Geological loss       | -   | -   | -   |
|                                  | Topographic change    | Rehabilitation                                    | Integrated into activity<br>Decommissioning of the activity                           | The impact that may occur cannot be avoided, but minimized through the implementation of the mitigation measure as stipulated in Section B1.4 of the document. E.g Mined-out areas needs to be backfilled and rehabilitated as mining commences.                            |
|                                  | Soil pollution        | Immediate rehabilitation<br>Continuous Inspection | Integrated into activity<br>Decommissioning of the activity                           | Impact must be avoided as far as possible or remediated immediately. Part B (d)(iv) in this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation, E.g immediate clean-up should any spillage occur |
|                                  | Depressed water table | -   | -   | -   |
|                                  | Fauna migration       | Noise level control                               | Integrated into activity  | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv)of this document needs to be implemented.  |
|                                  | Water quality loss    | -   | -   | -   |
|                                  | Noise disturbance     | Operations during office hours                    | Integrated into activity  | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented. E.g Restrict operations to standard business hours.   |

|  |                         |   |   |   |
|--|-------------------------|---|---|---|
|  | Air quality degradation | Dampening of mine roads<br>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 Part B (d)(iv) needs to be done E.g Watering of the area with fresh/recycled water.                                       |
|  | Archaeological items    | Avoid sites of significance   | Before commencement of activity<br>Integrated into activity                                     | Impact must be avoided at all times, Part A (iv) and Part B (d)(iv) of this document needs to be implemented And strictly adhered to in order to achieve successful impact avoidance.   |
|  | Sensitive landscape     | Operations outside wet season<br>Adherence to all mitigation measures | Upon commencement of activity<br>Integrated into activity                                       | The degradation of any sensitive landscapes must be minimized as far as possible Implementation and adherence to Part A (iv) and Part B (d)(iv) needs to be done E.g avoidance of open surface water bodies.  |
|  | Visual impact           | -   | -   | -   |
|  | Waste disposal          | Management standards  | Upon commencement of activity.<br>Integrated into activity.<br>Decommissioning of the activity. | Waste management procedures, as stipulated in Part B (d)(iv) 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.  |
|  | Area rehabilitation     | Closure standards   | Integrated into activity<br>Decommissioning of activity<br>During closure of activity           | Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Part A (iv) and Part B (d)(iv) of this document are measures that when implemented will optimize this activity E.g rehabilitation of an area where no activity takes place. |
|  | Waste disposal          | Management standards  | Upon commencement of activity.<br>Integrated into activity.<br>Decommissioning of the activity. | Waste management procedures, as stipulated in Part B (d)(iv) 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.  |

|                    |                         |   |   |   |
|--------------------|-------------------------|---|---|---|
| Site Office/ Store | Geological loss         | -   | -   | -   |
|                    | Topographic change      | Rehabilitation                                    | Integrated into activity<br>Decommissioning of the activity | The impact that may occur cannot be avoided, but minimized through the implementation of the mitigation measure as stipulated in Part B (d)(iv) of the document. E.g Mined-out areas needs to be backfilled and rehabilitated as mining commences.                          |
|                    | Soil pollution          | Immediate rehabilitation<br>Continuous Inspection | Integrated into activity<br>Decommissioning of the activity | Impact must be avoided as far as possible or remediated immediately. Part B (d)(iv) of this document needs to be implemented and strictly adhered to in order to achieve successful impact avoidance and / or remediation, E.g immediate clean-up should any spillage occur |
|                    | Depressed water table   | -   | -   | -   |
|                    | Fauna migration         | Noise level control                               | Integrated into activity                                    | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented.   |
|                    | Water quality loss      | -   | -   | -   |
|                    | Noise disturbance       | Operations during office hours                    | Integrated into activity                                    | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented. E.g Restrict operations to standard business hours.   |
|                    | Air quality degradation | Dampening of mine roads<br>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 Part B (d)(iv) needs to be done E.g Watering of the area with fresh/recycled water.   |
|                    | Archaeological          | Avoid sites of significance                       | Before commencement of activity                             | Impact must be avoided at all times,  |

