mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

SCOPING REPORT

FOR LISTED ACTIVITIES ASSOCIATED WITH MINING RIGHT AND/ OR BULK SAMPLING ACTIVITIES INCLUDING TRENCHING IN CASES OF ALLUVIAL DIAMOND PROSPECTING

SUBMITTED FOR ENVIRONMENTAL AUTHORISATIONS 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 AMMENDED)

NAME OF APPLICANT: TAU INDUSTRIES PTY (LTD)

FILE REFEFERENCE NUMBER SAMRANWD: **GP 30/5/1/1/3/2/1 (10498) EM**

APPLICANT DETAILS

Project applicant:	**TAU INDUSTRIES PTY (LTD)**
Registration no (if any):	N/A
Trading name (if any):	N/A
Responsible Person, (e.g. Director, CEO, etc).:	Director
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1. OBJECTIVE OF THE SCOPING REPORT PROCESS

The objective of the scoping report is to, through a consultative process-

a) Identify the relevant policies and legislation relevant to the activity
b) Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location
c) Identify and confirm preferred activity and technology alternative through an impact and risk assessment and ranking process;
d) Identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic and cultural aspects of the environment
e) Identify the key issues to be addressed in the assessment phase
f) Agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and
g) Identify suitable measures to avoid, mange, or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

2. CONTACT PERSON AND CORRESPONDENCE ADRESS.

a) Details of:

i. The EAP who prepared the report

Table 1: EAP details

Name of the Practitioner	Lufuno Mutshathama(Mugovhani)
Postal address:	P O Box 4147, Honeydew,2040
Physical address	09 Loerie road, Randpark ridge, Randburg, Johannesburg
Telephone:	011 791 5032
E-mail:	Joanprojects@gmail.com
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ii. Expertise of the EAP

The EAP holds a Bachelor of Environmental Science (graduated in May 2008) from the University of Venda (See Appendix 1). The EAP is also registered with SACNASP (Reg: 114437)

The summery of the EAP's past experience and projects undertaken is attached as appendix 2.

b) Description of the location of the activity.

The project site is located within the West Rand District Municipality (Mogale City Local Municipality) in the Gauteng Province. The site lies approximately 6 km's West of Magaliesburg and 30km North West of Krugersdorp. Rustenburg is located approximately 44km North West of the project area.

Table 2: Activity Location

21-digit Surveyor General code	T0IQ0000000000450011 T0IQ0000000000450022
Farm Name:	Koesterfontein
Application area (Ha)	75.2177 ha
Magisterial district:	Krugersdorp
Distance and direction from nearest town	Approximately 6 km's West of Magaliesburg, 30 km North West of Krugersdorp and 44km south east of Rustenburg.
Locality map	**See appendix 3**
Description of the overall activity. (Indicate Mining Right, Mining Permit, Prospecting right, Bulk Sampling, Production Right, Exploration Right, Reconnaissance permit, Technical co-operation permit, Additional listed activity)	The application is being lodged for the prospecting (including all prospecting activities) rights, for gold with bulk sampling. This will involve drilling and bulk sampling simultaneously. The development will primarily include 4 borehole sites of approximately 100m^2 each, each comprising of a borehole, drill rig and a sump. Core will be taken from each borehole to test the targets identified through mapping and geophysical and geochemical surveys. Six (6) bulk sampling pits (trenches) of 70mX200mX10.5m dimension will also be dug to obtain larger samples of the area (and any minerals if contained in the samples)

c) Locality map

The locality map is attached as **Appendix 3.**

d) Description of the scope of the proposed overall activity.

i) Listed and specified activities

Table 3: Activities To Be Undertaken

NAME OF ACTIVITY (**E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc**	**Aerial extent of the Activity Ha or m²**	**LISTED ACTIVITY** (Mark with an **X** where applicable or affected).	**APPLICABLE LISTING NOTICE** (***GNR 544, GNR 545 or GNR 546)***	**WASTE MANAGEMENT AUTHORISATION** (Indicate whether an authorisation is required in terms of the Waste Management Act). **(Mark with an X)**
Access route	(Existing) No new access road will be constructed			N/A
Bulk sampling pits	200x70x10.5m (x6 pits)	X	item 19 under the listing notice R984	N/A
Site Camp(admin)	1000m^2			N/A
Equipment storage	100m^2			N/A
Topsoil storage/stockpile	40 m^2			N/A
Drill sites	400 m^2 (4 borehole sites of 100 m^2 each)	X	Item 20 of listing notice R983	N/A
Plant (gravity processing plant)	1000 m^2			N/A
waste rock dump	1000m2			N/A
Tailings dump	1000m2			N/A

ii) Description of the activities to be undertaken

Prospecting activities will be carried out to assess the potential and feasibility of mining Gold in the area. The primary activities that will be carried out as part of the prospecting include:

- Site preparation
- Drilling, Excavation and logging
- Decommissioning and Rehabilitation

Site preparation:

Field mapping will be carried out to fine-tune location of the pits and boreholes. The areas surrounding the planned pit and borehole positions will be mapped in the field to monitor the geology recorded by previous work. The positions will be adjusted as required.

A truck mounted drill rig will be placed on site for the drilling of core boreholes. Low volumes of diesel are used to run the drill unit; therefore, diesel drums will also be placed on site in fuel and oil storage bays alongside the units. Small sumps will be excavated and lined with plastic. These sumps are used to recycle water used during the drilling process.

Site preparation will also include the clearing of the site of any vegetation present where the sumps will be located and drilling will be carried out, as well as the area that will be designated as a parking bay. Topsoil will be removed where necessary, and stockpiled. Water carts will be used for providing water for drilling purposes.

Mobile offices and ablution facilities will be placed on site. Lockable and bunded facilities for hazardous substances and bunded areas for small scale maintenance will also be provided.

An existing access road will be utilised to access the project site.

Drilling, Excavation and logging

Once borehole and suitable pit positions have been demarcated, 4 boreholes will be drilled at each drilling site. Each borehole site will have the lined sump which will be rehabilitated (together with the borehole site)

at the completion of the borehole drilling process. Six sampling pits (approximately 70mX200mX10.5m in dimensions) will be excavated with the use of a back actor or any other excavator machine. Top soil will be removed from the drilling, pits and sump locations and stockpiled on the side prior to the drilling and excavating. The drilled boreholes will be closed with a steel casing to suitable depth and a concrete cap will be placed on top. The drilling and sampling pit areas will be fenced off with barricade tape that will serve as access control during operation.

The core and pits results will be logged to evaluate the potential for potential deposits of gold. Drilling and bulk sampling will be conducted simultaneously. Core material will be taken to the Laboratory for analysis.

Determination of contents of gold will be achieved using bulk sampling techniques. Processing of gold discovered will be undertaken through gravity processing to avoid using chemicals that will contaminate the environment. The tailings will be dumped on a temporal tailings dam. Any gold that may be recovered will be sold.

Decommissioning and Rehabilitation

Upon completion of the excavation and logging process, the excavation equipment will be removed from site. All campsite facilities will also be removed from site. The pits will be backfilled by the tailings and waste rock that will be on site. Topsoil that will be removed from excavated and drill sites will be replaced, and all disturbed areas (including roads) will be ripped and allowed to return to the natural state. The denuded area will be re-vegetated.

e) Policy And Legislative Context

Table 4:Applicable Legislation

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFFERENCE WHERE APPLIED
Constitution of the Republic of South Africa	The Bill of Rights, in the Constitution of South Africa (No. 108 of 1996), states that everyone has a right to a non-threatening environment and requires that reasonable measures are applied to protect the environment. This protection encompasses preventing pollution and promoting conservation and environmentally sustainable development. These principles are embraced in NEMA and given further expression. The development will ensure that as little damage as possible will be left on the surrounding environment and local community. This report is drafted to ensure compliance to this piece of legislation.
National Environmental Management Act, 1998	National Environmental Management Act (Act No 107, 1998) requires that measures are taken to prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development In addition, it makes provision:

	- That the disturbance of the environment (biological and physical) is avoided, or where they cannot be altogether avoided, are minimized and remedied: - That a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and - Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure. NEMA also requires that environmental authorisation is obtained for any development/ activity prior to its commencement. The Act also requires that all environmental impacts (including social impacts) due as a result of the development and/or its activities are assessed and where possible, minimised or mitigated. The following are the references where the NEMA has been applied (as per section 24 of NEMA): • Environmental Authorisation application • Public participation • Scoping report • EIR

National Environmental Management Act EIA Regulations 2014	• Section 24 of NEMA provides for the activities that require specific environmental authorisation. Activity 19 from the Listing Notice 2 of the NEMA regulations was triggered by the proposed development, prompting the EIA. Environmental Authorisation application, Public participation, Scoping report and this EIR are the application of this regulation.
Mineral and Petroleum Resources Development Act, 2002 as amended	The MPRDA regulates all mining related activities and requires that authorisation, permits and rights are obtained prior to the removal of any minerals or the commencement of any mining related activities. The prospecting activities including trenching for diamonds therefore prompts the application of a prospecting right prior to the commencement of prospecting activities. The following are the references where the MPRDA been applied: • Application for a prospecting right to carry out prospecting activities (including bulk sampling) as per section 20 of the MPRDA as amended.
Mineral Petroleum Development Resources Regulations	The MPRDA regulations provide guidance on the processes and procedures of obtaining the prospecting rights being applied. The prospecting right is therefore made in accordance with the MPRDA regulations.
National Heritage Resources Act (Act 25 of 1999)	The National Heritage Resources Act seeks to

	-Introduce an integrated and interactive system for the management of the national heritage resources; -To promote good government at all levels, and empower civil society to nurture and conserve their heritage resources so that they may be bequeathed to future generations; -To lay down general principles for governing heritage resources management throughout the Republic; -To introduce an integrated system for the identification, assessment and management of the heritage resources of South Africa; -To establish the South African Heritage Resources Agency together with its Council to co-ordinate and promote the management of heritage resources at national level; -To set norms and maintain essential national standards for the management of heritage resources in the Republic and to protect heritage resources of national significance; -To control the export of nationally significant heritage objects and the import into the Republic of cultural property illegally exported from foreign countries; -To enable the provinces to establish heritage authorities which must adopt powers to protect and manage certain categories of heritage resources; -To provide for the protection and management of conservation-worthy places and areas by local authorities; and

