



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

BASIC ASSESSMENT REPORT

And

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

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 AMENDED).

NAME OF APPLICANT: 2SSS (Pty) Ltd

TEL NO: 068 249 5251

FAX NO: N/A

EMAIL .derrickduma@yahoo.com

POSTAL ADDRESS:

FILE REFERENCE NUMBER SAMRAD: NW30/05/1/3/2/11070 MP

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 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 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 provide 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 paced 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 the proposed activity is located and how the activity complies with and responds to the 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 the risk of impact of the proposed activity and technology alternatives on these aspects to determine:
 - (i) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and
 - (ii) the degree to which these impacts-
 - (aa) can be reversed;
 - (bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

(e) 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.

SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

3. Contact Person and correspondence address

a) Details of

i) Details of the EAP

Name of the Practitioner: Mabirimisa Shumani Edmond

Tel: 082 752 1754

Fax No.:086 557 9215

E-mail address:shumaniedmond@gmail.com

ii) Expertise of the EAP.

(1) The qualifications of the EAP

(With evidence).

Mabirimisa Shumani Edmond holds a Bachelor Degree of Environmental Sciences, Certificate Course in GIS, Certificate of Occupational Health and Safety and Engineering Studies Certificates, 1 year working experience as an intern at Department of Mineral Resources under Mineral Regulation. I am currently working as an Environmental Consultant at Mabirimisa Consulting and Projects.

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

(In carrying out the Environmental Impact Assessment Procedure)

CV attached as appendix 1(1.1)

b) Location of the overall Activity.

Farm Name:	Certain portion of portion 4 of the farm Vogelstruisnek 173 JP	
Application area (HA)	4.9 Ha	
Magisterial district:	Magisterial district of Mankwe	
Distance and direction from nearest town	Approximately 25.5 from Rustenburg	
21 digit Surveyor General Code for each farm portion	T0JP0000000017300004	
Coordinates of the boundary of the property or properties	Longitude	Latitude

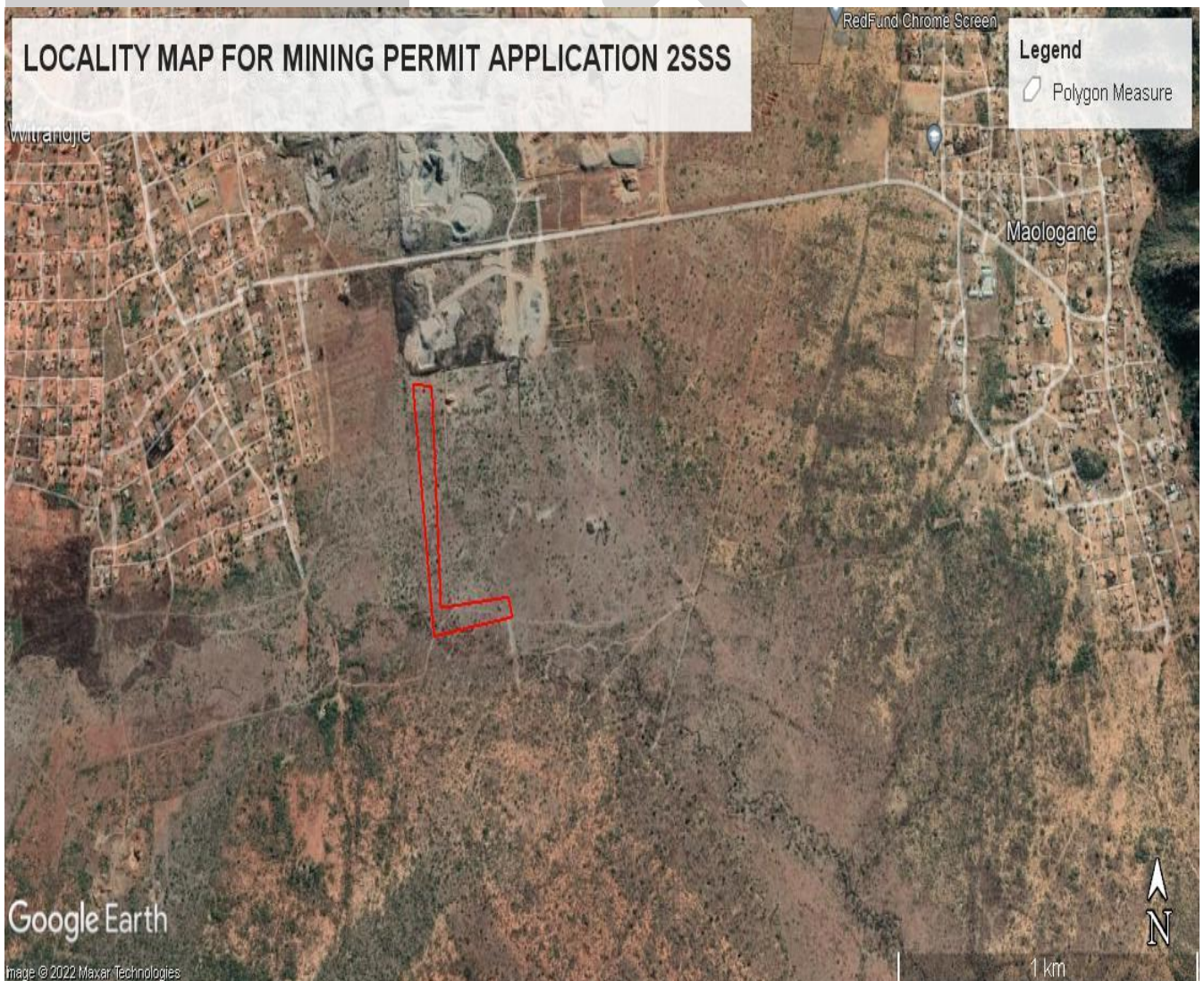
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	26.93574	-25.2783
	26.93763	-25.2783
	26.9377	-25.2806
	26.93578	-25.2806

C map

(Show nearest town, scale) Locality not smaller than 1:250000)

Map attached as **appendix 2**



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

The proposed overall activity is a mining permit application for Chrome Ore on certain portion of portion 4 of the farm Vogelstruisnek 173 JP situated in the Magisterial District of Mankwe in Moses Kotane Local Municipality.

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.

Figure 2: Infrastructure to be placed on site (also attached under Appendix A)

(i) Listed and specified activities

Proposed mining permit for Chrome Ore	5 ha	X	GNR 983 Activity 21&27
Waste material from the processing plant	5 Ha		NEMWA 59 of 2008 Activity 15
Total number of 10 box will be excavated only 5 boxes will be excavated with total dimension of 20m (length) x 15m (breath) will be excavated at the same time	0,15	X	Not listed
Rehabilitation of access road	100	X	Not listed
Fencing	100 m	X	Not listed
General surface rehabilitation	0.2 ha	X	Not listed
Chrome processing plant (the total area covered by the plant its 40 M squared)	0.008	X	Not listed
2 to 3 years maintenance and after care	0.2 ha	X	Not listed
Fencing	50 m Squared	X	Not listed

(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)

ACCESS TO THE SITES

ACCESS ROAD

- The access road to the mining are and campsite & office must be established in consultation with the land owners and existing road shall be used as far as possible.
- Should portion of the access road be newly constructed the following must be adhere to
 - Water course and steep gradient shall be avoided as far as possible
 - Acces road will be prepared, vegetation will be cleared, top soil and overburden/sub soil will be removed and stored separately next to the excavation

- No other routes will be used by vehicles or personnel for the purpose of gaining access to the site
- The erection of gates in fence lines and the open or closed status of gates in new and existing positions shall be clarified in consultation with the land owner and maintained throughout the operation period

OFFICE CAMP SITE

- Office and camp site shall be established, as far as possible, outside the flood plain, above the 1 in 50 flood level mark within the boundaries of the mining area.
- The area chosen for this purpose shall be the minimum reasonably required and which will involve the least disturbance to vegetation.
- No Camp office site shall be located than 100 metres from a stream, river, spring, dam or pan
- No trees or shrubs will be damaged for the purposes of obtaining fire wood.
- Fire will only be allowed in facilities or equipment specially constructed for this purpose.
- Lightening and noise disturbances or any other form of disturbance that may have an effects on the land owner or person lawfully living in the vicinity shall be kept to a minimum.
- The area will be fenced off in order to provide a safe environment and to prevent easy access to the site.

TOILETS FACILITIES, WASTE WATER AND REFUSE DISPOSAL

- As a minimum requirement, the holder of a mining permit shall provide pit latrines for employees and proper hygiene measures shall be established
- Chemical toilet facilities or other approved toilet facilities such as septic drain shall be preferably be used and sited on the camp site in such a way that they do not cause water or other pollution.
- All effluent water from the camp washing facilities shall be disposed of in a properly regulatory requirements concerning construction and maintenance should be adhering to.
- Spill should be cleaned up immediately to the satisfaction of the regional Manager by removing the spillage together with the polluted soil and by disposing of the at a recognized facility
- Non – Biodegradable refuse such as grass bottle, plastics bags, metal scrap etc., shall be stored in a container at collecting point and collected on a regular basis. Specific precautions shall be taken to prevent refuse from being

dumped on or in the vicinity of the office

- Biodegradable refuse generated from the office /camp site, processing areas vehicles yard, storage area or any other area shall be either be handled as indicated above or be buried in a pit excavated for that purpose.

VEHICLE MAITENANCE

- Vehicle maintenance shall be established, as far as possible, outside the flood plain, above the 1 in 50 flood level mark within the boundaries of the mining area.
- Top soil should be handled with care
- The storage is shall be secure fenced and all hazardous substances and stocks such as diesel, oil shall be stored and be marked.
- No vehicle may be repaired in any place within or outside the applied area.

WASTE DISPOSAL FROM CHROME PROCESSING PLANT

- All used oils, grease or hydraulics fluids shall be placed therein and these receptacles will be removed from the site on a regular basis for disposal at a registered for disposal facility
- Spill should be cleaned up immediately to the satisfaction of the regional Manager by removing the spillage together with the polluted soil and by disposing of the at a recognized facility
- General waste will be disposed of at the licensed dumping site while recyclable waste will be recycled as far as possible
- Any potential hazardous material left on the site will be managed appropriately and disposed of at an authorized.
- All waste material from the processing plant will be used to closed open excavation.

e) Policy and Legislative Context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (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	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT? (E.g. In terms of the National Water Act a Water Use License has/ has not been applied for)

that are applicable to this activity and are to be considered in the assessment process)		
Minerals and Petroleum Development Resources Act, Act 28 of 2002 (MPRDA) and the MPRDA Amendment Act, Act 49 of 2008	Department of Mineral Resources	The conditions and requirements attached to the granting of the mining permit will apply to the mining activities.
Environmental Impact Assessment Regulations	Department of Mineral Resources	This Basic Assessment Report is being undertaken in terms of the Environmental Impact Assessment Regulations in order to determine any possible impacts on the environment and to propose sufficient mitigation in order to prevent harm on the environment
Constitution of South Africa, specifically everyone has the right: a) to an environment that is not harmful to their health or wellbeing; and b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that i) prevent pollution and ecological degradation; ii) promote conservation; and iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.	Republic of South Africa	The mining activities will only proceed after effective consultation.
National Environmental Management Act, 1998(Act No. 107 of 1998)	DMR	This Basic Assessment Report is being undertaken in terms of the National Environmental Management Act (No. 107 of 1998) as amended in order to determine any possible impacts on the environment and to propose sufficient mitigation in order to prevent harm on the environment. The appropriate environmental authorisation will be obtained before proceeding with any mining activities. No mining activity will be conducted within a sensitive environment.