|          |                     |   |   |   |
|----------|---------------------|---|---|---|
|          | items               |   | Integrated into activity  | Part A (iv) and Part B (d)(iv) of this document needs to be implemented And strictly adhered to in order to achieve successful impact avoidance.  |
|          | Sensitive landscape | Operations outside wet season<br>Adherence to all mitigation measures | Upon commencement of activity<br>Integrated into activity                                       | The degradation of any sensitive landscapes must be minimized as far as possible Implementation and adherence to Part A (iv) and Part B (d)(iv) needs to be done E.g avoidance of open surface water bodies.  |
|          | Visual impact       | -   | -   | -   |
|          | Waste disposal      | Management standards  | Upon commencement of activity.<br>Integrated into activity.<br>Decommissioning of the 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.  |
|          | Area rehabilitation | Closure standards   | Integrated into activity<br>Decommissioning of activity<br>During closure of activity           | Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Part A (iv) and Part B (d)(iv) of this document are measures that when implemented will optimize this activity E.g rehabilitation of an area where no activity takes place. |
| Ablution | Geological loss     | -   | -   | -   |
|          | Topographic change  | Rehabilitation  | Integrated into activity<br>Decommissioning of the activity                                     | The impact that may occur cannot be avoided, but minimized through the implementation of the mitigation measure as stipulated in Part B (d)(iv) of the document. E.g Mined-out areas needs to be backfilled and rehabilitated as mining commences.                      |
|          | Soil pollution      | Immediate rehabilitation<br>Continuous Inspection                     | Integrated into activity<br>Decommissioning of the activity                                     | Impact must be avoided as far as possible or remediated immediately. Part B (d)(iv) of this document needs to be implemented and strictly   |

|                         |   |   |   |   |
|-------------------------|---|---|---|---|
|                         |   |   |   | adhered to in order to achieve successful impact avoidance and / or remediation, E.g immediate clean-up should any spillage occur   |
| Depressed water table   | -   | -   | - | -   |
| Fauna migration         | Noise level control   | Integrated into activity                                    |   | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented.   |
| Water quality loss      | -   | -   | - | -   |
| Noise disturbance       | Operations during office hours  | Integrated into activity                                    |   | This impact can only be minimised and the adherence to the noise control measures as stipulated in Part B (d)(iv) of this document needs to be implemented. E.g Restrict operations to standard business hours.                   |
| Air quality degradation | Dampening of mine roads<br>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 Part B (d)(iv) needs to be done E.g Watering of the area with fresh/recycled water. |
| Archaeological items    | Avoid sites of significance   | Before commencement of activity<br>Integrated into activity |   | Impact must be avoided at all times, Part A (iv) and Part B (d)(iv) of this document needs to be implemented And strictly adhered to in order to achieve successful impact avoidance.   |
| Sensitive landscape     | Operations outside wet season<br>Adherence to all mitigation measures | Upon commencement of activity<br>Integrated into activity   |   | The degradation of any sensitive landscapes must be minimized as far as possible Implementation and adherence to Part A (iv) and Part B (d)(iv) needs to be done E.g avoidance of open surface water bodies.                      |
| Visual impact           | -   | -   | - | -   |
| Waste disposal          | Management standards  | Upon commencement of activity.                              |   | Waste management procedures, as   |

|  |                     |                   |   |   |
|--|---------------------|-------------------|---|---|
|  |                     |                   | Integrated into activity.<br>Decommissioning of the activity.                         | stipulated in Part B (d)(iv) 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.  |
|  | Area rehabilitation | Closure standards | Integrated into activity<br>Decommissioning of activity<br>During closure of activity | Rehabilitation of a disturbed area is crucial. Within the mitigation measures stipulated in Part A (iv) and Part B (d)(iv) of this document are measures that when implemented will optimize this activity E.g rehabilitation of an area where no activity takes place. |



**i) Financial Provision**

**(1) Determination of the amount of Financial Provision.**

**(a) Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation.**

Closure Objectives:

The main objective would be to leave the environment in the same state as before the tailings were dumped on the property.