	-To provide for matters connected therewith Should any heritage resources be found on site, it will be ensured that such resources are not destroyed, tempered with or removed from site and that all activities are carried out within reasonable distance from the resources.
National Environmental Management: Biodiversity Act	The National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA) provides for listing threatened or protected ecosystems, in one of four categories: critically endangered (CR), endangered (EN), vulnerable (VU) or protected. The Draft National List of Threatened Ecosystems (Notice 1477 of 2009, Government Gazette No 32689, 6 November 2009) has been gazetted for public comment. The list of threatened terrestrial ecosystems supersedes the information regarding terrestrial ecosystem status in the NSBA 2004. In terms of the EIA regulations, a basic assessment report is required for the transformation or removal of indigenous vegetation in a critically endangered or endangered ecosystem regardless of the extent of transformation that will occur. The Act also provides for listing of species as threatened or protected, under one of the following categories:

	• **Critically Endangered:** any indigenous species facing an extremely high risk of extinction in the wild in the immediate future. • **Endangered:** any indigenous species facing a high risk of extinction in the wild in the near future, although it is not a critically endangered species. • **Vulnerable:** any indigenous species facing an extremely high risk of extinction in the wild in the medium-term future; although it is not a critically endangered species or an endangered species. • **Protected species:** any species which is of such high conservation value or national importance that it requires national protection. Species listed in this category include, among others, species listed in terms of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

f) Need and desirability of the proposed activities

Although mining's contribution to South Africa's GDP has declined over the past 10-20 years, it remains one of the country's critical economic cornerstones and contributes to its economic activity, job creation and foreign exchange earnings. The sector is therefore critical to the country's socio-economic status.

Significant underlying gold reserves were identified around the preferred location, this owing to the specific underlying geology of the area. It is however essential that prospecting activities are carried out to assess whether or not the reserves can be feasibly mined. Should it be found (through the prospecting activities) that these reserves can be feasibly mined, the associated mining activities will contribute to the above-mentioned benefits. The Mogale City Local Municipality has a total population of about 362,422, of which 24.6 % are unemployed and 32.3% of the youth are unemployed. The development could assist in providing the very much needed jobs preferentially to members of the local community, to help minimise this unemployment rate, especially amongst the youth, and in the long run contribute to the GDP and foreign exchange earnings through export.

The proposed project will therefore to a certain degree help improve the local and national socio-economic status within the country.

g) Period for which the environmental authorisation is required.

The authorisation is required for a period of 5 years

h) Description of the process followed to reach the preferred site

The site was chosen based on the underlying geology of the area. The geology in these areas is widely varied, showing the upper Pretoria Group, Rustenburg Layered Suite and Pilanesberg Complex and ages from the Vaalian to the Namaquan systems. Hornfels, slate and shale are the primary rock types that characterise the Silverton Formation. Lenses of quartz-biotite phyllite and magnetite-rich biotite quartz hornfels are distinctive of the Silverton Formation in the Mabeskraal and Mabaalstad areas. Epidote-zoisite, cordierite, pyroxene, sillimanite, andalusite, biotite-quartz hornfelses, as well as garnet-biotite hornfels within the Silverton Formation, are an indication of varying metamorphic conditions. The mineral assemblages of these hornfelses suggest low to higher temperatures. In contrast to the generalisation of low-grade metamorphism of the Pretoria Group, the hornfelses in the area indicate albite-epidote, hornblende and pyroxene hornfels and, rarely, amphibolite facies. Hornblende hornfels and cordierite hornfels are exclusive to the Mabeskraal and Mabaalstad areas respectively. Epidote-zoisite hornfels and biotite-quartz hornfels are common in both areas. The spatial distribution of these hornfelses is an indication of the heat variations during the intrusion of the Rustenburg Layered Suite. The top five formations of the Pretoria Group are absent in the area. The immediate floor rocks to the Rustenburg Layered Suite are the Magaliesberg Formation quartzite, confirming that the basic pluton intruded along a major unconformity. Coarse-grained trough-cross lamination, crack-like microbial mat-related features, halite casts, current and wave ripple marks, as well Fe-oxide mottles, are surface features observed in this area that characterise the Magaliesberg Formation quartzite.

I. Details of alternatives considered

Due to the fact that the site was selected based on the underlying geology and therefore location of reserves, no other alternative sites were considered.

II. Details of public participation process followed

The table below shows the process of consultation that has been undertaken by the applicant.

Table 5: Public Participation Process Followed

Interested and affected parties consulted	Manner of consultation	Status	Record appended?
Land owners affected by proposed activities (Land Affairs)	Letter	Completed	yes
Land Occupiers	N/A	N/A	N/A
Municipality	Same as Landowner	Completed	yes
General public	Site notices and Newspaper advert	Completed	yes

III. Summery Issues raised by interested and affected parties. (table 1)

Table 6: Comments By Interested And Affected Parties

Interested and affected parties	Date comments were raised	Issues raised	Response to the issue
Land owners	None to date	None to date	N/A
Lawful occupiers	N/A	N/A	N/A
Landowners & lawful occupiers of adjacent land and interested Parties ***(Note: all other I&AP have requested to be registered as such, and receive the Scoping and EIA reports for commentary. Such commentary will be incorporated once received.)***	27 January 2017	1.The Magaliesburg area is declared a Biosphere by UNESCO! Magaliesburg is designated for agricultural purposes.	1.Kindly note that this is not an application for a mining right but an application for prospecting right which is way less invasive than the mining right. I have attached a prospecting Works Programme to give you more information
Municipality	Same as landowner	Same as landowner	None to date

Community and community leaders	N/A	N/A	N/A
Relevant state departments	None to date	None to date	None to date

Record of consultation is attached as **Appendix 5**

IV. Environmental attributes associated with the sites

1. Baseline Environment

a. Type of environment affected by the proposed activity

Climate

No climate data was available for the study area. Climate data for Magaliesburg (located approximately 6km North-East of the project site) was obtained.

The climate around the project area is mild, and generally warm and temperate. The summers receive more rainfall than the winters in Magaliesburg. The average annual temperature is 16.8 °C. Precipitation is the lowest in July, with an average of 6 mm. The greatest amount of precipitation occurs in January, with an average of 131 mm. About 675 mm of precipitation falls annually.

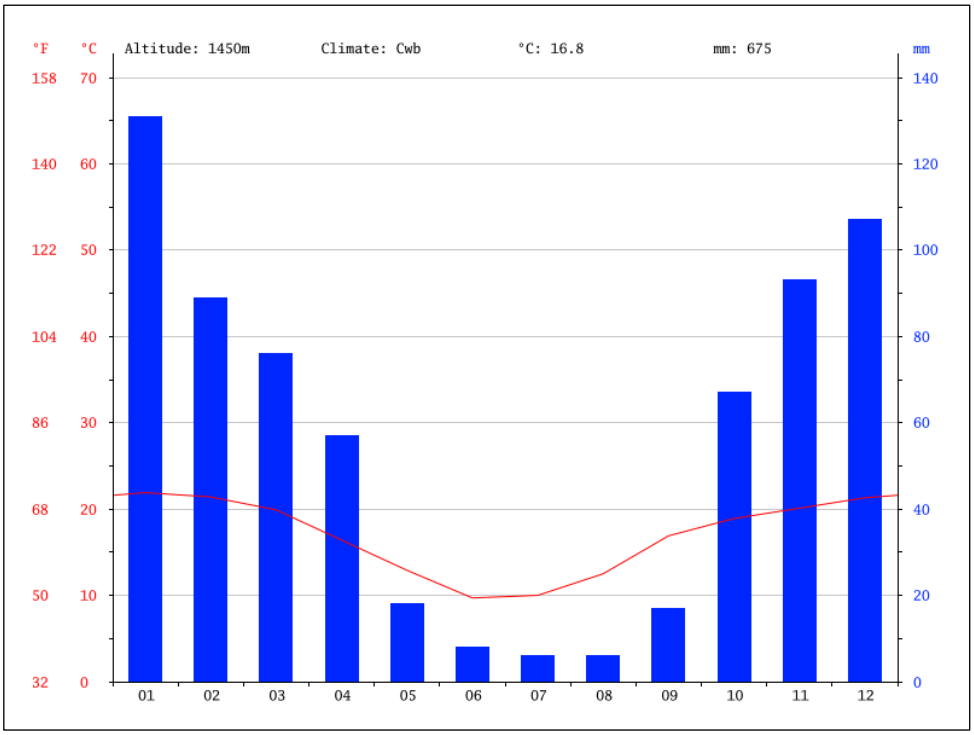


Figure 1:Magalesburg climate graph

Source: http://www.worldweatheronline.com/ventersdorp-weather-averages/north-west/za.aspx

At an average temperature of 21.9 °C, January is the hottest month of the year. The lowest average temperatures in the year occur in June, when it is around 9.7 °C