		Measures will be implemented to prevent any pollution occurring during mining activities. Once mining is complete, the area will be rehabilitated as close as reasonably possible to pre-mining.
National Water Act, 1998 (Act No.36 of 1998)	Department of Water and Sanitation (DWS)	Water will be transported to sited by truck.
National Heritage Resources Act, 25 of 1999 ("NHRA")	SAHRA	The National Heritage Resources Act legislates the necessity for cultural and heritage impact assessment in areas earmarked for development, which exceed 0.5 hectares. The Act makes provision for the potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA). Should the proposed activities impact the heritage resources, application to SAHRA would be required to obtain the necessary permits? The proposed mining operations will not have any impact on the heritage resources, as no resources of significance were identified to date.

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 project site has been selected on the basis of the presence of a mineable resource. The project plan and site layout has been based on limiting the project area footprint and trying to avoid sensitive areas where possible from an environmental and social perspective, while still considering engineering feasibility and financial considerations. The proposed project will benefit society and the surrounding communities both directly and indirectly by generating additional employment at the proposed operation and through the extraction and beneficiation of mineral resources. Direct economic benefits will be derived from wages, taxes and profits. Indirect economic benefits will be derived from the procurement of goods and services and the spending power of employees.

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

Preferred sites: The applicant applied for mining permit over the area of Maologane Community which is closed to Witrandjie community. There have also been various Chrome Deposit operations within the vicinity of the proposed project as depicted on the picture below. The site therefore regarded as the preferred site and alternative site are not considered.



Preferred Activities: The preferred and only manner of extracting of Chrome Ore for this proposed activity is through mining. The life of mine is currently intended to exist for two years; therefore, temporary structures will be erected on site for the operation.

Technology Alternatives: There are no technological alternatives to the proposed mining activities. Opencast mining is the only method that will be used.

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 of the activity
 - d) The technology to be used in the activity
 - e) The operation aspects of the activity
 - f) The option of not implementing the activity

(a) the property on which or location where it is proposed to undertake the activity

Sifora Trading and Projects (Pty) Ltd applied for a mining permit over the area of Maologane. Area located on a certain portion of portion 4 of the farm Vogelstruisnek 173 JP in the magisterial district of Mankwe

b) the type of activity to be undertaken

Mining activity for Chrome Ore.

c) the design or layout of the activity

Mining will be conducted by means of opencast mining methods. A Tractor-Loader-Backhoe will be used to rom the strip of a layer of topsoil from the profile. The topsoil will be stockpiled separately to be used during the rehabilitation of the mined area. The Tractor-Loader-Backhoe will also be used to dig Chrome Ore.

from the profile and stockpile it at a designated area. Equipment such as a Front-End-Loader, excavator and dump trucks will be utilised during mining.

d) the technology to be used in the activity

The opencast mining method will be considered in order to maximise the Chrome Ore extraction. Truck and shovel operation will be used. Haul trucks will be used from the hauling of the above mentioned minerals through haul roads that will be constructed in the area

e) the operational aspects of the activity

Due to the nature of the mining activities no permanent infrastructure will be placed on site.

f) the option of not implementing the activity

Should the proposed mining operation not be authorised, it is anticipated that there will be no production of Chrome Ore.?

ii) Details of the Public Participation Process Followed

It requires that a site notice be fixed at a place noticeable to the public, at the boundary or on the fence of the site where the activity to which the application relates is to be undertaken and on any alternative site. The purpose of this is to notify the public of the project and to invite the public to register and inform them of the public participation process.

Site notices were placed on the site and surrounding the farm on the 15 July 2022.

Advertising

Application for a mining permit was advertised in the local newspaper, namely Rustenburg Herald on the 15 of July 2022. The purpose of this advertisement was to ensure that group of I&APs possible was informed and invited to provide input and question and comments on the projects.

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 List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.		Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated.
AFFECTED PARTIES					
Landowner/s	X				
Republic of Bophuthatswana (Ntsabele Maleka)	X	No comments received			N/A
Bakgatla Ba Kgafela (Maologane Community Chief herbet Molotsi)		No comment received.	N/A		

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

			No issue raised	N/A	
Lawful occupier/s of the land	X		No issue raised		
Landowners or lawful occupiers on adjacent properties	X		No issue raised		
Municipal councillor	X				
Municipality	X				
Moses Kotane Local Municipality	X	No comment received	No issue raised	N/A	N/A
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA, etc.					
North West Department of Agriculture, Conservation and Environment	X	No comment received	No issue raised	N/A	N/A
Department of Water and sanitation	X	No comment received	No issue raised	N/A	N/A

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

Department of Rural Environmental, Agricultural Development	X	No comment received	No issue raised	N/A	N/A
North West Provincial Heritage Resources Authority	X	No comment received	No issue raised	N/A	N/A
Department of Public Works and Transport in NW		No Comment received	No issue raised	N/A	N/A
Communities					
Community close to the proposed projects is Maologane and Witrandjie		No comments received	No issue raised	N/A	N/A
Dept. Land Affairs					
Department of Rural Development and Land Reform	X	No comments received		N/A	N/A
Traditional Leaders					
Dept. Environmental Affairs					
Department of Mineral Resources		No comments received		Noted	

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

Other Competent Authorities affected					
OTHER AFFECTED PARTIES					
INTERESTED PARTIES					

DRAFT

- 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 geological, physical, biological, socio-economic, and cultural character.



PHYSICAL ENVIRONMENT

The application for Mining Permit located in the magisterial district of Bojanala in the Moses Kotane Local Municipality

Moses Kotane Municipality is a category B4 municipality located within the Bojanala District Municipality in the North West Provinces. It was established after re-demarcation of municipal boundaries and subsequent municipal election in 2000. The Municipality covers an area of approximately 522km square and is mostly rural in nature comprising 107 villages and 2 two formal town of Mogwase and Madikwe.

Moses Kotane Local Municipality population was established at 242 552 by 2011 Census compared to 237175 by census 2001.

Topography

The landscape to the north-west and south-west of the study area is dominated by mountainous and hilly terrain, and includes the Magaliesberg and Pilanesberg mountain ranges, as well as a second range of

smaller hills parallel and to the north of the Magaliesberg. The elevation (above mean sea level; amsl) of the high-lying areas varies between 1 200 m and 1 700 m. The flatter terrain beyond these high lying areas averages between 1 050 m amsl and 1 180 m amsl (refer to Figure 1.1). The topography to the north, west and east of the study area is dominated by well-established non-perennial watercourses (including the Elands, Selons and Sterkstroom rivers) where the altitude drops to less than 1 000 m amsl. The central part of study area is characterised by the sporadic presence of hillocks and rocky outcrops.

CLIMATE

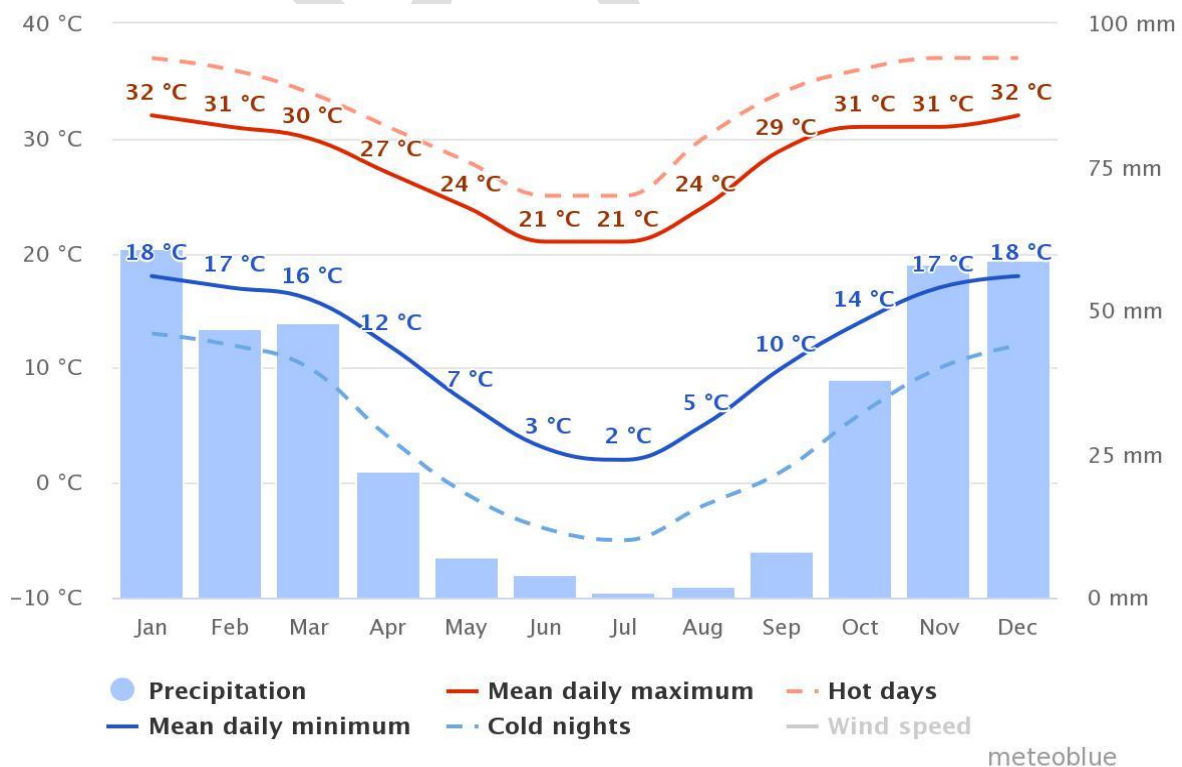
No climate data was available for the study area. Climate data for Sun City (located approximately 60km South-East of the project site) was obtained.

The prevailing climate in Sun City is known as a local steppe climate. During the year there is little rainfall. The Köppen-Geiger climate classification is BSh. The average annual temperature is 19.0 °C in Sun City. The average rainfall is 641 mm in a year.