To prevent sterilization of ore reserves.

To prevent the erection of permanent structures.

To limit and rehabilitate any erosion features and prevent any damage to the soil capacity.

To limit and manage the visual impact.

Ensure health and safety of all humans and animals that may be affected by the activities.

The last closure objective is that the operation is closed efficiently, cost effectively and in accordance with government policy.

**(b) Confirm specifically that the environmental objectives in relation to closure have been consulted with landowner and interested and affected parties.**

Confirmed by M A Goliath.

**(c) 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 Objectives

On completion of the prospecting operation, the various surfaces, including the access roads, the office area, storage area, will finally be rehabilitated as follows:-

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 and landscaped.

All infrastructures, site office, ablution facilities and waste disposal bin (outside prospecting area) and other items used during the operational period will be removed from the site.

On completion of operations, all structures or objects on the office site will be dealt with in the following manner:

The holder of the prospecting right may not demolish or remove any building, structure or object —

- (a) which may not be demolished or removed in terms of any other law;
- (b) which has been identified in writing by the Minister for purposes of this section; or
- (c) which is to be retained in terms of an agreement between the holder and the owner or occupier of the land, which agreement has been approved by the Minister in writing.

2. The provision of subsection (1) does not apply to bona fide prospecting equipment, which may be removed.

#### Topsoil and Stockpile Deposits: Disposal facilities

Waste material of all description inclusive of receptacles, scrap, rubble and tyres will be removed entirely from the prospecting area and disposed of at a recognised landfill facility. It will not be permitted to be buried or burned on the site.

#### On-going seepage, control of rain water

No monitoring of ground or surface water will take place, except if so requested by the DWS.

#### Long term stability and safety

It will be the objective of the management to ensure the long term stability of all rehabilitated areas including the backfilled depressions. Cleaning of all drill bits material concurrently and replacing of topsoil where available.

This will be done by the monitoring of all areas until a closure certificate has been issued

#### Submission of information

Reports on rehabilitation and monitoring will be submitted annually to the Department of Mineral Resources — Kimberley, as described in Regulation 55.

#### Maintenance (Aftercare)

Maintenance after closure will mainly concern the regular inspection and monitoring and/or completion of the ground levelling and landscaping program and monitoring of the drainage pattern.

The aim of this Environmental Management Plan is to ensure that the all excessive prospecting material is effectively removed to ensure that the farm is available for commercial use after the completion of the prospecting program

The aim with the closure of the operation will be to create an acceptable post-prospective environment and land-use. Therefore all agreed commitments will be implemented by the Company Management.

#### After-effects following closure:

##### Acid mine drainage

No potential for bad quality leachate or acid mine drainage development exist after prospecting operation closure.

##### Long term impact on ground water

No after effect on the groundwater yield or quality is expected.

- (d) **Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives.**  
The ultimate rehabilitation of the prospecting site involves the sloping, levelling and landscaping of the operation area for future commercial use. There should therefore not be any vegetation on the property after the operation
- (e) **Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline.**