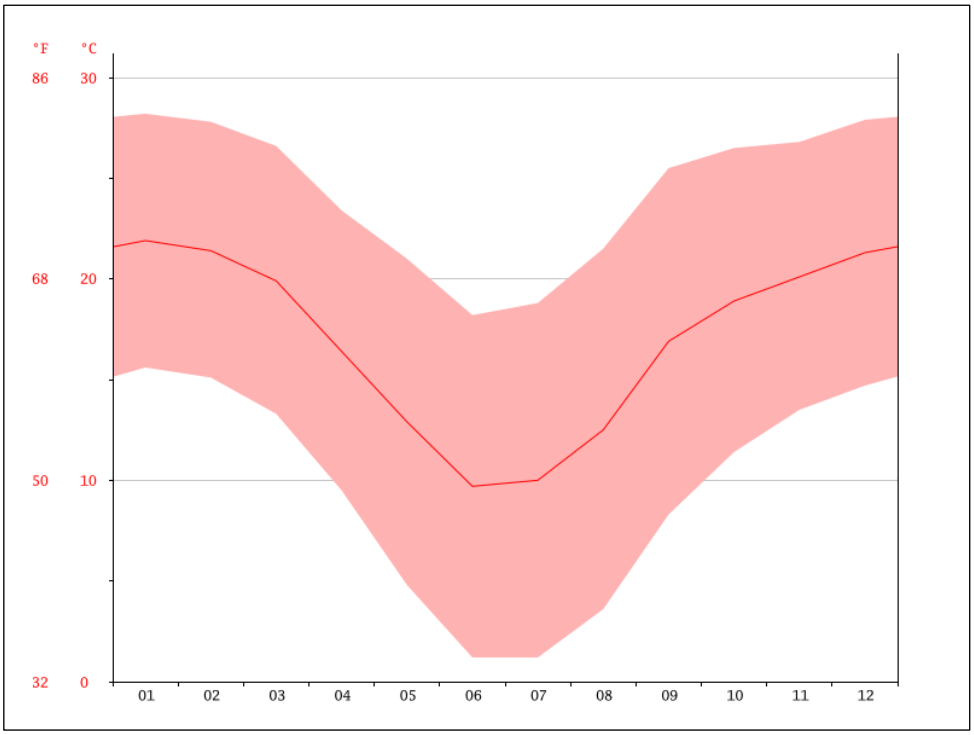


Figure 2: Magaliesburg temperature graph

Source: http://www.worldweatheronline.com/ventersdorp-weather-averages/north-west/za.aspx

Biodiversity

Approximately 55% of the area is dominated by the Rocky Highveld Grassland with the Mixed Bushveld comprising 17 %. 1, 2% of plants occurring in that area are endemic of which can be considered to be a high proportion. A total of 6 species are Near Threatened, with 4 being Endangered, 4 Rare and 1 being Vulnerable. 10 % of the natural vegetation has been converted into urban areas. While much of the Mixed Bushveld Veld Type (35.3%) of the natural vegetation characteristic has been conserved, (86.5%) of the Rocky Highveld Grassland vegetation remains unprotected (Mogale local municipality, IDP; 2002-2006).

According to information and data obtained from SANBI, the area under application however, contains no threatened, vulnerable or endangered species, and is not a protected or ecological support or critical biodiversity area (See Annexure 6).

Vegetation

The area is also comprised of the Moot Plain Bushveld as well as the Gold Reef Mountain Bushveld. The Moot Plains Bushveld consists mainly of thorny Savanna containing various Acacia species (Thorn trees) (Figure 6) on the plains, as well as in the woodlands. The Gold Reef Mountain Bushveld consists mainly of dense woody vegetation with distinct floristic differences. There is a predominance of Acacia caffra (Common Hook-thorn) (Figure 7) and other trees (Mucina and Rutherford, 2006)

Fauna

The Magaliesberg area is home to a number of breeding pairs of Cape Vultures (Gyps coprotheres) that form part of three separate colonies, namely Skeerpoort, Robert's Farm and Nooitgedacht. These Cape Vultures are a southern African near-endemic species, listed as vulnerable. Monitoring of vultures at these colonies has been on-going for over 50 years. However, the monitoring has not been continuous and was not always according to a standard monitoring protocol (Rhino and Lion Wildlife Conservation Non-profit Organization).

Land use

The study area is used for agricultural purposes and currently have commercial crops.

Mammals

The project area covers a relatively small area; therefore, a high diversity of mammal species is not expected. Furthermore, animal life in the area is limited to small animals, potentially as a result of anthropogenic disturbance and the low floral diversity. The mammal community consists primarily of pioneer species, such as rodents (e.g. the genus Mastomys) bats, squirrels, lizards and a few snake species, and other species that are widespread and common to most vegetation types.

Surface water

The project area falls within the Crocodile and Marico West Water Management Area. There is no river passing through the proposed mining area. Bloubank river flows approximately 450m from the project site.

Air Quality

Currently there is no measured air quality data for the vicinity of the proposed mining operations. Most of the monitoring facilities are located in the urban areas (i.e. Rustenburg) and/or on the larger platinum mines such as Impala, Lonmin and Anglo Platinum (See Figure 3). Air quality information form these nearby mines was obtained from a report by Golder Associates (2012). Data recorded at the platinum mines show infrequent exceedances of the national standard of 48 ppb for the daily SO2 concentration, several exceedances of the current national daily standard of 120 µg/m3 for PM10 and numerous exceedances of the 2015 national daily standard of 75 µg/m3. These mines are located approximately 30km to 60km North of the proposed mining operations and, although airborne pollutants can travel long distances, their concentrations diminish with distance from the emission source.

Potential air quality pollution sources of local significance include:

- Fugitive emissions from mining operations such as clearing operations (scraping, dozing and excavating), materials handling operations (tipping, off-loading, loading), vehicle entrainment of dust from haul roads, wind erosion from open areas, drilling and blasting. These results mainly in fugitive dust releases
- Vehicle tailpipe emissions. These include CO2, CO, SO2, NOx and hydrocarbon gases as well as particulate material and lead.
- Household fuel combustion (particularly coal and wood used by smaller communities/settlements).

- Biomass burning (veld fires in agricultural areas within the region).
- Various miscellaneous fugitive dust sources (agricultural activities, wind erosion of open areas, vehicle entrainment of dust along paved and unpaved roads).

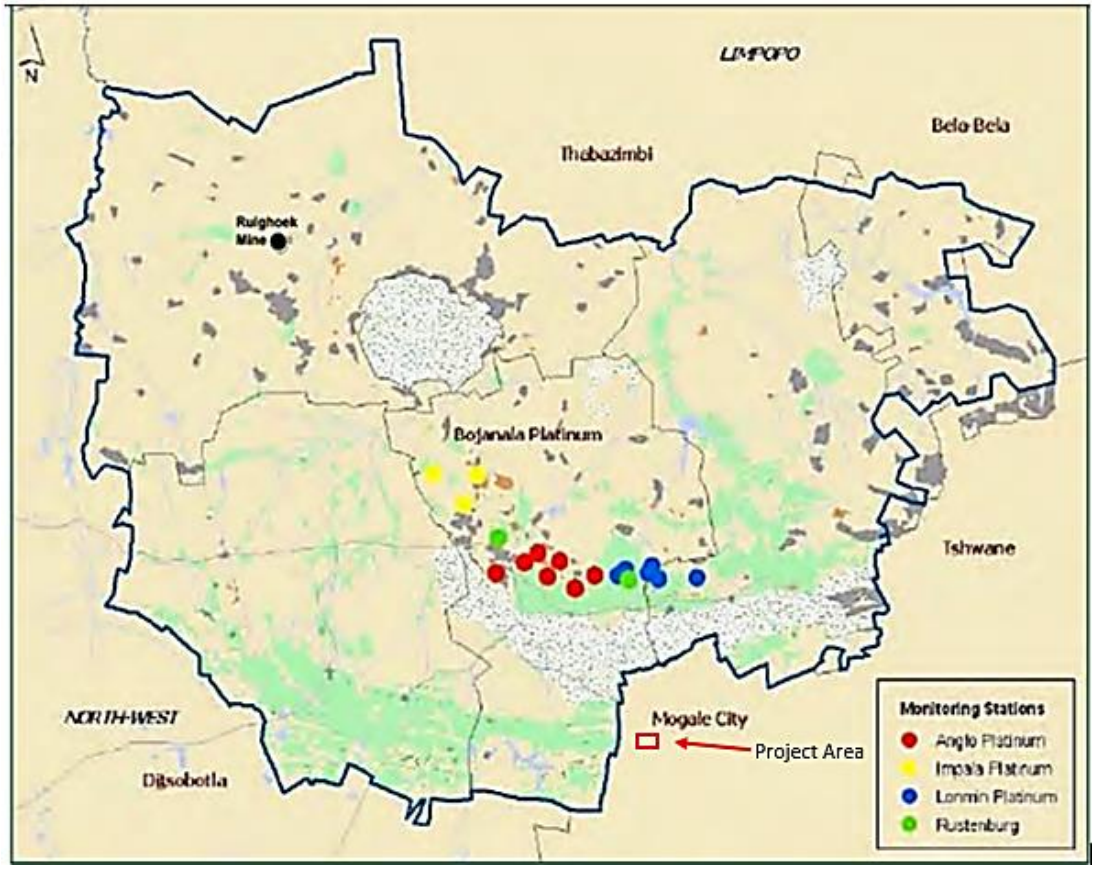


Figure 3: Mining Operations Near The Project Site

Topography

The topography is flat, area is characterized by an uneven terrain with its lowest point situated 1220 m above sea level to the north-east of the Magalies plain and the highest point (1840 m) on a mountain range along its northern borders.

V. Methodology used in determining the significance, of environmental impacts.

The generic criteria and systematic approach used to identify, describe and assess impacts as outlined in this report is stated under

this section. In order to determine the significance of an activity each activity was rated.

METHODOLOGY FOR THE ASSESSMENT OF IMPACTS

The assessment of impacts adheres to the minimum requirements in the EIA Regulations, 2014 and takes into account the applicable official guidelines.

Below is a detailed methodology of how all direct, indirect and cumulative impacts associated with all the phases of the project where assessed. The Direct, indirect and cumulative impacts associated with the proposed operation and its alternatives on the environment and socio-economic conditions will be assessed in terms of the following criteria:

- The **nature**, which shall include a description of what causes the effect, what will be affected and how it will be affected.
- Impact Parameters

Parameter	Description
Extent	Refers to the geographical extent of the resultant impact, whether local (limited to the immediate area or site of development) or regional, and a value between 1 and 5 will be assigned as appropriate (with 1 being low and 5 being high):
Duration	Refers to the duration that the resulting impact will last, whether ➢ the lifetime of the impact will be of a very short duration (0–1 years) – assigned a score of 1; ➢ the lifetime of the impact will be of a short duration (2-5 years) - assigned a score of 2; ➢ medium-term (5–15 years) – assigned a score of 3;

	➢ long term (> 15 years) - assigned a score of 4; or permanent - assigned a score of 5
Intensity	Refers to the intensity of destruction or benign of the impact on the environment whether it destroys the impacted environment, alters its functioning, or slightly alters the environment itself. The intensity is rated as: low, medium or high.
Probability	Refers to the probability/chances of the impact to happen. Probability will be estimated on a scale of 1–5, where 1 is very improbable (probably will not happen), 2 is improbable (some possibility, but low likelihood), 3 is probable (distinct possibility), 4 is highly probable (most likely) and 5 is definite (impact will occur regardless of any prevention measures).