Rainfall

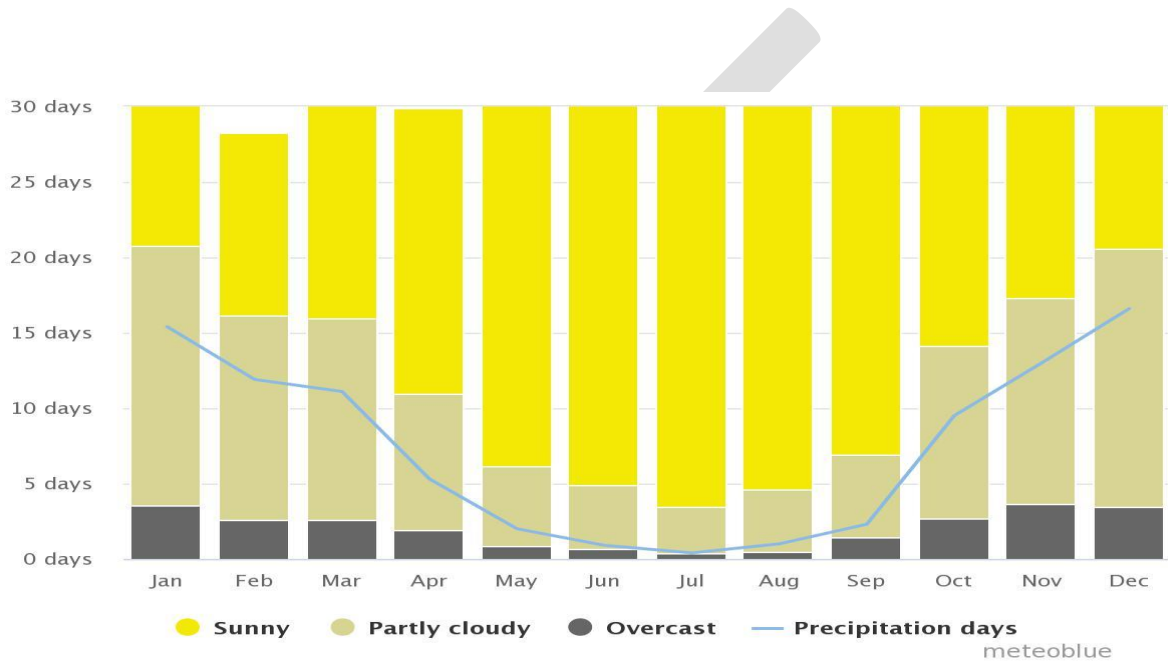
Most of the precipitation here falls in December, at an averaging of 122 mm. The driest month is August, where there is 3 mm of precipitation in August. Figure 1 below shows the average monthly rainfall in Sun City, which is the closest town to the project area.

Average Temperature and Precipitation



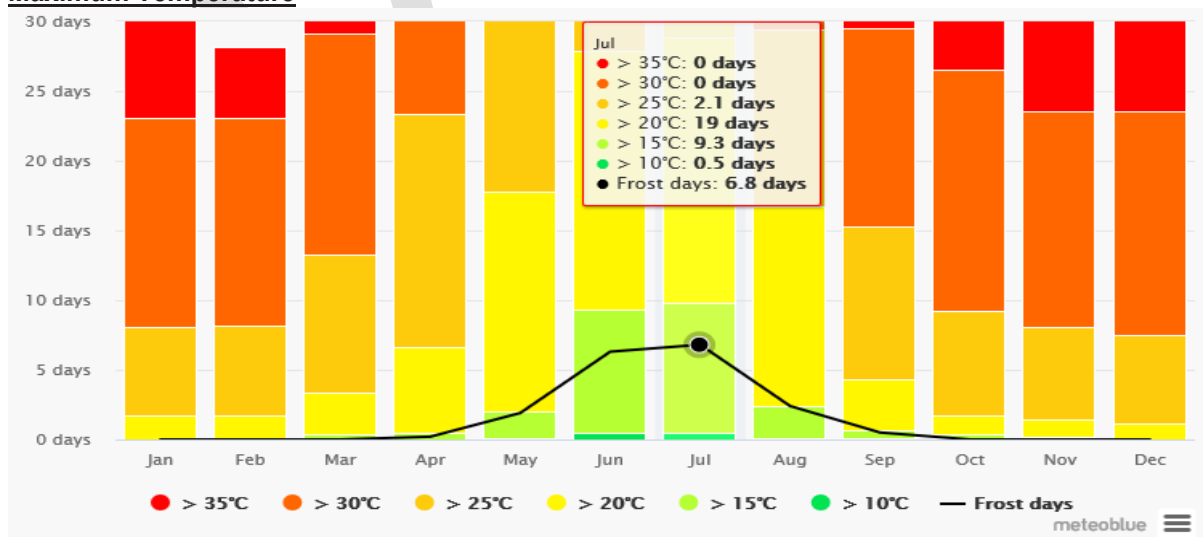
The “mean daily maximum “(solid red line shows the maximum temperature of an average day for every month for Sun City Resor.Likewis, mean daily minimum (solid blue line) shows the average minimum temperature. Hot days and cold nights (dashed red and blue line) show the average of the hottest day and coldest night of each month of the last 30 years. For vacation planning, you can expect the mean temperature, and be prepared to hotter and colder days. Wind speeds are not displayed per default, but can be enable at the bottom of the graph.

Cloudy, Sunny, and Precipitation days



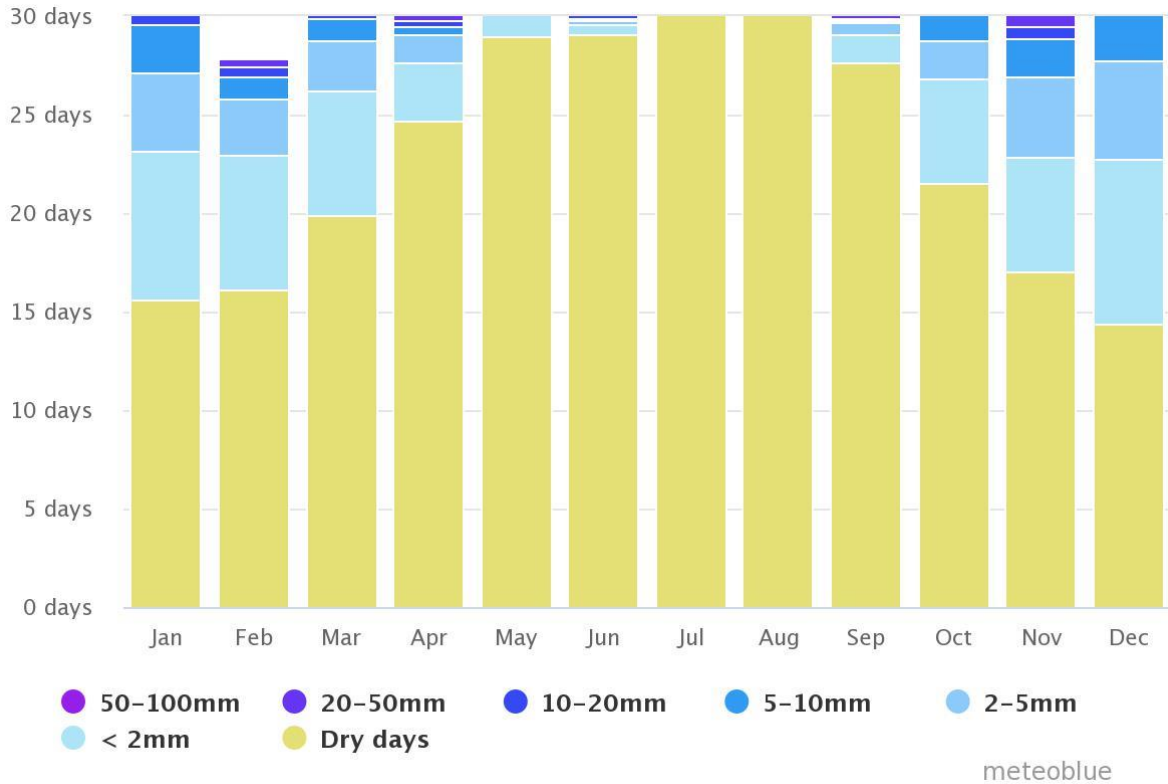
The graph shows the monthly number of sunny, partly cloudy, overcast and precipitation days. Days with less than 20% cloud cover considered as sunny, with 20-80% cloud over as partly cloudy and with more than 80% as overcast

Maximum Temperature



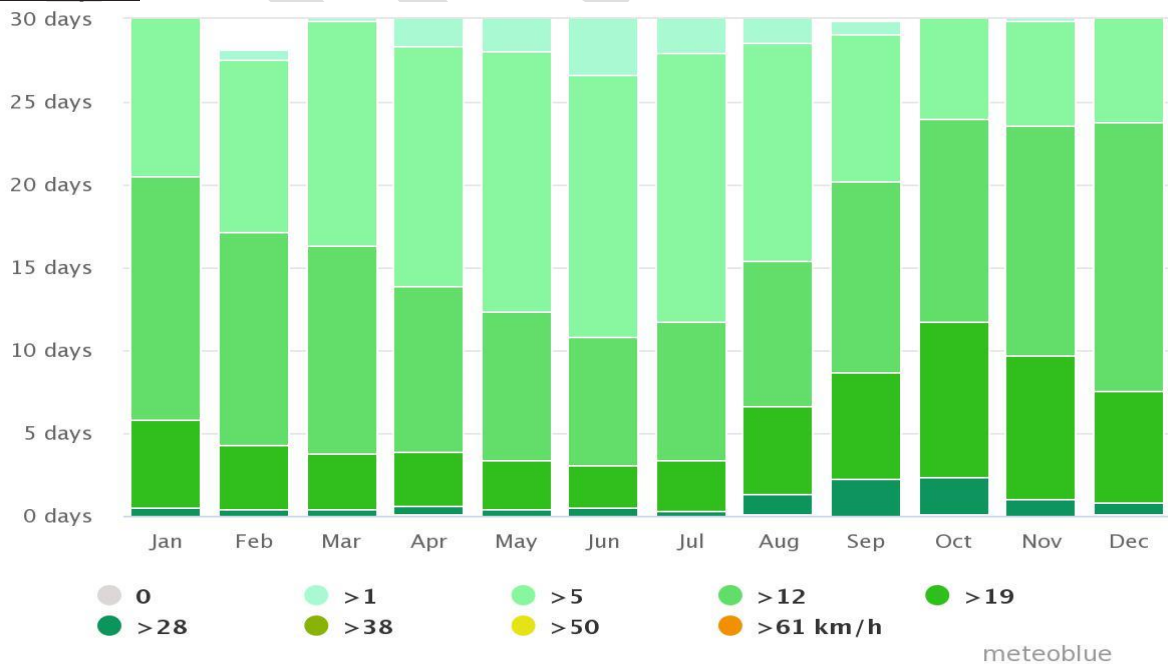
The maximum temperature diagram for Sun City Resort display how many days per month reach certain temperature

Precipitation Amounts



The precipitation diagram for Sun City shows on how many days per month, certain precipitation amount is reached. In tropical and monsoon climates, the amount may be underestimated.