**R48729.41**

| No   | Description  | Unit           | A        | B           | C                     | D                | E=A*B*C*D    |
|------|--|----------------|----------|-------------|-----------------------|------------------|--------------|
|      |  |                | Quantity | Master Rate | Multiplication factor | Weighting factor | Amount Rands |
| 1    | Dismantling of processing plant and structures   | m <sup>3</sup> | 450      | 15.94       | 1                     | 1                | 7173.00      |
| 2(A) | Demolition of steel buildings and structures   | m <sup>2</sup> | 0        | 221.99      | 1                     | 1                |              |
| 2(B) | Demolition of reinforced concrete buildings and structures                                 | m <sup>2</sup> | 0        | 327.14      | 1                     | 1                |              |
| 3    | Rehabilitation of access roads<br>m <sup>2</sup> remain for future use                     | m <sup>2</sup> | 0        | 39.72       | 1                     | 1                |              |
| 4(A) | Demolition and rehabilitation of electrical railway lines                                  | m              | 0        | 385.55      | 1                     | 1                | 0            |
| 4(B) | Demolition and rehabilitation of non-electrical railway lines                              | m              | 0        | 210.30      | 1                     | 1                | 0            |
| 5    | Demolition of housing and/or administration facilities                                     | m <sup>2</sup> | 50       | 443.97      | 1                     | 1                | 22198.50     |
| 6    | Opencast rehabilitation including final voids and ramps                                    | ha             | 0.014    | 225957.57   | 1                     | 1                | 3163.41      |
| 7    | Sealing of shafts and inclines   | m <sup>3</sup> | 0        | 119.17      | 1                     | 1                | 0            |
| 8(A) | Rehabilitation of overburden and spoils  | ha             | 0.005    | 155155.97   | 1                     | 1                | 1129.79      |
| 8(B) | Rehabilitation of processing waste deposits and evaporation ponds(non-polluting potential) | ha             | 0.010    | 193243.96   | 1                     | 1                | 1932.43      |
| 8(C) | Rehabilitation of processing waste deposits and  | ha             | 0.00 ha  | 561272.05   | 1                     | 1                | 0            |

|       |  |      |          |             |                   |   |           |
|-------|--|------|----------|-------------|-------------------|---|-----------|
|       | evaporation ponds(polluting potential)     |      |          |             |                   |   |           |
| 9     | Rehabilitation of subsided areas           | ha   | 0.0004   | 1129919.76  | 1                 | 1 | 451.97    |
| 10    | General surface rehabilitation             | ha   | 0.002346 | 122909.70   | 1                 | 1 | 287.61    |
| 11    | River diversions                           | ha   | 0        | 122909.70   | 1                 | 1 | 0         |
| 12    | Fencing                                    | m    | 0        | 140.20      | 1                 | 1 | 0         |
| 13    | Water management                           | ha   | 0.05     | 46733.73    | 1                 | 1 | 2336.69   |
| 14    | 2 to 3 years of maintenance and after care | ha   | 0.11     | 16356.80    | 1                 | 1 | 1900.00   |
| 15(A) | Specialist study                           | sum  |          |             |                   |   |           |
| 15(B) | Specialist study                           | sum  |          |             |                   |   | 0         |
|       |  |      |          |             | Subtotal          |   | 40,573.40 |
|       | Preliminary and General                    |      |          |             | Weighing factor 2 |   |           |
|       |  |      |          |             | 1                 |   |           |
|       | Contingencies                              | 1800 |          | Subtotal    | 42,373.40         |   |           |
|       |  |      |          | VAT(15%)    | 6,356.01          |   |           |
|       |  |      |          | Grand Total | <b>48,729.41</b>  |   |           |

**(f) Confirm that the financial provision will be provided as determined.**  
Confirmed by Director Mr Shane Mathebula

**Mechanisms for monitoring compliance with and performance assessment against the environmental management programme and reporting thereon, including**

- g) Monitoring of Impact Management Actions
- h) Monitoring and reporting frequency
- i) Responsible persons
- j) Time period for implementing impact management actions
- k) Mechanism for monitoring compliance