- Mitigation

Impacts that result from the development can be minimised if mitigation measures are correctly put in place. Mitigation measures should ensure that the development considers the environment and the predicted impacts in order to minimise impacts and achieve sustainable development.

- Mitigation Efficiency (ME): The efficiency and effectiveness of mitigation measures, is measured through mitigation efficiency, as identified through professional experience and empirical evidence of how effectively the proposed mitigation measures will manage the impact. The lower the assigned value the greater the effectiveness of the proposed mitigation measures and subsequently, the lower the impacts with mitigation.

Determination of Significance – Without Mitigation:

Significance is determined through a synthesis of impact parameters as described in the above table, and provides an indication of the importance of the impact. The significance of the impact “without

mitigation" is the key determinant of the nature and degree of mitigation required. Where the impact is positive, significance is noted as "positive".

Significance is rated on the following scale:

- **No significance**: The impact is not substantial and does not require any mitigation action.
- **Low:** The impact is of little importance, but may require limited mitigation.
- **Medium:** The impact is of importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
- **High:** The impact is of major importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

Identifying the Potential Impacts without Mitigation Measures (WOM):

Following the assignment of the necessary weights to the respective parameters, criteria are summed and multiplied by their assigned weightings, resulting in a value for each impact (prior to the implementation of mitigation measures).

Equation 1:

Significance Rating (WOM) = (Extent + Intensity + Duration + Probability) x Weighting Factor

<u>Determination of Significance – With Mitigation (Significance Following Mitigation (SFM):</u>

Determination of significance with mitigation refers to the anticipatable significance of the impact after the successful implementation of the necessary mitigation measures. The efficiency of the mitigation measure determines the significance of the impact. The level of impact is therefore seen in its entirety with all considerations taken into account. Significance with mitigation is rated on the following scale:

- **No significance:** Following the implementation of mitigation measures, the impact becomes insignificant/ insubstantial.
- **Low:** The impact will be mitigated to the point where it is of limited importance.
- **Low to medium:** After mitigation, the impact is reduced to acceptable levels.
- **Medium:** Notwithstanding the successful implementation of the mitigation measures, the negative impact remains of significance, however, in relation to the overall context of the project, the persistent impact does not constitute a fatal flaw.
- **Medium to high:** The impact is of major importance but after the implementation of the correct mitigation measures, the negative impacts are reduced to acceptable levels.
- **High:** The impact is of major importance. Mitigation of the impact is not possible on a cost-effective basis. The impact is regarded as high importance and taken within the overall context of the project, is regarded as a fatal flaw. An impact regarded as high significance, after mitigation could render the entire development option or entire project proposal unacceptable.

Identifying the Potential Impacts With Mitigation Measures (WM):

In order to gain a comprehensive understanding of the overall significance of the impact, after implementation of the mitigation measures, it is necessary to re-evaluate the impact.

Equation 2:

Significance Rating (WM) = Significance Rating (WOM) x Mitigation Efficiency

Or

WM = WOM x ME0

Below is a table of all ratings allocated to the aforementioned parameters that have been accounted for in rating all identified impacts from the development.

Extent	Duration	Intensity	Probability	Weighing Factor (WF)	Significance Rating (SR)	Mitigation Efficiency (ME)	Significance Following Mitigation (SFM)
Footprint 1	Short term 1	Low 1	Probable 1	Low 1	Low 0-19	High 0.2	Low 0-19
Site 2	Short to Medium 2		Possible 2	Low to Medium 2	Low to Medium 20-39	Medium to High 0.4	Low to medium 20-39
Regional 3	Medium term 3	Medium 3	Likely 3	Medium 3	Medium 40-59	Medium 0.6	Medium 40-59
National 4	Long term 4		Highly likely 4	Medium to High 4	Medium to High 60-79	Low to Medium 0.8	Medium to High 60-79
International 5	Permanent 5	High 5	Definite 5	High 5	High 80-100	Low 1.0	High 80-100

Based on the calculated rating, all impacts can therefore be rated to be of low, low to medium, medium, medium to high or high significance before and after mitigation.

VI. 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.

No- Go Alternative

The No-Go option, entails the continuation of the current land use (with no prospecting activity) on the study site proposed for the prospecting activities for gold. The primary positive impacts of this alternative include the retention of the current land capability and the retention of the natural habitat /ecosystem structures.

Worthy of noting however is that, the associated prospecting activities will contribute to small scale job creation, providing the very much needed jobs (given the high level of unemployment) preferentially to members of the local community, and contribute to the GDP and foreign exchange earnings through export.

Preferred Alternative (only alternative):

Positive impacts

The following are the potential positive impacts the proposed activity will have on the receiving environment and surrounding community:

- Job creation:

The proposed project will create a few general /unskilled and skilled jobs for unemployed persons, with the greatest preference given to members of the neighbouring communities. The project will also provide work and generate income for a few construction workers that will be carrying out the technical surface work. This will in turn improve the livelihoods / standards of living for members of the local communities who will be employed.

- Good environmental management.

The Environmental Authorisation together with the approved EIA/EMP report will guide the applicant in terms of managing the physical and socio-economic environment that is impacted by the mining activities. This will be possible through the implementation of the requirements and conditions of the Environmental Authorisation and the approved EIE/EMP report.

Negative impacts

The following are the potential negative impacts identified for the proposed activities.

- Altering land use and land capability.

The project area issued for farming purposes. Crops are planted on the farm for commercial purposes. The project will therefore temporarily alter the land use. Furthermore, the project activities might possibly alter the land capability as the soil structure and composition will be tempered with, and this could reduce the agricultural land capability of the farm.

- Soil pollution

Potential leakage of oil and other industrial liquids from the trucks and machineries. This is a potential risk of soil contamination, which will change the soil chemistry and soil nutrients of the affected soil. This could also potentially affect the vegetation growth in the contaminated areas.

- Dust

The use of the access dusty roads and the excavation activities will result in the emission of dust into the surrounding atmosphere. This will impact on the plants surrounding the area as it (the dust) is deposited on the leaves. This interferes with the photosynthesis process of the plants. Furthermore, animals that feed on the plants will be impacted upon as this will affect their forage.

- Noise

The machinery operations, and the movement of trucks and vehicles, all causes noise. The trenching activities noise levels may go over the immediate site. The noise levels of the trucks and excavators depend on their size and this may cause the noise to be localised in the specific site.

- Soil erosion

Soil erosion on denuded areas and topsoil stockpile is a potential negative impact. Most of the areas to be worked on are flat, but do not rule out soil erosion by runoff or wind.

- Animal life disruption

The noise, dust, movement and operation of trucks and other vehicles, the potential loitering of the employees and the trenching itself will disrupt the life of the animals around. This disruption can further lead to injury or death in cases where animals fall into the trenches.

- Removal of vegetation

While all means will be applied to minimise disturbance, removal of vegetation cannot be avoided altogether. Vegetation will be removed in areas where pitting will be done. This removal of vegetation will leave the ground bare and prone to erosion.

- Habitat destruction

The grassland with its shrubs, small trees and burrows are habitat to and form part of an ecosystem that supports some of the small animals that inhabit the area. This habitat within the project site will be disturbed and destructed by the movement and operations during the prospecting activities. This could possibly cause the relocation of some of the animals, and also result in habitat fragmentation.

- Waste generation

Solid waste such as debris (slimes), waste rock and litter will be generated and deposited in and around the site. This could potentially attract nuisance and affect the natural scenery of the site. The slimes and waste rock will be used to backfill the trenches. This will be undertaken in a concurrent rehabilitation manner.

- Surface and ground water impacts

The generation of waste may lead to surface water contamination and Hazardous chemical spills may reach groundwater, thereby impacting its quality.

- Acid Mine drainage and groundwater pollution.

Acid mine drainage results when water/runoff percolates through sulphur-bearing materials forming solutions of net acidity. This will be the case when runoff percolates through gold waste rock or tailings dams containing traces of pyrite (a form of sulphur, which when coming into contact with water and/or air, generates acidity).

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

ACTIVITIES	Associated Impacts	TYPICAL MITIGATION MEASURES
Site establishment: Site Clearing	• Generation of noise.	- Work during the day time only. Sound is louder during the night than during the day. to minimise disruption of animal life and noise in the night - Service equipment, machineries, trucks and other vehicles regularly to minimise noise. - provide ear plugs to the employees and ensure they wear them for the protection of their ears.
	• Generation of dust.	- Suppress dust by spraying water on dust roads and onsite were possible - Regulate speed to be 40 km/h on site to reduce dust emission. - Provide dust mask to employees working on site
	• Removal of vegetation.	- Minimise removal of vegetation- where possible work on barren parts of the site. - Rehabilitate and vegetate denuded areas as soon as possible

	• Habitat disruption and destruction	- Install mobile offices and ablution facilities to minimise ground disturbance - The site office and ablution facilities must be located in an area with minimal damage or disturbance to the environment. - Establish 'NO-GO' areas for any environmental sensitive or important habitat areas as per the biodiversity assessment- where no construction personnel, equipment/machinery or vehicles are permitted.
	• Soil contamination by oil spills from vehicles and machinery	- Construct a concrete slab to avoid soil contamination by hydrocarbon leakage - Provide drip trays for all parked vehicles
	• Temporary in-migration of workers and job seekers	- Ensure that an employment criterion, for the prospecting crew be made public in advance to deter unqualified job seekers from moving into the area. - Employ as far as possible, local labour at each phase of the project, especially during the prospecting phase
	• Personal safety and hazard exposure	- Ensure that all activities comply with all the requirements of the Occupational Health and safety Act as stipulated by its health and safety policy and the health and safety plan for the prospecting; and

	(actual and perceived)	- Communities and other Interested & Affected Parties should be informed (community awareness) of these policies and must be able to report any irregularities to the relevant competent authority.
	• Introduction and establishment of weeds	- Monitor the establishment of any foreign/alien invasive species on site and remove if any
Excavating pits (trenches) and Drilling	• Generation of dust	- Suppress dust by spraying water on dust roads and onsite were possible
	• Generation of noise	- Provide workers with earplugs - Ensure that all equipment is well maintained
	• Removal of vegetation	- Avoid removal of vegetation as far as practically possible. Vegetation clearing in natural areas should be kept to a minimum and restricted to the proposed mining footprint only - Place infrastructures in places that are already disturbed or degraded to avoid removal of vegetation and increasing the footprint of the activity.