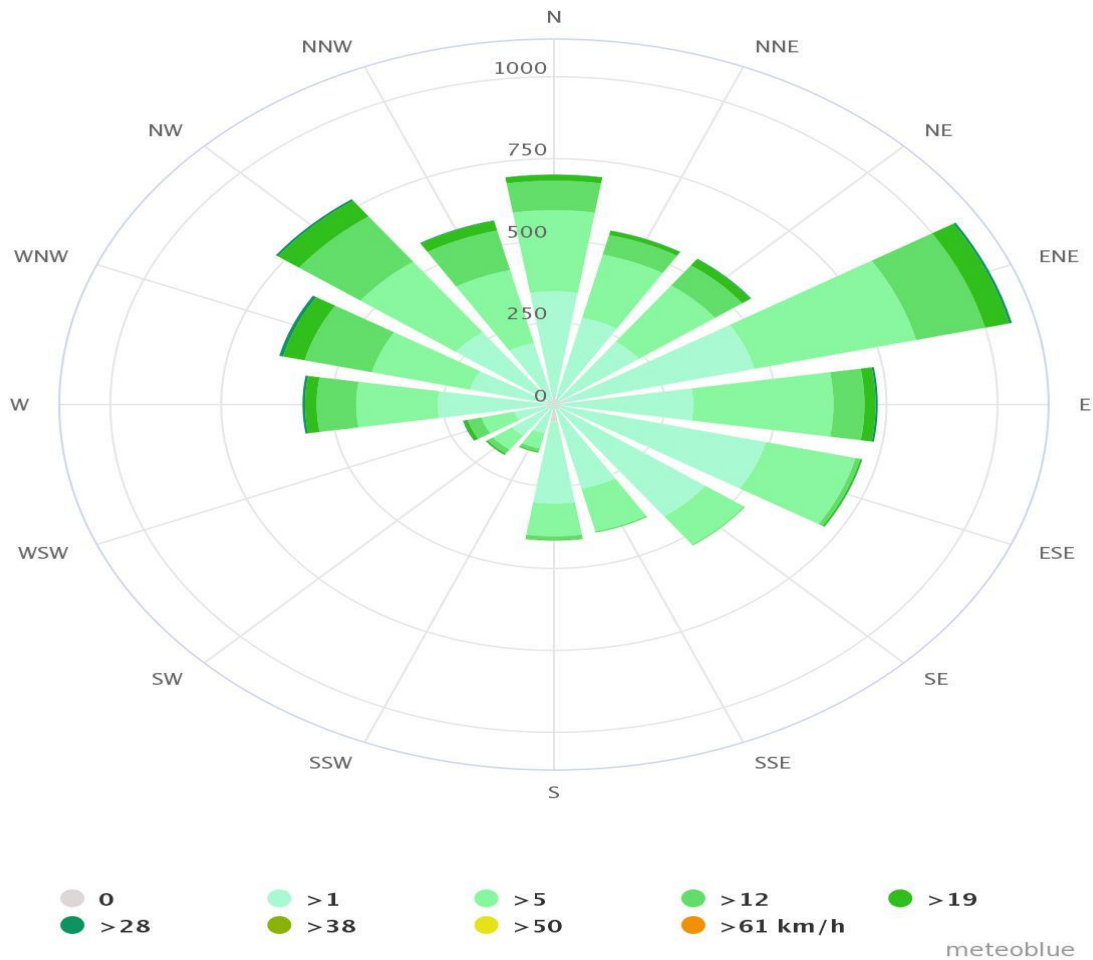
Wind Speed



The diagram for Sun City Resort shows the days per month, during which the wind reached a certain speed. An interesting example is the Tibetan Plateau, where the monsoon creates steady strong winds from December to April, and calm winds from June to October. The Wind speed units can be changed in the preference (top right)

Wind speed units can be changed in the preferences (top right

Wind Rose



The wind rose for Sun City Resort shows how many hours per year the wind blows from the indicated direction. Example SW: Wind is blowing from South –West (SW) to North –East (NE).

Surface water

The project area falls within the Crocodile and Marico West Water Management Area. No surface water resource traverses the proposed mining area. Two non-perennial tributaries of the Motlhabe River flow next to the project area (approximately 200m from the project site). The tributaries are generally dry and flow only after significant rainfall. They are not utilised as water sources by the local community or livestock.

Vegetation

The proposed site falls within the Savannah Biome. The Savannah Biome is the largest biome in South Africa, covering approximately 34.3% of the country (E-Kapa, 2007). It is found at sea level to areas 2 000 masl. The landscape is characterised by grasses with shrubs and occasional trees. The savannah Biome has a tropical climate, with dry winters and wet summers (www.blueplanetbiomes.org).

The summer rainfall ranges from 235mm over the Kalahari area to 1000mm a year over the eastern area (E-Kapa, 2007). There are more than 5 700 plant species in the savannah Biome and it plays host to wild animals, like the lion, leopard, cheetah, elephant, giraffe, zebra and many bird species (E-Kapa, 2007). The site consists of Zeerust Thornveld (SVcb 3). Less than 4% of this vegetation type is statutorily conserved between four reserves including the Pienaar and Marico Bushveld Nature Reserves. Some 16% of the Zeerust Thornveld vegetation has been transformed mainly by cultivation, with some urban or built-up areas. The Vegetation is classified as Least Threatened with a conservation target of 19% (Mucina and Rutherford, 2006). Zeerust Thornveld consists of deciduous, open to dense short thorny woodland, dominated by Acacia species with herbaceous layer of mainly grasses on deep, high base-status and some clay soils on plains.

Groundwater

Groundwater Information available from previous groundwater investigations at Ruighoek (Golder, May 2007) and (Brink, D; Canahai, G; February 2012) can be summarised as follows:

- The main aquifers are secondary fractured aquifers and weathered rock aquifers;
- Groundwater levels ranged from 5.82 mbgl to 20.38 mbgl (1130 mamsl to 1133 mamsl) based on data collected in 2001;
- Yields in boreholes identified during a 2001 hydro census varied from dry to 10 l/s;
- Boreholes are used mostly for domestic use and stock watering; Groundwater quality generally did not meet the South African Water Quality Guidelines for domestic use due to high salinity, high Ca, high Mg and high nitrate;
- The main source of groundwater recharge was identified as high-lying ground in the Pilanesberg Mountains and low-lying areas of the Motlhaba River catchment;
- Annual groundwater abstraction was estimated at 105 m³/yr., and the fractured/weathered rock aquifers are described as “minor”.
- Two aquifers were identified:
 - Weathered zone aquifer which extends to a depth of 5 m to 30 m. The saturated zone in this aquifer can vary from 0 m to 20 m. Porosity is of the order of 1% to 25%. Transmissivity ranges from 30 m²/day to 150 m²/day. The aquifer is of limited extent and subject to dewatering under sustained pumping conditions; and
 - Fractured rock aquifers are associated with sub-vertical fractures

Air Quality

Currently there is no measured air quality data for the vicinity of the proposed mining area 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 from these nearby mines were 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 40km to 70km south-east 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 drilling), 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, NO_x 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).

Demography

Moses Kotane Population was estimated at 242 553 by 2011 census compared to 237 175 by Census 2001. The Municipality has a predominantly African population with fewer Indian, Coloured and white's groups who are mostly residing in Sun City residence and Mogwase Unit 2. It should be noted that the recognized legal statistics to be used developing IDPs is from Census 2011.

Geographic information of households by 2011 was estimated at 75 195 compared to 61759 by census 2001 with the same total number of demarcated wards, the municipality is comprised of 31 Wards and is led by Council, the Speaker, Mayor and Executive Committee, the mayor is the head of Executive

Committee (EXCO) which comprises of 10 Councillors who are head of various departments and serve in portfolios, Total number of Proportional Representatives and Ward Councillors amount of 62.

Demographic indicators				
Census 1996	Male	108313	Female	121308
Census 2001	Male	115715	Female	121460
Census 2011	Male	120515	Female	122038
Population Growth (2001 -2011)	0.22			

Racial Composition /Population Group	Population Group	Male	Female	Total
	Black Africa	118092	120424	238516
	Coloured	325	294	620
	Indian or Asian	837	363	1200
	White	989	840	1829

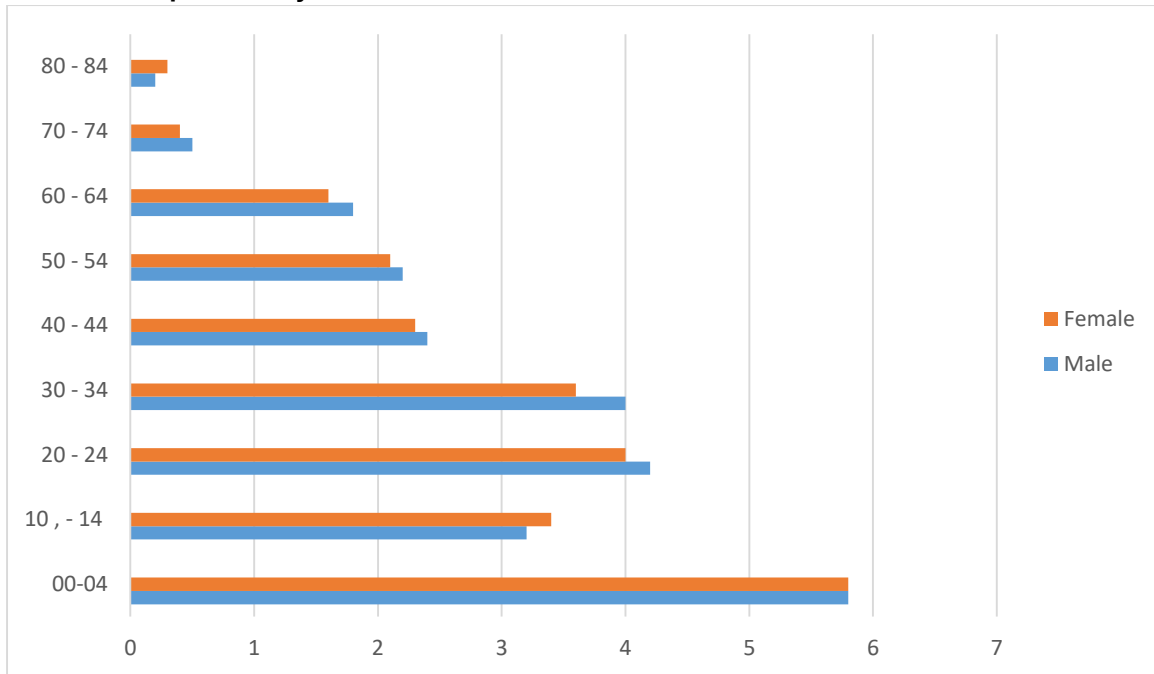
Population Distribution/ Composition Structure and Pyramid	
Area (km ²)	3839
Population Density (POP/km ²)	42.4
Urban Formal Area	27.7
Traditional Area	4224.2
Informal Area	
Farm Area	1467.3