| <b>SOURCE ACTIVITY</b>           | <b>IMPACTS REQUIRING MONITORING PROGRAMMES</b>                              | <b>FUNCTIONAL REQUIREMENTS FOR MONITORING</b>  | <b>ROLES AND RESPONSIBILITIES<br/>(FOR THE EXECUTION OF THE MONITORING PROGRAMMES)</b>                     | <b>MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS</b> |
|----------------------------------|---|--|--|---|
| Trenching/Drilling               | Soil pollution<br>Noise disturbance<br>Air quality loss<br>Waste management | Visible spills on ground<br>Monitoring of noise levels<br>Monitoring of dust fall<br>Monitoring waste management | Environmental Manager<br>Noise monitoring specialist<br>Air monitoring specialist<br>Environmental Manager | Continuous<br>6 monthly<br>6 monthly<br>6 monthly   |
| Topsoil Stockpile/<br>Overburden | Soil pollution<br>Noise disturbance<br>Air quality loss<br>Waste management | Visible spills on ground<br>Monitoring of noise levels<br>Monitoring of dust fall<br>Monitoring waste management | Environmental Manager<br>Noise monitoring specialist<br>Air monitoring specialist<br>Environmental Manager | Continuous<br>6 monthly<br>6 monthly<br>6 monthly   |
| Site Office/ Store               | Soil pollution<br>Noise disturbance<br>Air quality loss<br>Waste management | Visible spills on ground<br>Monitoring of noise levels<br>Monitoring of dust fall<br>Monitoring waste management | Environmental Manager<br>Noise monitoring specialist<br>Air monitoring specialist<br>Environmental Manager | Continuous<br>6 monthly<br>6 monthly<br>6 monthly   |
| Ablution                         | Soil pollution<br>Noise disturbance<br>Air quality loss<br>Waste management | Visible spills on ground<br>Monitoring of noise levels<br>Monitoring of dust fall<br>Monitoring waste management | Environmental Manager<br>Noise monitoring specialist<br>Air monitoring specialist<br>Environmental Manager | Continuous<br>6 monthly<br>6 monthly<br>6 monthly   |
| Prospecting and<br>access roads  | Soil pollution<br>Noise disturbance<br>Air quality loss<br>Waste management | Visible spills on ground<br>Monitoring of noise levels<br>Monitoring of dust fall<br>Monitoring waste management | Environmental Manager<br>Noise monitoring specialist<br>Air monitoring specialist<br>Environmental Manager | Continuous<br>6 monthly<br>6 monthly<br>6 monthly   |

**l) Indicate the frequency of the submission of the performance assessment/environmental audit report.**

Annual Performance Assessment and Environmental Audit will be conducted and submitted to the DMR-Kimberley-Northern Cape Office

**m) Environmental Awareness Plan**

**(1) Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work.**

- An Environmental, Health and Safety induction programme will be provided to all employees prior to commencing work, and they will sign acknowledgement of the induction
- A daily “toolbox talk” will be held prior to commencing work, which will include discussions on health, safety and environmental considerations. The toolbox talks should be led by the Site Manager.
- Implement a mandatory code of Practise and Safe Operating Procedures

**ENVIROMENTAL AWARENESS TRAINING  
PROGRAMME PROCEDURES**

Natural resource is limited and not always renewable and it is the responsibility of management to ensure that all employees are trained to understand that impact of their tasks on the environment and to reduce them wherever possible.

Environmental awareness training must be given to new employees on the site and any contractors who may come onto the site for a short period of time. Refresher training must be given to permanent employees on an annual basis.

The objective of this procedure is to ensure that all employees on the, including contractors, are competent to perform their duties, thereby eliminating negative impacts on their safety, health and the environment

The Environmental topics to be covered in awareness training should include the following:

• **RESOURCE MANAGEMENT**

- (i) The importance of saving water
- (ii) South Africa is a water scarce country and rivers are polluted
- (iii) Do not throw litter into river or water drains
- (iv) Do not dispose of oils in sewers
- (b) Air pollution- Climate changes**
  - (i) The use of fossil fuels is increasing the amount of greenhouse gases that are discharge to the atmosphere. Share transport or use public transport
  - (ii) Don't burn any rubbish, the smoke pollution the air
  - (iii) Plant trees, they clean the air, provide us with oxygen and removed the greenhouse gas carbon dioxide from the air
- (c) Soil conservation**
  - (i) Prevent over grazing of farmlands, keep vegetation on surface on the land to prevent soil erosion
  - (ii) Plant trees