		- Bring in and use the mobile equipment that will just need the positioning and not the construction. equipment such as the toilet and the guard house. - Where vegetation removal cannot be avoided, rehabilitate as soon as possible by revegetating - Work during daytime to minimise the disruption of animal life.
	• Animal Life disruption	- Fence -off the pits to prevent animals from falling into the pits - Do not disturb nests, breeding sites or young ones. Do not attempt to kill or capture snakes unless directly threatening the safety of employees. - Employees and contractors should be made aware of the presence of, and rules regarding, flora and fauna through suitable induction training and on-site signage.
	• Impact on geology	- Limit operations to area designated to prospecting plan within the approved prospecting rights area.
	• Safety Hazards to workers and neighbours	- Provide workers with safety clothing - Comply with Health and Safety measures, standards and regulations

		- Carry out Health and Safety audits frequently to ensure all Health and Safety measures, standards and regulations and complied with - Any hazardous zones on site should be monitored
	• Altering land use and land capability	- Limit operations to area designated to prospecting plan within the approved prospecting rights area. - Ensure that area is rehabilitated upon completion of activities, and that the soil is fertilised back to its suitable farming value.
Top soil stockpiles	• Soil erosion from the storage stockpile	- Avoid erosion by stockpiling topsoil properly and keep stockpile damp to reduce erosion and dust emission
	• Dust from the storage stockpile	- Spray stockpile to keep damp and prevent the emission of dust.
	• Impact on the topography	- Remove topsoil and backfill into pits as soon as operations cease.

	• Visual impact	- Ensure stockpiles are not higher than 1.5m tall.
Waste and storage	• Nuisance and visual pollution	- Littering should be prohibited and all waste generated from the site should be cleared. A 'no waste dumping' sign should also be placed next to the stream to raise caution of littering around it. - Provide rubbish bins and ensure that all waste is properly disposed of in the bins - Empty and dispose of waste weekly at the nearest landfill site
Tailings dumps	• Acid mine drainage and ground water pollution • Removal of vegetation	- In order to keep runoff water clean a storm water trench and berm should be constructed and maintained. - Measures should also be taken to contain the dispersion of slimes material from the site. - The establishment of surface runoff control systems and a containment paddock wall system on the Machavi TDF site should be done as required in terms of GN704 (DWA) - Vegetation disturbance must be as little as possible.
Oil storage	• Soil Contamination	- Place oil dip trays beneath trucks and machinery in use of oil to contain any oil spills

Gold processing	• Noise • Soil contamination	- No mitigation measure exists. - Ensure that, in the event of a spillage or contamination, the contaminated soil should be removed as soon as possible.

VIII. The Outcome of the site selection matrix. final site layout

The general objectives of the site selection matrix are to ensure that the activity to be undertaken is environmentally and socially acceptable, and thus sustainable. Considerations in this process are the size (land area) and the strategic location of the main activities and associated infrastructures.

The site was selected based on the geographic location of the potentially underling required mineral reserves. The layout of the site was however selected based on considerations made for the surrounding environment where possible, ease of operations and mining activities on site as well as minimal disturbance to the community near the site.

The site/land area for run of activity was selected based on the size (according to the geology of the area), and position and of the mineral reserves to be exploited.

IX. Motivation where no alternative sites were considered.

As indicated in section VIII above, no alternatives were considered as the activities depend on the geology and therefore position of the ore body.

X. statement indicating the preferred site

The preferred site is as per the site plan (See Annexure 7). Based on the desktop study of the geology of the area under question, the site is potentially underlain by reserves of the minerals to be prospected for. For this reason, prospecting activities are to be carried out to verify the availability of minerals and the feasibility of mining them.

(i) Plan of study for undertaking the Environmental Impact Assessment process to be undertaken

i. A description of the alternatives to be considered, including the option to of not proceeding with the activity

Preferred Alternative:

Drilling and Pitting sites

The drilling and pitting locations were chosen sorely on the position of the underlying ore body. The trenches are planned in such a way to investigate the location and strike of the required minerals. The sites were located a reasonable distance away from any sensitive area to ensure that no damage, diversion or disturbance is inflicted on the sensitive environment, e.g. wetland, river and etc. However, the full Impact assessment will give proper recommendation.

Campsite

The campsite location was selected considering the location of the pitting sites. The camp site has to be located near the trenching sites, however it has to be ensured that the campsite is not placed at an area with potentially a large reserve of minerals.

The use of mobile offices and ablution facilities was chosen to ensure that minimal damage is left on the natural environment.

ii. Description of the aspects to be as assessed as part of EIA process.

The aspects that will be assessed as part of the EIA include:

- The Biodiversity component of the site and immediate surroundings
- The land use of the site as well as that of the surroundings
- The Social structure (Nearby communities)

iii. Description of aspects to be assessed by specialist

Ecological study /biodiversity study will be undertaken to ensure that no endangered species are destroyed during prospecting operations.

iv. Description of the proposed method of assessing the environmental aspects including the proposed method of assessing alternatives.

The environmental aspects will be assessed through:

- Carrying out a desktop study to obtain existing information (literature review) on the natural environment socio -economic status of the site and its surroundings;
- Conducting a site assessment to verify information obtained during the desktop study and further assess the above-mentioned aspects.
- Conducting a biodiversity specialist study.

v. Description of the proposed method of assessing duration and significance of impacts.

See section V of Part A this report

vi. Stages at which the competent authority will be consulted

Initial communication with the competent authority has been made through the application for environmental authorisation for this proposed project.

Further consultation will be made when the draft scoping report is finalised so as to obtain comments. The competent authority will also be consulted upon finalisation of the draft Environmental Impact Report for commenting.

vii. Particulars of the public participation process that will be conducted during the EIA process.

1) Steps to be taken to notify the interested and affected parties

The following steps will be taken to notify the interested and affected parties during the EIA phase: -

- Registered Interested and Affected parties will be notified of the availability of draft EIA reports for commenting.
- Draft reports will be posted to Organs of State
- Emails will be sent to all registered Interested and Affected parties and Organs of State on the progress of the application and Environmental Authorisation.
- Letters (registered/hand delivery) will also be sent to Organs of State on the progress of the application and Environmental Authorisation in cases where emails cannot be utilised to do so.
- All interested and affected parties will be notified of the record of decision of the environmental authorisation.

2) Details of the engagement process to be followed.

The following will be the engagement process.

- The land owners will be notified and invited to comment on the draft EIA/EMP documents.
- If found necessary, a public meeting will be held to detail the project and receive any further comments from individuals of the surrounding communities
- draft reports will be emailed to registered interested and affected parties.

3) Description of the information to be provided to interested and affected parties.

Interested and Affected Parties will be provided with the following information:

- Details of the proposed project:
  - project description,
  - project location,
  - impacts from project activities,
  - closure objectives
- Contact details at which commentary can be made
- Availability of draft reports and commentary dates and duration
- Accessibility to draft reports for reviewing and commentary
- Record of decision for the application.

viii. A description of the tasks that will be undertaken during the EIA process

The following tasks will be undertaken during EIA process.

- Site assessment

A visit to the proposed site will be undertaken in order to assess the receiving (physical) environment in detail and identify further impacts that the proposed project may have on the environment.

- Report compilation and submission

Once the site assessment has been carried out, the identified impacts will be assessed (for significance) and rated. The findings will be collated in the Draft Environmental Impact Report.

A Draft Environmental Management Plan will also be compiled, within which a plan for mitigating and managing the identified impacts will be detailed. The plan will also detail the frequency of monitoring the impacts and management measures suggested.

- Public participation

Contact will be made with all Registered Interested and Affected Parties and organs of State, informing them of the availability of the Draft Environmental Impact Report and Environmental Management Plan for commenting.

Upon request, these draft reports will be provided to Registered Interested and Affected Parties through mail.

All Interested and Affected Parties and the general public will be allowed a period of 30days to comment on the draft reports, after which, all commentary raised by Interested and Affected Parties will be incorporated in the Final EIA report (together with all responses to the commentary).