Population Composition and Structure				
Young (0-14)	Male	35696	Female	35099
Working Age (15-64)	Male	77489	Female	75483
Elderly (65+)	Male	7330	Female	11456

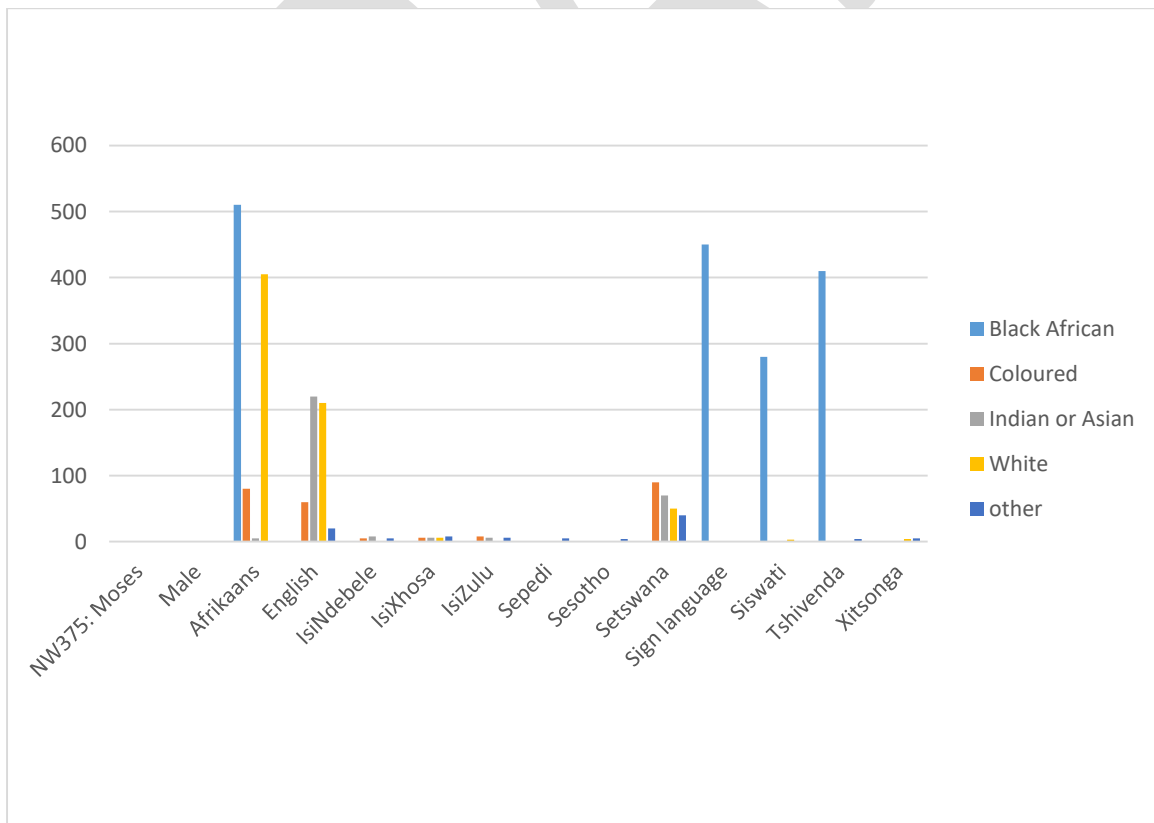
DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

Sex Ratio (Males/ 100 Females)	99
Dependency Ratio (<15+>65/(1564)	58.56

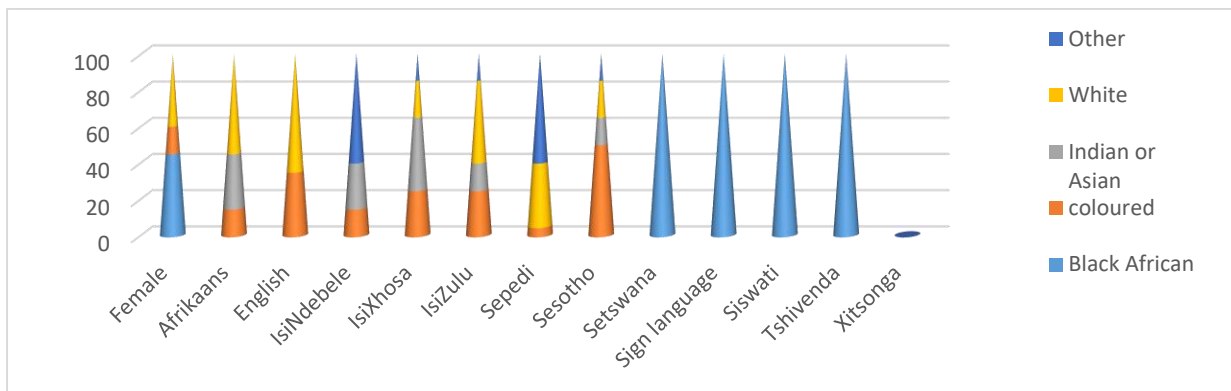
Picture of Population Pyramid



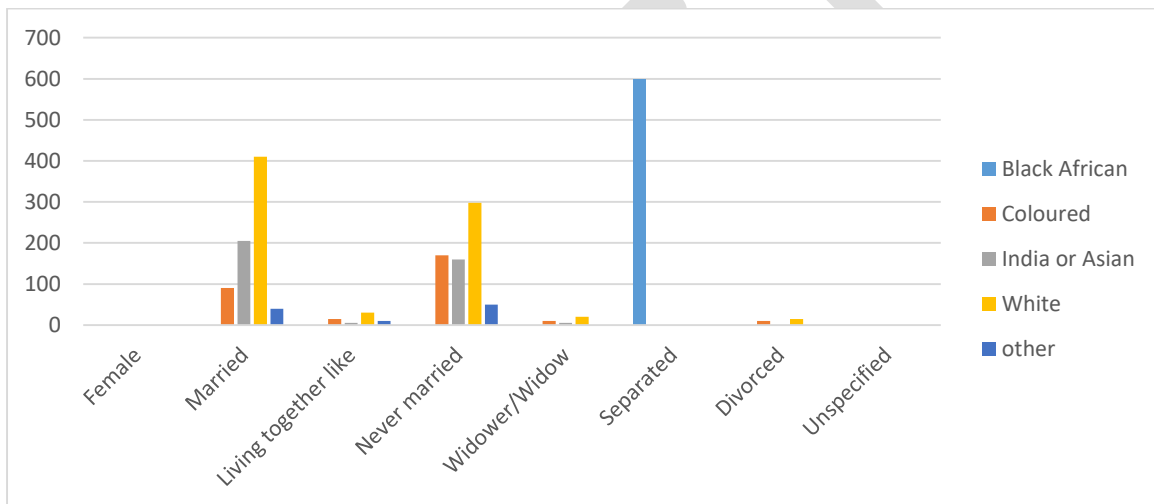
Census 2011 by municipality, language, and Gender and population group



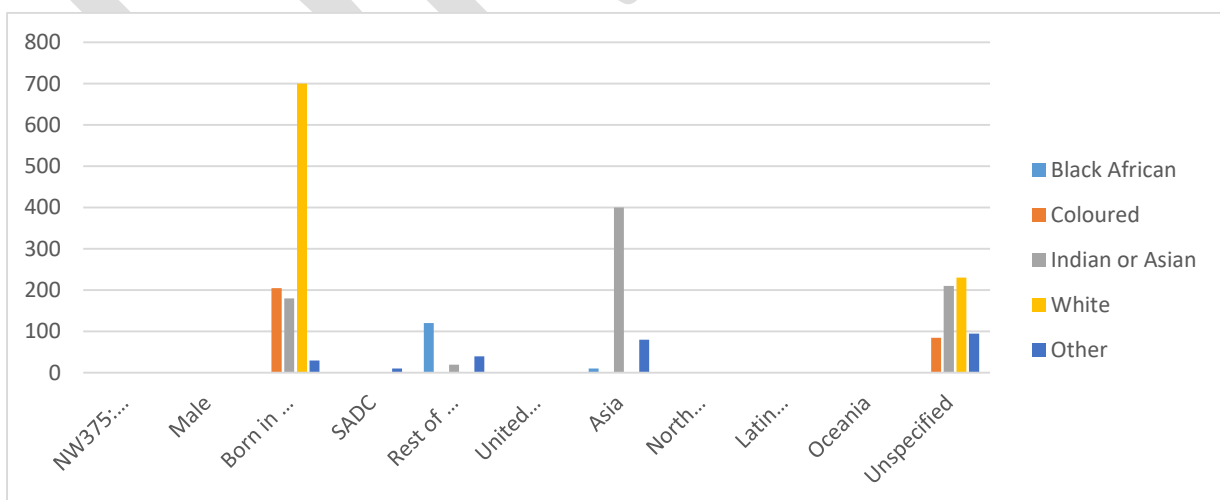
Census 2011 by municipalities, language, and Gender and population group