• **HAZARDOUS SUBSTANCE USE AND STORAGE**

- a. Solvents, petrol, diesel, insecticides, chlorine, detergents, chemical fertilisers and harmful to the environment and to your health. Use them sparingly and do not let them get into the water system. Containers must be disposed of to a licensed hazardous waste disposal facility.
- b. Hazardous substances must be stored and used correctly
- c. Ensure that 16 points Material Substances Safety Data Sheets (MSDS) are available at point of store
- d. Compressed gas storage requirement
- e. Flammable substances store requirement

- **INCIDENT AND EMERGENCY REPORTING**

- a. The company must have an emergency/ incident reporting system whereby environmental incidents can be reported and actioned to mitigate and follow up on

- **OIL/DIESEL/PETROL SPILL CLEAN UP**

- a. All employees who work with machines and vehicles must be instructed how to prevent and clean up an oil or diesel spill appropriately. Spill kits must be available on sitedrip trays must be used when servicing vehicles

- **CONSERVATION OF WATER**

- a. Campaign to save water on site
- b. Clean water is expensive and potable water must be used carefully
- c. Prevent pollution of water by preventing spills and dispose of wastes properly

- **CONSERVATION OF VEGETATION**

Plants, grasses and trees are very important to our existence on the earth, they provide food, fuel, shelter, raw materials and they clean the air. Indigenous plants are especially important for multi and the whole ecology of life. Human activities are destroying the natural forests of the earth. The natural forests are the "lungs" of the planet and unfortunately they are being cleared faster than they can be regenerated

- a. EIA's are to be done before virgin bush can be cleared
- b. Vegetation cover reduces water and topsoil loss from the ground, do not clear vegetation unnecessarily
- c. Indigenous trees provide shade that attract wild birds
- d. Do not chop down indigenous trees without good reason
- e. Implement a tree planting programme
- f. Remove alien invasion trees in your area such as Prosopis, Syringa and Pepper trees, Cactus plants.

## **WASTE MANAGEMENT**

Employees must be instructed on how to tell the difference between hazardous waste and general waste.

### **(2) Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment.**

*Air Quality:*

Control the incidence of unacceptable dust pollution on site.

*Surface water:*

Conserve water and eliminate the contamination of run-off and sources of surface water.

*Ground water:*

Minimise and prevent as far as practically possible the contamination of ground water.

*Noise:*

Control the incidence of unacceptable noise levels on site.

*Aesthetics:*

Minimise aesthetics disturbance; and

Reduce the visual impact of the prospecting operation through continuous rehabilitation.

*Soils:*

Prevent soil pollution.

Limit soil compaction.

Curb soil erosion.

Reinstate a growth medium able to sustain plant life.

*Sensitive landscapes:*

Protect sensitive landscapes from potential negative impacts.

*Waste Management:*

Demarcated sites for waste.

**n) Specific information required by the Competent Authority**

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

Quarterly reports on fall-out and nuisance dust and noise monitoring will be conducted and incorporated into the annual reports forwarded to the Principle Inspector of Mine Health and Safety, Kimberley.

Fauna will be monitored annually for the Performance Assessment Report.

Annual performance Assessment and financial quantum reports will be conducted.

**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.



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Signature of the environmental assessment practitioner:

**BNL NNAke Trading (PTY) LTD**

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Name of company:

28 March 2019

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Date:

**-END-**



**REFERENCES:**

**South Africa. 2004. National Environmental Management: Biodiversity Act No. 10 of 2004. Pretoria: Government Printer.**

**ACOCKS, JPH 1998. Veld types of South Africa. 3rd Edition**

**Hutton Series: Established Series WDH/HBM/MEJ/GHL 05/2001**

**National Groundwater Quality Monitoring Programme- Department of Water and Sanitation**

**WORLDWEATHERONLINE.COM**

**Mine Health and Safety Act (Act 29) of 1996 (As Amended)**

**National Environmental Management Act, 1998(Act 107 of1998) (As Amended)**