The final Reports will be submitted to the competent authority, in anticipation for a record of decision on the authorisation application. The public will be notified of the record of decision by the competent authority.

ix. Measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored

See the Table below

The table below presents measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

ACTIVITIES	Aerial extent of the Activity Ha or m²	Associated Impacts	TYPICAL MITIGATION MEASURES
Site establishment: Mobile offices and ablution facilities, equipment storage, and parking bay preparation	1100m^2	• Generation of noise. • Generation of dust. • Removal of vegetation. • Habitat disruption and destruction • Soil erosion as the result of exposed surfaces. • Employment of few local people • Soil contamination by oil spills from vehicles	- Provide earplugs to workers and ensure that all vehicles are serviced and have silencers installed - Spray access roads and site with water - Provide dust mask to employees working on site - Minimise removal of vegetation - The site office and ablution facilities must be located in an area with minimal damage or disturbance to the environment. - Install a mobile office to minimise ground disturbance - Establish 'NO-GO' areas for any environmental sensitive or important areas- where no construction personnel, equipment/machinery or vehicles are permitted. - Construct a concrete slab to avoid soil contamination by hydrocarbon leakage - Provide drip trays for all parked vehicles - Ensure that all mining activities are carried out within reasonable distance (500m) away from the river.
Pitting	(6) (14000m)^2 = 84000m^2	• Generation of noise • Generation of dust • Removal of vegetation • Animal Life disruption • Impact on geology • Safety Hazards to workers and neighbours	- Suppress dust by spraying water on dust roads and onsite were possible - Provide workers with earplugs - Ensure that all equipment is well maintained - Avoid removal of vegetation as far as practically possible. Vegetation clearing in natural areas should be kept to a

		• Altering land use and land capability	minimum and restricted to the proposed mining footprint only - Place infrastructures in places that are already disturbed or degraded to avoid removal of vegetation and increasing the footprint of the activity. - Bring in and use the mobile equipment that will just need the positioning and not the construction. equipment such as the toilet and the guard house. - Where vegetation removal cannot be avoided, rehabilitate as soon as possible by revegetating - Work during daytime to minimise the disruption of animal life. - Fence -off the pits to prevent animals from falling into the pits - Do not disturb nests, breeding sites or young ones. Do not attempt to kill or capture snakes unless directly threatening the safety of employees. - Employees and contractors should be made aware of the presence of, and rules regarding, flora and fauna through suitable induction training and on-site signage. - Limit operations to area designated to prospecting plan within the approved prospecting rights area. - Provide workers with safety clothing - Comply with Health and Safety measures, standards and regulations

			- Carry out Health and Safety audits frequently to ensure all Health and Safety measures, standards and regulations and complied with - Any hazardous zones on site should be monitored
Drilling(boreholes) and sumps	400 m^2 (4 sites of 100 m^2 each)	• Generation of noise • Generation of dust • Removal of vegetation	- Provide workers with earplugs - Suppress dust by spraying water were possible - Avoid removal of vegetation as far as practically possible - Where vegetation removal cannot be avoided, rehabilitate as soon as possible by revegetating
Top soil stockpiles	40 m^2	• Soil erosion from the storage stockpile • Dust from the storage stockpile	- Suppress dust by spraying water were possible - Avoid erosion by stockpiling topsoil properly and keep stockpile damp to reduce erosion - Ensure that soil is piled at reasonable distance from the river and its banks
Waste storage	1000m^2	• Nuisance • Health impacts • Water and soil/land pollution • Impacts on plants and animal	- Provide rubbish bins - Empty and dispose of waste weekly at the nearest landfill site
Processing plant	1000m^2	• Noise • Soil contamination	- No mitigation measure exists. - Ensure that, in the event of a spillage or contamination, the contaminated soil should be removed as soon as possible
Waste rock dump	1000m^2	• Visual blocking	- Vegetation disturbance must be as little as possible and restricted to footprint.

		• Vegetation removal/disturbance	- Keep stockpile less than 1.5m high -
Tailings dam	1000m^2	• Acid mine drainage and ground water pollution • Removal of vegetation	- In order to keep runoff water, clean a storm water trench and berm should be constructed and maintained. - Measures should also be taken to contain the dispersion of slimes material from the site. - The establishment of surface runoff control systems and a containment paddock wall system on the Machavi TDF site should be done as required in terms of GN704 (DWA) - Vegetation disturbance must be as little as possible and restricted to footprint.

Other 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**.

This aspect will be assessed during EIA.

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

No heritage resources have been identified thus far. The impact on any national estate referred to in section 3(2) of the National Heritage Resources Act will however be investigated during the EIA process.

3) **other matters required in terms of section 24(4)(a) and (b) of the Act.**

N/A

J) UNDERTAKINGREGARDING CORRECTNESS OF INFORMATION

I LP Mutshathama herewith undertake that:

- The information provided in the foregoing report is according to my knowledge correct, and that the comments and inputs from stakeholders and interested and affected parties has been correctly recorded in the report.

EAPSignature.....

Date: .....02/02/2017.....

K) **UNDERTAKING REGARDING LEVEL OF AGREEMENT**

I LP Mutshathama herewith undertake that the information provided in the foregoing report is correct, and that the level of agreement with interested and affected parties and stakeholders has been correctly recorded and reported herein.

Signature:

Date :02/02/2017

APPENDIX 1: EAP DEGREE CERTIFICATE

University of Venda

This is to Certify that the Degree of

Bachelor of Environmental Sciences

was Awarded to

MUGOVHANI LUTUNO PRISCILLA

at a Ceremony held on the

08-MAY-2008

in Accordance with the Provisions of the Act and Statute

Vice Chancellor

University Registrar

Executive Dean

APPENDIX 2: EXPERIENCE AND PAST PROJECTS UNDERTAKEN

CURRICULUM VITAE OF LUFUNO PRECILLA MUTSHATHAMA

Surname	: Mutshathama
First Name	: Lufuno Precilla
Identity Numbers	: 8510020398080
Date of Birth	: 1985 October 02
Gender	: Female
Marital Status	: Married
Home Language	: Tshivenda
Nationality	: South African
Physical Address	:45 Mayers Estate, Bassoon Avenue, Struben Valley, 1724
Contact numbers	: 073 912 0800/073 805 5481, 011 074 6866
Fax No	: 086 2355 142
Email address	: Joanprojects@gmail.com

TERTIARY COMPETENCES

Name of Institution : University of Venda
Qualification : BEnvSc (Bachelor of Environmental Sciences)

Duration of study : 2005 – 2007

Major courses :

Ecology and Resources Management

- Environmental Impact Assessment & Modelling
- Hydrology & water resources
- Conservation biology
- Environmental Pollution and management
- Resources Evaluation and Information Systems

Geography

- Geographic Information System (GIS)
- Remote sensing
- Population and demography
- Climatology
- Biogeography
- Tourism geography

CURRENT OCCUPATION

Name of Employer : Joan Construction and Projects
Job Title : Director-Mineral licensing and Environmental Consultant
Company : Joan Construction and Projects (Pty) Ltd
Duration : June 2013 to date
Duties :

- Conduct Environmental Impact Assessment
- Compile scoping reports
- Compile Environmental Management Plans
- Compile Basic Assessment report
- Conduct public participation (stakeholder engagements)
- Compile Environmental Performance Assessment Reports
- Amend Environmental Management Plans and programmes
- Compile mine closure plans
- Compile Integrated Water use Licence application
- Compile financial provision report and calculate financial provision quantum
- Select and appoint appropriate specialists to undertake specialist studies and draw up sound Terms of Reference for the specialists that address the particular needs of that project or piece of work.

PREVIOUS WORK EXPERIENCE

Name of Employer : Village Main Reef Limited
Job Title : Group Environmental Officer
Duration : January 2012 to July 2013
Duties:

Environmental Management:

- Enforce Compliance of MPRDA 2002(Act no 28 of 2002), NWA1998 (Act no 36 of 1998) and NEMA 1998 (Act no 107 of 1998) through conducting environmental monitoring & auditing in four (4) mines and one exploration site.
- Compilation of EMPs
- Assessment of EM Programmes before they are submitted to the DMR
- Compilation of rehabilitation plans

- Liaison with the regulators (DMR, DWA, DEA)
- Compilation of performance assessments for all operations
- Calculation and updating rehabilitation financial liability
- Compilation of closure applications for Prospecting Rights
- Conduct public participation

Mineral and Prospecting Right Legal Tenure

- Apply and follow up on section 11s (cessions)
- Apply and follow up on section 102s(amendments/variations)
- Follow ups on conversion applications
- Apply and follow up on Mining Permits

Name of the employer	:	Department of Minerals Resources
Directorate	:	Mineral Regulation
Job title	:	Environmental Officer
Duration	:	September 2008 to December 2011
Duties	:	

Environmental Management:

- Evaluation & assessment of EMPs, EIAs Scoping Reports, Performance Assessment Report, Closure Plans, rehabilitation plans Environmental Liability and other Environmental Technical Reports.
- Management of mining related impacts on the components of the natural environment.
- Compliance and enforcement of MPRDA 2002(Act no 28 of 2002), NWA1998 (Act no 36 of 1998) and NEMA 1998 (Act no 107 of 1998) through conducting Inspections, environmental monitoring & auditing
- Consult with relevant state departments that administer matters relating to the environment.
- Identifying area that are sensitive and protected before mining can resume.

Mineral and Prospecting Right Legal Tenure

- Assist clients with lodging applications on SAMRAD system.
- Capture mining spatial areas (polygons/ farms) applied for on the work -based GIS(ArcIMS) software for mining right, prospecting right and mining permit
- Digitising/geo-coding mining polygons
- Advice the regional manager on settlement and environmentally sensitive areas under the mining Application
- Give monthly statistic of all mining application in Limpopo

Name of the employer	**: Department of Minerals Resources**
Directorate	Mineral Regulation
Job title	: Intern (Environmental & GIS officer)
Duration	: April 2008 to September 2008
Duties	:

- Capture mining spatial areas (polygons/ farms) applied for on the work -based GIS(ArcIMS) software for mining right, prospecting right and mining permit
- Digitising/geo-coding mining polygons
- Advice the regional manager on settlement and environmentally sensitive areas under the mining Application
- Give monthly statistic of all mining application in Limpopo

REFERENCES

1. Name and Surname : Mr. Dalubuhle Ncube
Company name : Village Main Reef limited

Title : Managing Director

Contact details :072 3341965|011 2744600|
DNcube@villagemainreef.co.za

2. Name and Surname : Mr. Aaron Kharivhe
Name of institution : Department of Mineral Resources

Title :Regional Manager: Limpopo Region

Contact details :0152874700/082 467 0912/
Aaron.Kharivhe@dmr.gov.za

APPENDIX 3: LOCALITY MAP

0 1,700 3,400 6,800
Meters

N

Legend

Van Staden Project Area

Coordinates

#	long	lat
1	27.477376°	-26.007858°
2	27.478963°	-26.014206°
3	27.490269°	-26.013134°
4	27.487821°	-26.004149°

Date: 09 January 2017

Joan Construction & Projects

Coordinate System: GCS Hartebeesthoek 1994
Datum: Hartebeesthoek 1994
Units: Degree