Census 2011 by municipalities, marital status, gender and population group

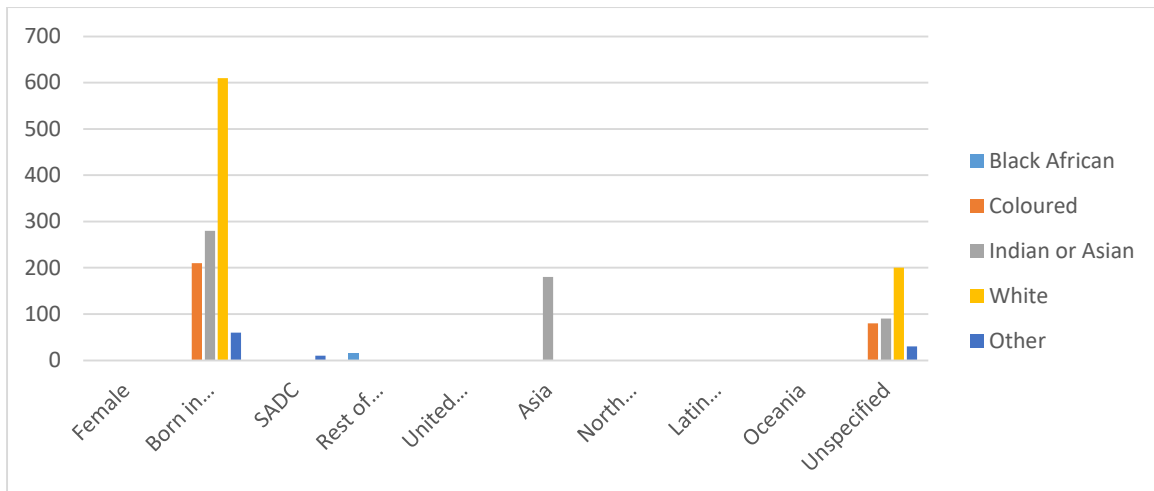


Municipalities, region of Birth, Gender and population group

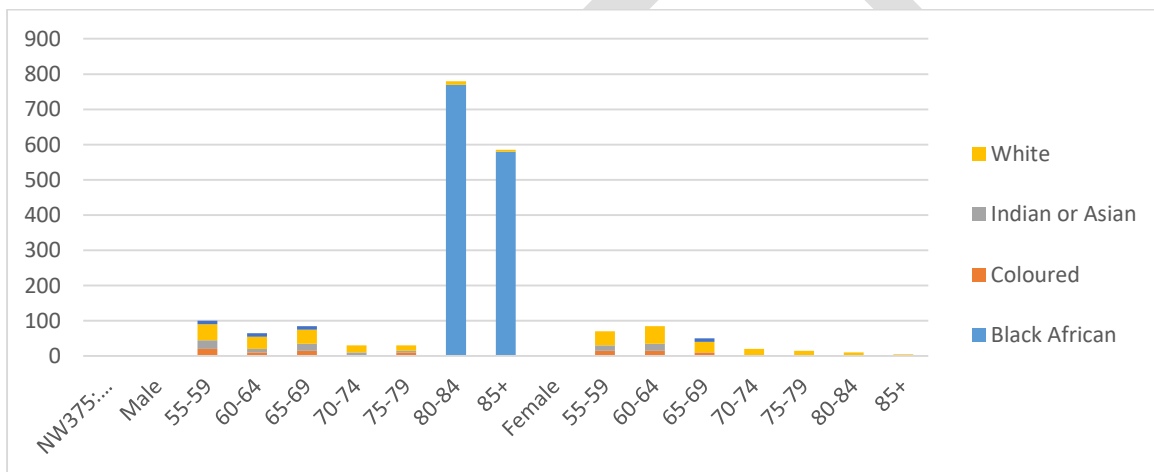


Census 2011 by municipalities, region of birth, gender population group

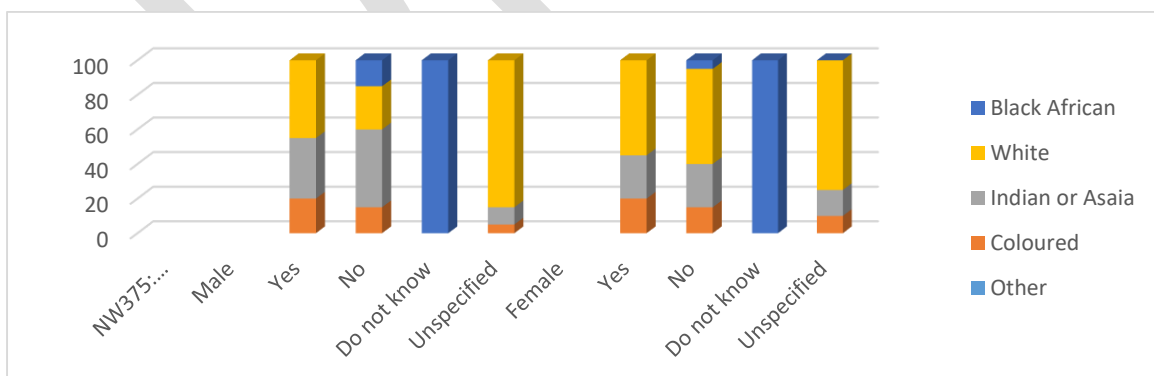
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Census 2011 by municipalities, age group, gender and population group

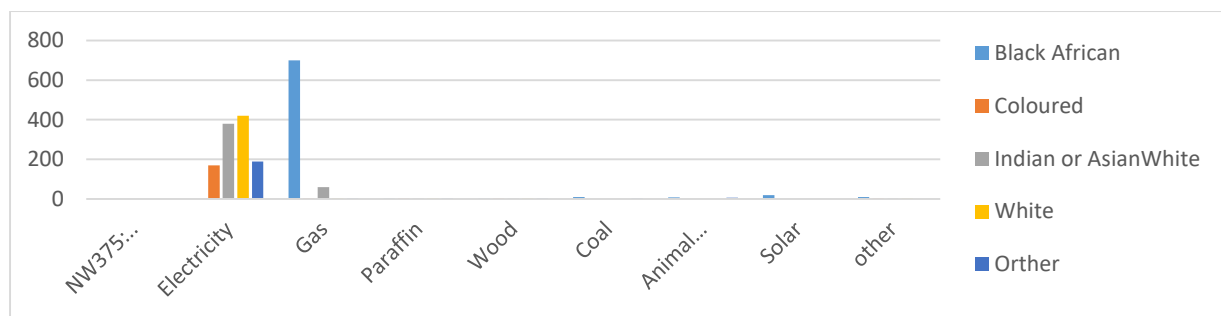


Census 2011 by municipalities, school attendance, gender and population group

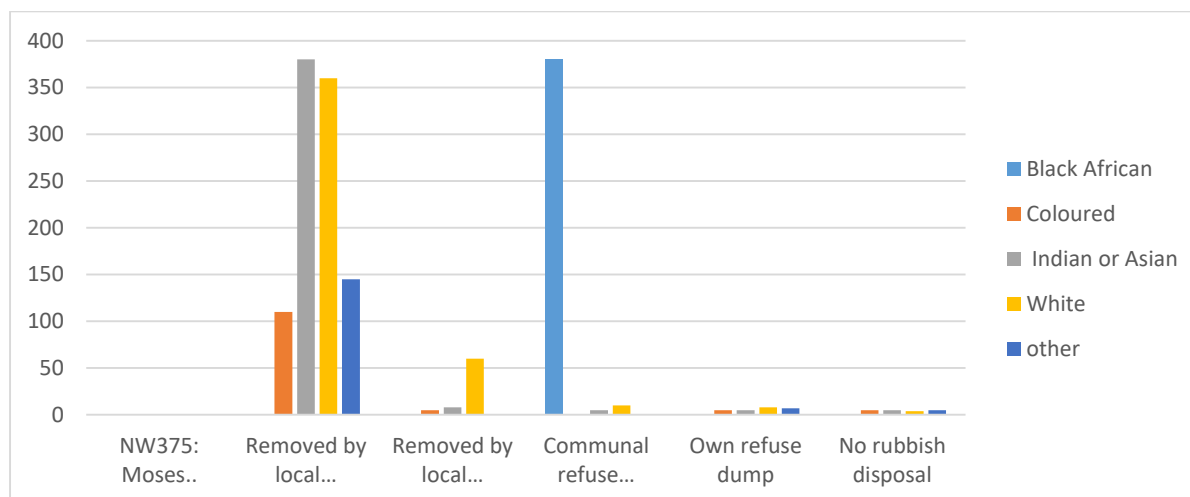


Municipalities, energy or fuel for cooking by population group of head of the Household

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Census 2011 refuse removal by population group of head of the Household



Waste and Environmental Management

Integrated Waste Management Plan still a draft and has to go to council for resolution, Waste Management is problematic in the Moses Kotane Local Municipal area. The existing waste disposal site in Madikwe needs to be upgraded as expected and outline in the Waste Management Act of 1998. This will be carried out in the financial year 2017/2018 and the implantation of the projects in 2018/2019 – 2019/2020 financial year, Mogwase town new landfill is classified as GBS and is currently have a service provider managing and operating it, The old Mogwase Landfill is under rehabilitation and the rehabilitation process will end in 2018/2019 financial year, The Boreholes have been installed in Madikwe and New Mogwase Landfill site, whereby monitoring and testing of ground water is been done.

Sun City has its own waste disposal site which is properly manage but it has reached a closure phase, Medical waste from most clinics is reportedly dumped in open areas as a results of lack of incinerators around to burn such waste .The need for waste disposal sites is only evident in the two towns of Madikwe and Mogwase where large amounts of waste are produced but is not a priority in most rural areas where little waste is produced and is only burned or buried .Another problem identified relates to littering especially around public place and taxi ranks particularly in Madikwe and Mogwase town.

Moses Kotane Local Municipality west of the Pilanesberg National Park, is characterised by high levels of biodiversity as determine in the North West Biodiversity database. In response to the importance of biodiversity as a concerned, the North West parks Board and tourism board is also considering the extension of a number of existing nature reserve and conservation areas. The most notable of these include the existing Heritage Park development which is envisaged to link the Madikwe Game Reserve in the west with the Pilanesberg National Park in the east

Other proposed initiatives include the possible expansion of the vaalkop dam nature reserve to link up with the Pilanesberg National Park as well as the expansion of the Borakalalo nature reserve to link up with Vaalkop dam, this will create conservation corridor stretching from the Borakalalo nature reserve in the east through Vaalkop Dam, Pilanesburgup to the Madikwe Game Reserve in the West

Geology

Bushveld Igneous Province

The Bushveld magmatic province is an unusual massive crustal emplacement of predominantly mafic Mg and Fe rich extrusive and intrusive rocks. It is of a Paleoproterozoic age (2.06 Ga) and it is unreformed. It is the largest magmatic layered intrusion in the world. The Bushveld magmatic province is located centrally within the northern portion of South Africa (Burger and Coertze, 1975). It comprises in part voluminous volcanoes that were predominantly felsic rather than basaltic in composition and it lacks associated dyke swarms

The Paleoproterozoic Bushveld Igneous Province in South Africa is comprised of;

- The bimodal but predominantly Rooiberg Group volcanic province.
- The Rustenburg Layered Suite, the largest mafic layered complex on Earth.
- The tabular Lebowa Granite Suite.
- The Rashedo Granophyre Suite developed at the contacts between the granites and Rustenburg Layered Suite.
- The Molopo Farms and Nkomati – Uitkomst which are isolated smaller mafic intrusions.

Mineralization in the Rustenburg Layered Suite

The mining permit area of interest lies under the western limb of the Rustenburg Layered Suite within the Bushveld Complex. The mafic rocks that are collectively termed the Rustenburg Layered Suite can be divided into about five zones. The zones are referred to as the Marginal, Lower, Critical, Main and Upper Zone. The Marginal zone is generally comprised of fine grained rocks and contains abundant calcsilicate xenoliths. The thickness of this zone is highly variable and may be completely absent in some areas. The zone has no known mineralization.