APPENDIX 4: Public Consultation

4.1) Notification of Landowners

4.2) Site Notices

4.3) Advert

4.4) Interested & Affected Parties Database and Correspondence

4.5) Stakeholder consultation

4.1) Notification of Landowners

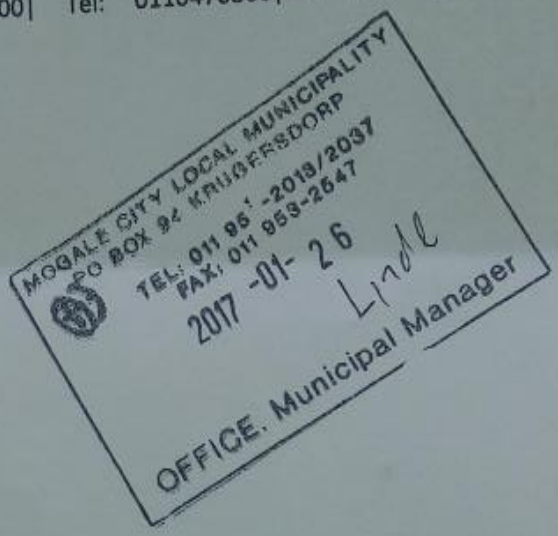
Andries Gerhardus Van Staden

P O Box 4147

Honeydew

2040

Enquiries: Lufuno Mutshathama|Celll: 0739120800| Tel: 0110476866|Fax 011 268 5170| email: joanprojects@gmail.com



The Municipal Manager

Mogale City local Municipality

PO Box 94,

Krugersdorp,

1740

Dear sir/ Madam

CONSULTATION NOTICE OF THE PROSPECTING RIGHTS APPLICATION BY ANDRIES GERHARDUS VAN STADEN

Notice is given in terms of Section 16(4)(b) of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) as amended ("MPRDA") and Section 24J of the National Environmental Management Act, 1998, (Act No 107 of 1998 read with Regulation 40 to 44 of the Environmental Impact Assessment Regulations Listing Notice 1 of 2014 ("NEMA").

Andries Gerhardus Van Staden has applied for the Prospecting Right for Gold (including bulk sampling) on portion 11 and 22of the farm Koesterfontein 45 IQ situated in the Westrand District Municipality (Mogale City Local Municipality). The DMR reference number is NW 30/5/1/1/3/2/1/12009EM

You have been identified as the interested and affected party in that you are the local municipality and landowner for the area under application. You are therefore hereby requested to forward written comments you may have or request the Draft scoping report for review to the undersigned in the above indicated contact details. Comments must reach the address within 30 days of this notice.

Yours Faithfully

L Mutshathama

Date: 25 January 2016

Gmail

Alice Moropa <bathodrum@gmail.com>

Andries Van Staden Prospecting Right Aplication (Gold with bulk sampling) Scoping EIA Report : REF:NW30/5/1/1/3/2/1/12009EM

Alice Moropa <bathodrum@gmail.com> Thu, Feb 9, 2017 at 4:31 PM
To: mm@mogalecity.gov.za
Cc: Lufuno Mugovhani <joanprojects@gmail.com>

Good Day,

Andries Gerhardus Van Staden has applied for a prospecting right for the prospecting of gold (including bulk sampling) on portion 11 and 22of the farm Koesterfontein 45 IQ situated in the Westrand District Municipality (Mogale City Local Municipality). The DMR reference number is NW 30/5/1/1/3/2/1/12009EM

The application has been subjected to a Scoping and EIA process in accordance with the National Environmental Management Act, 1998, (Act No 107 of 1998 read with Regulation 40 to 44 of the Environmental Impact Assessment Regulations Listing Notice 1 of 2014 ("NEMA") and the of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).

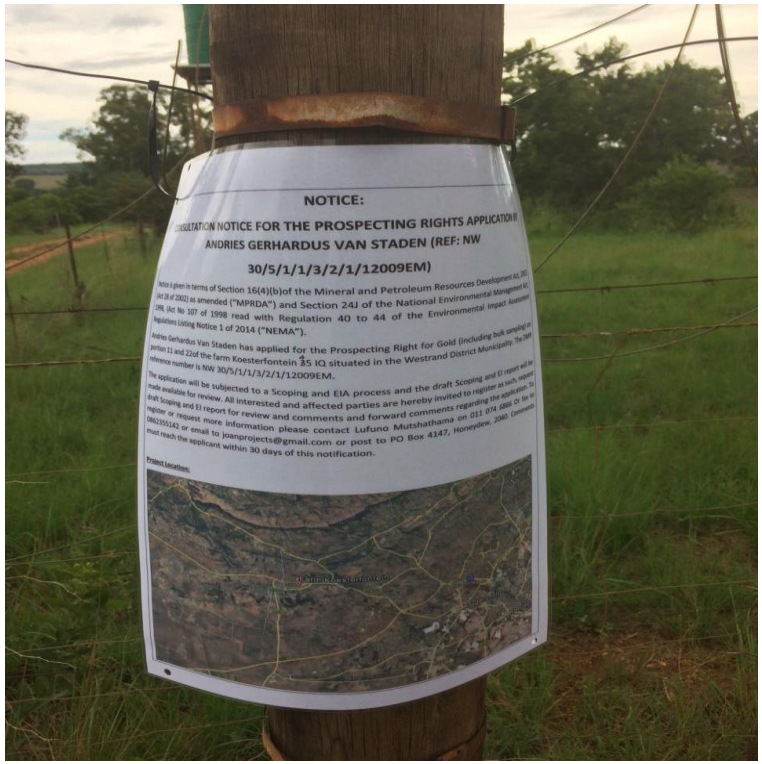
As a landowner the Mogale City Local Municipality is hereby afforded an opportunity to comment on the Scoping Report attached to this email. Should you have any inquiries or comments or enquiries, such comments may be forwarded in response to this email or directed to the assigned EAP (indicated int he report).

Regards,

--
Mmabatho Alice Moropa
Environmental Scientist
BSc (Hons) Environmental science
| Mobile 0787077057 | Email: bathodrum@gmail.com

Van staden Scoping Report V2.pdf
2581K

4.2) Site Notices


NOTICE:
ANDRIES GERHARDUS VAN STADEN (REF: NW
30/5/1/1/3/2/1/12009EM)

4.3) Advertisement

4.4) Interested & Affected Parties Database and Correspondence

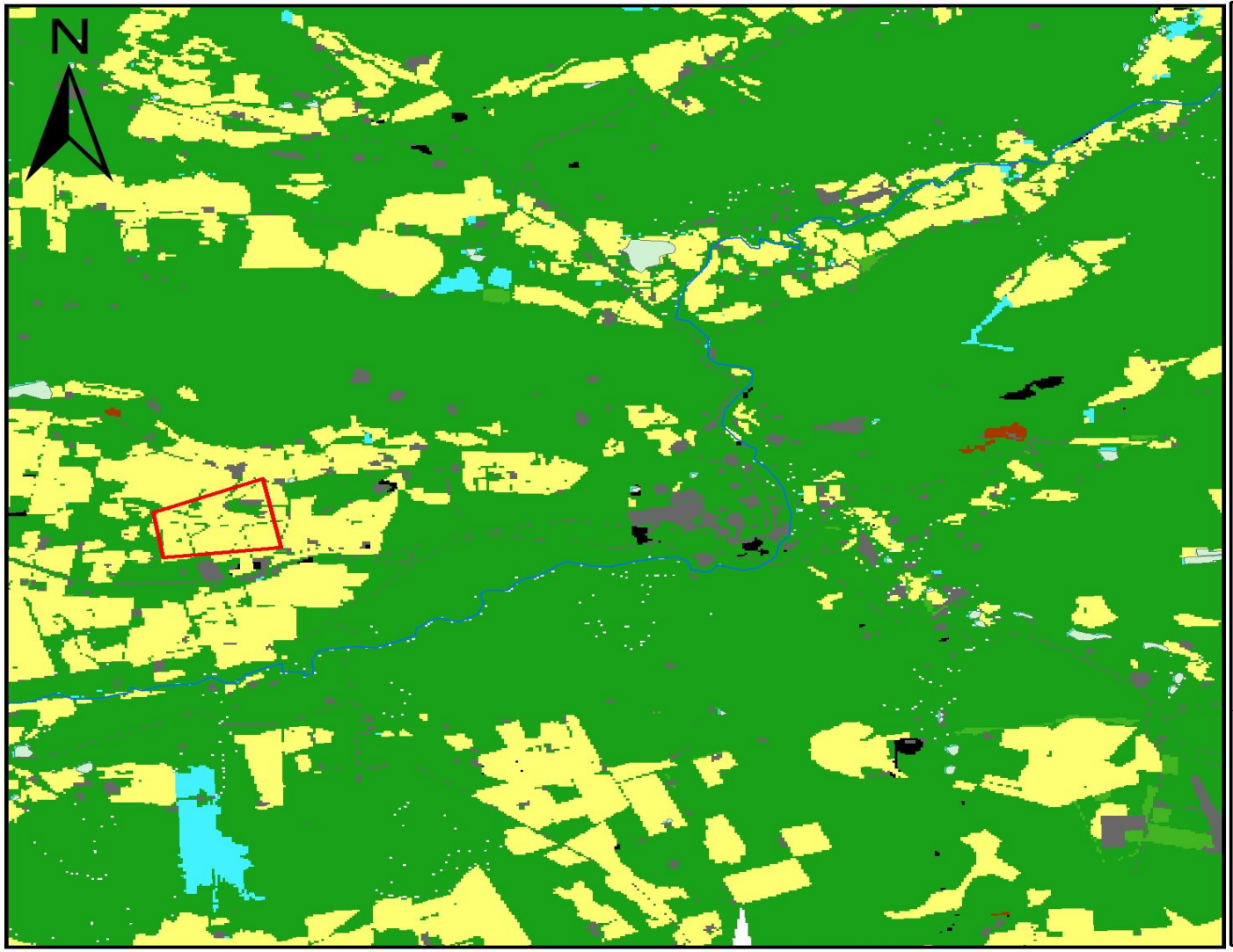
Interested and Affected Parties Register (Van Staden Prospecting Right Application (REF: NW30/5/1/1/3/2/1/12009EM)			
#	**Name**	**Contact (Tel)**	**Email Address**
1	Andrew Robinson	(011) 486 1736/ 083 324 3708	andrew@ultraliquors.co.za
2	Len Rundle & Pat Rundle	(011) 4080366 (Ext 82366) / (082) 498 8650	ltr@jdg.co.za
3	Richard Sanderson	-	richard@appsman.co.za
4	Bonney Cinnamond	-	bcinnamond@gmail.com
5	Mark Helfrich	079 597 4296	mark@kashaan.co.za
6	Constance Belfi	-	belficonstance@gmail.com
7	Johan Van der Merwe and Elize van der Merwe	083 454 5126 / 011 692 1656/7	johan@picm.co.za
8	Mags Pillay (Gauteng Department of Economic Development)	011 085 2482 / 083 647 5088	mags.pillay@gauteng.gov.za
	Department Of Water and Sanitation		

State Owned Entities Consulted			
#	**Name**	**Contact (Tel)**	**Email Address**
1	Department Of Water and Sanitation		
2	Department Of Agriculture Forestry and Fisheries		
3	Department Of Rural Development and Land Reform		
4	Gauteng Department of Economic Development		

4.5) Stakeholder consultation

Appendix 5: Land use Map

LAND USE MAP



Coordinates

#	long	lat
1	27.477376°	-26.007858°
2	27.478963°	-26.014206°
3	27.490269°	-26.013134°
4	27.487821°	-26.004149°

Legend

- Van Staden Project Area
- GT481Rivers
- GT481Wetlands

Descriptio

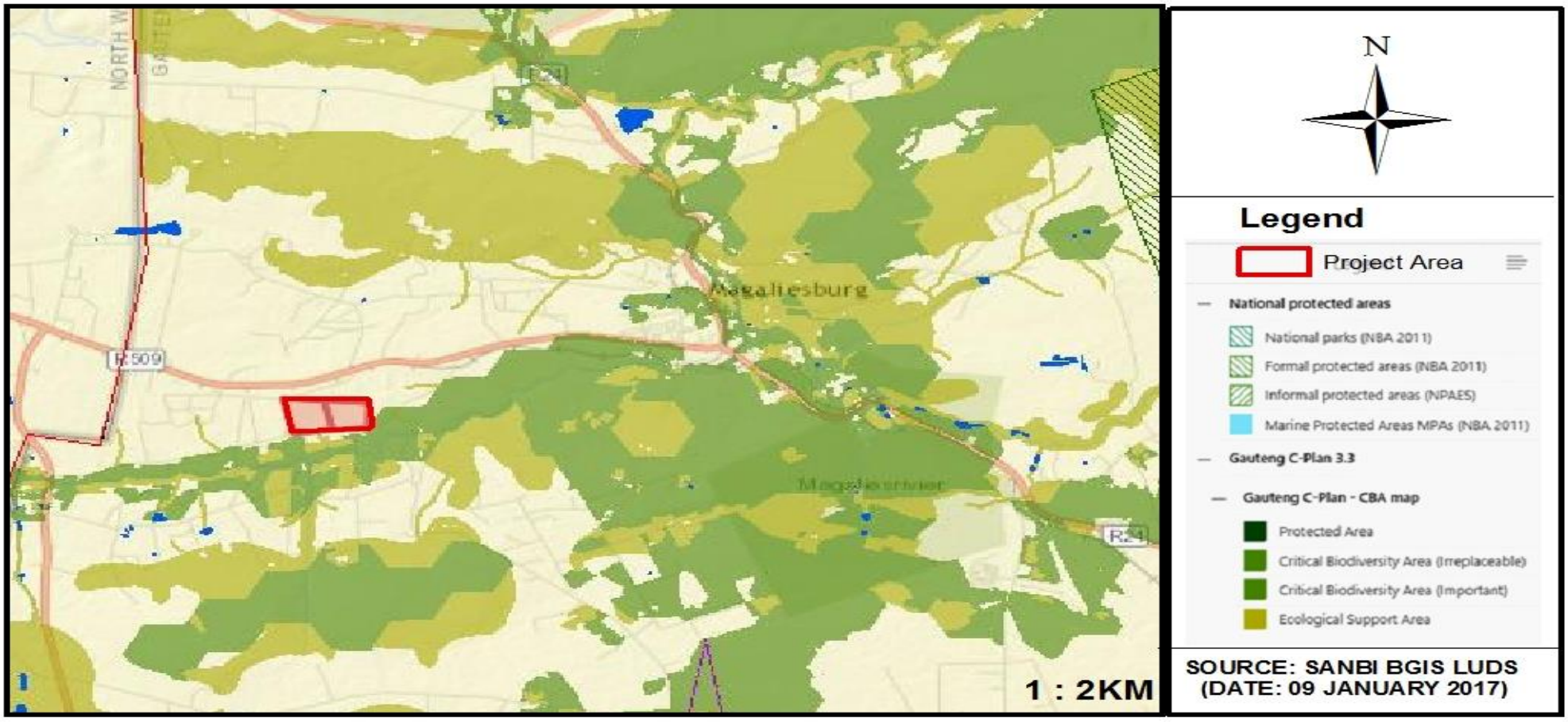
- Cultivation
- Degraded
- Mines
- N/A
- Natural
- Plantations
- Urban Built-up
- Waterbodies

Date: 09 January 2017

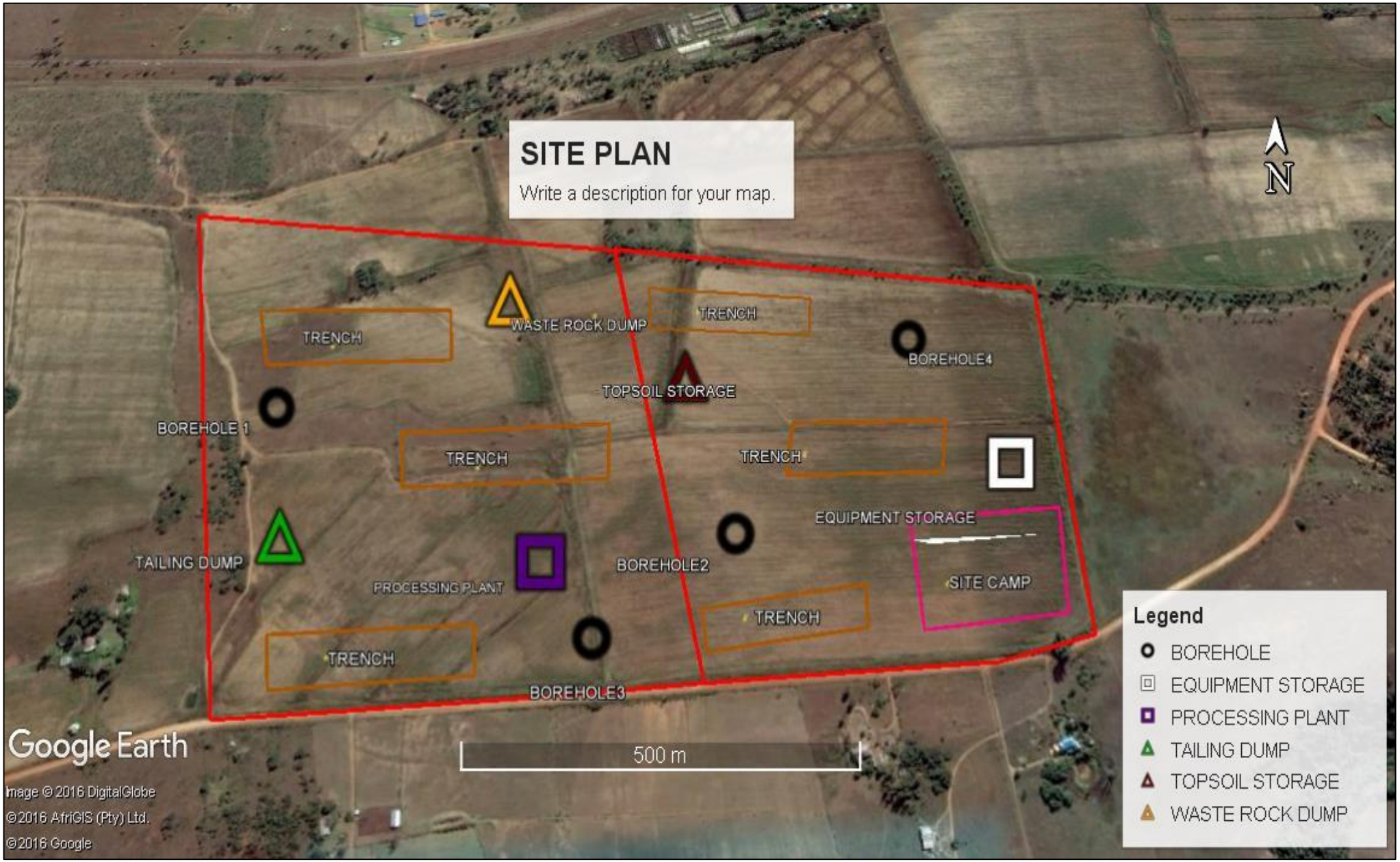
Coordinate System: GCS Hartebeesthoek 1994
Datum: Hartebeesthoek 1994
Units: Degree

Appendix 6: Sensitivity Map

GAUTENG C PLAN - CBA MAP



Appendix 7: Site Plan


SITE PLAN
Write a description for your map.
N
TRENCH
WASTE ROCK DUMP
TRENCH
BOREHOLE4
TOPSOIL STORAGE
BOREHOLE 1
TRENCH
TRENCH
EQUIPMENT STORAGE
TAILING DUMP
PROCESSING PLANT
BOREHOLE2
SITE CAMP
TRENCH
TRENCH
BOREHOLE3
Google Earth
500 m
Image © 2016 DigitalGlobe
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©2016 Google
Legend
BOREHOLE
EQUIPMENT STORAGE
PROCESSING PLANT
TAILING DUMP
TOPSOIL STORAGE
WASTE ROCK DUMP