The marginal Zone is overlain by the Lower Zone. The Lower Zone is dominated by orthopyroxene with associated olivine rich cumulates in the form of harzburgites and dunites. The commencement of the Critical Zone is marked by the appearance of cumulus chromite layers. The Critical Zone is divided into Lower and Upper Critical zone. The Critical Zone hosts all the chromitite layers and it is characterized by regular cyclic layering. Approximately 25 cyclic units have been identified. The Lower Critical Zone contains about seven chromitite seams occurring within the pyroxenite. They are termed the Lower Group

chromitite seams (LG). Included in the Lower zone are the MG1 and MG2 chromitite layers. Above the MG2 chromitite seam, plagioclase becomes cumulus and marks the commencement of the Upper Critical Zone.

The Critical Zone is approximately 800m thick. The MG3 and MG4 chromitite seams occur at the base of the Upper Critical Zone. The Critical Zone is characterized by a number of cyclic units beginning with narrow pyroxenitic horizons with chromitite layers which invariably pass up into norites, leuconorite and eventually anorthosite. The first important rhythmic layering in the Upper Critical Zone is the UG1 cyclic unit. It is said to be a spectacular unit consisting of chromitite layers with interlayered footwall anorthosite. Another significant cycle is that of the UG2.

The UG2 chromitite seam is of considerable importance because it contains economic concentrations of PGE mineralization. The UG3 chromite seam is 10m above the UG2 chromite seam and is the focal point of this thesis. The Merensky and the Bastard cycles are the uppermost rhythmic units. The Merensky reef is known for its economic PGE concentrations. The top of the Critical Zone is defined by the Giant Mottled Anorthosite. Overlaying the Critical Zone is the Main Zone.

The Main zone consists of norites grading upwards into gabbronorite. Several layers of anorthosite occur in the lower part of the main zone. A distinctive pyroxenite layer, called the Pyroxenite Marker appears two thirds towards the top of the zone. The middle part of the Main Zone is said to be very resistant to erosion and thus have given rise to the Pyramid Hills found in the Southwestern limb of the Rustenburg Layered Suite. The resistant part of the Main Zone is being mined for dimension stones The Main Zone is overlain by the Upper Zone.

The Upper Zone is characterized by layers of magnetite and its base is marked by the appearance of cumulus magnetite above the Pyroxenite Marker. The zone is approximately 2km thick. The Upper Zone contains between 24-27 magnetite layers, the 4th layer being termed the Main Magnetite Layer is the most prominent. The 4th layer is underlain by an anorthosite and it is mined for its vanadium content in the Eastern and Western Limbs of the Bushveld Complex.

(b) Description of the current land uses

The current land use is used for grazing. The proposed project site is comprised of natural bushveld that contain grasses. The area surrounding, the proposed project was previously disturbed and the area was left without being rehabilitated as depicted in the picture below.



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

The mining activity will have no impact to the community which is near the proposed development. There are no significance environmental features on site. There is no building on site as the applicant applied in the area next to the existing mining permit.

(d) Environmental and current land use map.

(Show all environmental and current land use features see attached **appendix 2**)



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).

PHASE	ACTIVITIES	PONTENTIAL IMPACT	REVERSIBILITY	IRREPLA CEBLE DAMAGE	CAN IMPACT BE AVOIDE
CONSTRUCTI ON PHASE	Site access	Fauna and flora -Destruction and/or disturbance of on-site fauna and flora. -Poor access control resulting in impacts on livestock, e.g. cattle breeding, breeding and grazing practices.	Partial	Yes	Yes
		Soil -Soil compaction resulting from repeated use of access roads.	Yes	No	Yes
		Noise -Vehicle traffic noise impact affecting cattle and/or wildlife.	Yes	No	Yes
		Heritage	No	Yes	Yes

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		-Potential destruction of heritage resources			
OPERATIONAL PHASE	Site establishment activities including: Activities a. Vegetation clearing of area. b. Topsoil stripping and stockpiling. c. Erection of temporary site office shaded area, potable ablution facilities and water storage tanks and ore bay. d. Erection of fuel storage tank. e. Erection of safety barrier. f. Waste generation and management.	Soil -Destruction and/or disturbance of on-site fauna and flora. -Soil disturbance and compaction and topsoil stockpiling resulting in soil erosion.	Partial	No	Yes
		Air quality -Dust emission resulting from site clearing, soil stripping and construction activities (including vehicle entrained dust).	Partial	No	Yes
		Visual -Visual impact affecting visual character and "sense of place".	Partial	No	Yes
		Social -Influx of persons (job seekers) to site as a result of increased activity resulting in increased incidents of theft and opportunistic crime.	Partial	No	Yes
		Heritage -Potential destruction of heritage resources.	Partial	No	Yes
		Topography	Yes	Partial	No

		-Disturbance of topography due to cutting down of trees. Which include erosion of topsoil cover and soil erosion which may occur on roadside due to excavation of earth/cutting operation?			
		Noise -Noise from heavy vehicles and machinery.	Yes	Partial	No
		Surface water -Increase in storm water runoff. The development will potentially result in an increase in storm water run-off that needs to be managed to prevent soil erosion. -Destruction of water courses(pans/dams/streams) Leakages of hazardous material. The machinery on site requires oils and fuel to function, leakages of these oils and fuel can contaminate surface water supplies.	No	Yes	Yes
		Groundwater -During the construction phase, the sanitary wastewater will be generated at the site, if this wastewater is allowed to stagnate in water ponds on the site, it can percolate into the soil, thereby, contaminating groundwater. -leakage of hazardous materials. The machinery on site requires oils and fuel to function, leakage of these oils and fuels can contaminate water supplies.	Yes	No	Partial

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Fauna and flora -Destruction and/or disturbance of on-site fauna and flora. -Poor access control resulting in impacts on livestock, e.g. cattle breeding, breeding and grazing practices.	Partial	Yes	Yes
DECOMMISSIONING PHASE	Removal of Temporary infrastructure a) Removal of temporary site office, portable ablution	Air quality -Dust emission from decommissioning activities (include vehicle causing dust)	No	Yes	Yes
		Fauna and Flora -Poor access control resulting in impact in cattle movement, breeding and grazing practice.	No	Partial	Yes
		Social -Unemployment to personal working at mine immediately after closure.	No	No	No
		Economic -Increased skilled labour force -increased business operation within vicinity initiated by exististence of the mine	No	No	No
		Waste -contamination of river system on rainy seasons from the waste from decommissioning activity.	No	Yes	Yes

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).

NATURE OF THE IMPACT

EXTENT	The physical and spatial size of the impact
Local	The physical and spatial size of the impact
Site	The impact could affect the whole area
Cumulative	The impact could have a cumulative effects with the surrounding land use
DURATION	The life time of the impact which measured in the context of the life time of the proposed phase
Short term	The impact will either disappear with mitigation or will be mitigated through natural process in short time period(05 to 5 years construction)
Medium term	The impact will last up to the end of the mining period.(05 to 15 years operation)
Long term	The impact will continue or last for the entire operational life of the mine, but will be mitigated by direct human action or by natural processes thereafter. (Greater than 15 years with impact after closure of the project.
Permanent	Mitigation either by man or natural process will not occur in such a way that a time span that the impact can be considered transient.
ITENSITY	This describes how destructive or begging of the impact is does it destroy the impacted environment, alter its functional or slightly alter it.
Low	This alter affected environment in such a way that the natural processes or faction are not affected. This impact is limited in extent. Impact is of low order and therefore likely to have little real effects. Mitigation is either easily achieved or little mitigation is required
Medium	The affected environment is altered ,but functional and process continue ,although in a modify way
High	Faction or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases. This will be a relative evaluation within the context of all the activities and the other impacts within the frame of the projects

Probability	This describes the likelihood of the impacts actually occurring. The impact may occur for any length of time during the life cycle of the activity, and not any given time.
Improbable	The possibility of the impact occurring is very low, due to the circumstances, design (less than 5% chance)
Probable	There is a possibility that the impact will occur to the extent that provisions must be made therefore.
High probable	It is most likely that the impacts will occur at some or other stage of the development. (Mostly like 60 % to 90 %)
Definite	The impact will take place regardless of any preventative plans, and mitigation measure or contingency plan will have to be implemented to contain the impact (impact will definitely occur)
Determination of significance	Significant is determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required
No significance	The impact is not likely to be substantial and does not require any migratory action
Low	The impact is of little importance, but may require limited mitigation
Medium	The impact is of importance and therefore considered to have negative impact. Mitigation is required to reduce the negative impacts to acceptable level.
High	The impact is of great importance. Failure to mitigate, with the objective to reduce the impact to acceptable level, could render the entire development option or entire project proposal unacceptable.

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).

Determination of Significance – With Mitigation (Significance Following Mitigation (SFM):

Equation 1:

$$\text{Significance Rating (WOM)} = (\text{Extent} + \text{Intensity} + \text{Duration} + \text{Probability}) \times \text{Weighting Factor}$$

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:

$$\text{Significance Rating (WM)} = \text{Significance Rating (WOM)} \times \text{Mitigation Efficiency}$$

Or

$$WM = WOM \times ME0$$

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?

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

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

IMPACTS METHODOLOGY IN PHASES.

CONSTRUCTION PHASE							
Impacts	Activity causing the impact	Nature of the impact	Extend	Duration	Magnitude	Probability	Significance
Destruction and disturbance of onsite fauna and flora	Site establishment activities including vegetation clearing. Top soil striping and stockpiling ,drill pad compaction and excavation	loss of fauna &flora and soil resources	Site	short	moderate	definite	high
Soil	Vehicle equipment and oil/lubricant /diesel spill may contaminate the soil. The mixing of soil during site preparation, compaction and potential pollution (spillage from oil)may cause this situation	Potential soil contamination and loss of soil fertility	site	long	moderate	definite	high
Topography	Disturbance of surface construction of access road and office	Change in land form and disturbance of the surface drainage	site	short	moderate	definite	High
Vegetation	Mining equipment such as excavator ,front and loader are the one which will be responsible for this impact	Dust emission can have impact on leaves of the plant.	site	short	moderate	definite	high

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

influx of person (job seeker to the site as a result of increased incident and the theft and crime	Job seeker	Increase in land and noise pollution	local	short	moderate	Definite	high
Lifestyle and culture	Cultural differences/conflict between the contractor workforce and the local inhabitant, conflict arising due to the mix of local and migratory worker as the use of local resources and product will be increased	Increase in crime rate	local	medium	moderate	Definite	low
Increase in harmful emission and greenhouse gases in the atmosphere	Mining equipment such as excavator ,front and loader are the one which will be	Air emission	Site	low	moderate	Definite	Low
Noise generations	Site establishment and construction of access road	Disturbance of wild animals					
Noise disturbance during construction operation and decommission	Site establishment and construction of access road	Disruption to surrounding due to noise levels	local	Long term	moderate	Definite	High
OPERATIONAL PHASE							

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

Destruction and disturbance of onsite fauna and flora	Site establishment activities including vegetation clearing. Top soil striping and stockpiling , compaction and excavation	loss of fauna &flora and soil resources	site	low	moderate	definite	low
Soil	Vehicle equipment and oil/lubricant /diesel spill may contaminate the soil. The mixing of soil during site preparation, compaction and potential pollution (spillage from oil)may cause this situation	Potential soil contamination and loss of soil fertility	site	low	moderate	Definite	low
Topography	Disturbance of surface construction of access road and office	Change in land form and disturbance of the surface drainage	site	low	moderate	Definite	Low
Vegetation	Mining equipment such as excavator ,front and loader are	Dust emission can have impact on leaves of the plant.	site	medium	moderate	Definite	low
Noise disturbance during construction operation and decommission		Disruption to surrounding due to noise levels	site	medium	moderate	Definite	low
Water and soil pollution resulting from disposal drill fluid	Collection storage and evaporation and waste generation and management	Loss of water resources and soil resources	site	medium	moderate	Definite	low
Dust emission from general site activities	excavation and transporting and hauling	Loss of water resources and soil resources	local	medium	moderate	definite	low

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

(including vehicle entering the site							
Continue soil erosion from topsoil stockpile and soil compaction from drilling, excavation and transporting material to the plant	evaporation , waste generation and management	Loss of soil resources	site	low	moderate	Definite	low
Soil erosion	Excavation of earth /cutting operation and clearing of vegetation	Loss of soil fertility	local	high	moderate	Definite	low
Surface and ground water	Excavation of earth /cutting operation and clearing of vegetation. There is also possible that various material like fuel, lubricant oil.	Pollution of ground and surface water	site	low	Moderate	Definite	low
Impacts on the pans and associated ecosystem in the area	excavation and hauling and transportation	Loss of sensitive environment and loss of fauna and flora	site	Low	Moderate	Definite	low
Groundwater Quality	excavation and hauling and transportation	Leak, acid mine drainage and pollution	Local and regional	Low	Moderate	Definite	low
Spill, pollution	excavation and hauling and transportation	Contamination of ground of ground water	local	Low	moderate	Definite	low
DECOMMISSIONING PHASE							

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

Destruction and or disturbance of on-site fauna	Removal of temporary infrastructure including removal of temporary site office shaded area ,potable ablution facilities,water storage	Loss of sensitive environment ,loss of fauna and flora	local	low	moderate	Definite	low
Potential water and soil pollution resulting from hydro carbons spill	Removal of temporary infrastructure including removal of temporary site office shaded area ,potable ablution facilities,water storage	Contamination of surface and ground water	site	low	moderate	Definite	low
Dust emissions from decommissioning activities including dust from vehicles	Removal of temporary infrastructure including removal of temporary site office shaded area ,potable ablution facilities,water storage	Increased dust emission	local	medium	moderate	Definite	low
Traffic volume	Removal of temporary infrastructure including removal of temporary site office shaded area ,potable ablution facilities,water storage	Increase in construction vehicle	Local	medium	moderate	Definite	low
Heritage resources	Removal of temporary infrastructure including removal of temporary site office shaded area, potable ablution facilities, water.		site	low	moderate	Definite	low

vii) The positive and negative impacts that the proposed activity (in terms of the initial site layout) 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 Impact

The applicant will conduct all activities at the horizontal distance of 500m away from the water course and 100m away from any infrastructure. Creation of short term job opportunity during the construction and operation for residents of the local community. Improve standard of living of the community. Training and skills development opportunities.

Negative Impact:

Vegetation loss. Decrease in air quality in the immediate surroundings of the mine. Increase traffic volumes as a result of more heavy vehicles making use of the roads in the immediate area. Noise and vibration levels and disturbance. Minimal soil contamination and soil erosion. Minimal dust generation. Loss of soil and agricultural potential.

viii) 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)

The following are the possible mitigation measures

- All vehicles and machinery will be regularly serviced to ensure they are in proper working condition and to reduce risk of leak.
- Fuel and oil spill shall be treated immediately by appropriate mop-up product.
- Provide dust musk to works on the site
- The applicant shall ensure that the basic firefighting equipment is available on the site
- Fire response and evacuation area.
- Dust suppression shall be implemented during the dry period and windy condition
- Drinking water will be supplied in plastic containers to be stored on site
- Noise level will be kept within acceptable limit.
- Stockpile heights must have kept as low as possible.
- First aid facilities should be available on site all the time.
- Road will be maintained.
- Drivers will be enforced to keep setting speed limits.
- All chemicals, fuels and oils to be stored on site will be appropriately stored in sealed containers and placed on a lined area.

ix) Motivation where no alternative sites were considered.

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

Geology of the area is well-known due to mining activities that were established previously and that is currently taking place within the property.



x) **Statement motivating the alternative development location within the overall site.**

(Provide a statement motivating the final site layout that is proposed)

The geological status proposed area is understood to have the desired chrome ore deposit as the area is historically disturbed. There is also existing mining closed to the proposed project.

i) **Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site (In respect of the final site layout plan) through the life of the activity.** (Including (i) a description of all environmental issues and risks that were identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures

The criteria for the description and assessment of environmental impacts are outlined below:

The criteria for the description and assessment of environmental impacts are outlined below:

Impact identification

Potential impacts will be categorised according to the direct impact on the environment:

- Direct/primary impacts

Primary impacts are caused directly due to the activity and generally occur at the same time and at the place of the activity. Impacts such as changes to the topography and destruction of fauna and flora.

- Indirect/secondary impact

Secondary impacts induce changes which may occur as a result of the activity. Impacts on the ground, surface water as result of contamination from leakages and spills of hydrocarbons, the decrease of certain species due to the loss of habitat.

- Cumulative impacts

Cumulative impacts are those that result from the incremental impact of the proposed activity on common resource when added to the impacts of the past, present or reasonably foreseeable future activities. E.g. impacts such as the decrease in the quality of the ground water or surface water due to the contaminations.

These cumulative impacts can occur from the collective impacts of individual minor actions over a period of time and can include both direct and indirect impacts.

Determining significance.

A ranking system was established in order to assess the impacts objectively, and each aspect was assigned a value. The impact consequence is determined by the summing scores of nature, duration and extent. The impact significance is determined by multiplying the consequence result with the probability score, i.e.

Significance= (Nature + Duration + Extent) x Probability

An explanation of the impact assessment criteria is defined below.

Magnitude / Intensity: The intensity of the impact is considered by examining whether the impact is destructive or benign, whether it destroys the impacted environment, alters its functioning, or slightly alters the environment itself.

The intensity is rated as:

It was concluded that the proposed development will not have a significant negative environmental impact if the proposed mitigation measures will be implemented and the EMP be adhered accordingly.

Definition of Significant rating

SIGNIFICANT RATINGS	LEVEL OF CRITERIA REQUIRED
High	-High magnitude with a regional extent and long term duration -High magnitude with either a regional extent and medium term or a local extent and long term duration -Medium magnitude with a regional extent and long term duration
Medium	-High magnitude with a local extent and medium term duration -High magnitude with a regional extent and construction period or a site specific extent and long term duration -High magnitude with either a local extent and construction period duration or a site specific extent and long term duration. -Medium magnitude with any combination of extent and duration except site specific and construction period or regional or long term. -Low magnitude with a regional extent and long term duration.
Low	-High magnitude with a site specific extent and construction period duration. -Medium magnitude with a site specific extent and duration except site specific and construction period or regional or long term. -Very low magnitude with a regional extent and long term duration.
Very low	-Low magnitude with a site specific extent and construction period or regional or long term. -Very low magnitude with any combination of extent and duration except regional or long term.
Neutral	Zero magnitude with any combination of extent and duration.

j) 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 activity (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*)

Phase	IDENTIFICATION		CONSEQUENCES	IMPACT BEFORE MITIGATION							MITIGATION MEASURES
	Activity	Aspect	Impact	Nature	Extent	Duration	Intensity	Probability	Significant	Classification	Mitigation and management measures
SITE CLEARANCE AND CREATION OF ACCESS ROAD											
Construction	Site clearance and access road	Geology	No impact is expected	N/A	0	0	0	0	0	N	No mitigation measures are anticipated
		Topography	No impact is expected	N/A	0	0	0	0	0	N	No mitigation measures are anticipated
		Soil	Soil compaction of surrounding areas due to movement of vehicles Loss of topsoil	N	1	1	1	2	1	L	Topsoil will be stripped from all areas where physical disturbance of the surface will occur and stored separately at a designated area for future topsoil backfilling
		Vegetation	Loss of vegetation	N	1	1	1	1	1	L	The disturbance of natural vegetation will be limited to the prospecting area.
		Fauna	Destruction of habitat	N	1	1	1	1	1	L	Limit the development footprint as far as possible

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Dust	Natural resources Road users Nearby people	N	1	1	1	2	1	L	Dust suppression will be implemented wherever necessary during construction.
		Air quality	Natural resources	N	1	1	1	2	1	L	<p>Vehicles and machinery on site will be monitored for excessive emissions</p> <p>Vehicles and machinery will be maintained to minimize the emissions.</p> <p>Generation of dust shall be minimised and dust nuisance for the surrounding community shall be kept to a minimum wherever possible.</p> <p>Dust suppression shall be implemented during dry period and windy condition.</p> <p>Ensure that shortest routes are used for material transport.</p> <p>Minimise travel speed on unpaved road</p>
		Surface water (no river or stream within the mining area)	Water contamination	N	1	1	1	2	1	L	All vehicle and machinery will be regularly serviced to ensure that they are in proper working condition and to reduce risk of leak. Fuel and oil spill shall be treated immediately

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Groundwater	No impact is anticipated	N	1	1	1	2	1	M	All vehicle and machinery will be regularly serviced to ensure that they are in proper working condition and to reduce risk of leak. Fuel and oil spill shall be treated immediately
TOPSOIL AND OVERBURDEN STRIPPING											
Construction	Topsoil and overburden stripping	Geology	Alter the geology of the area	N	1	2	2	1	2	L	Excavated topsoil and overburden should be stored and preserved separately for rehabilitation post mining. The mining operations will be remain within the limits of the designated mining area
		Topography	Alter the geology of the area	N	0	0	0	0	0	L	The disturbed area will be profiled and sloped to represent the natural topography when m is complete
		Soil and agricultural potential	Possible residual impact due to hydrocarbon spillages	N	2	1	2	4	2	M	Prevent through restricting the disturbance area. Control through implementation of storm water management. Remedy
		Vegetation	Loss of vegetation	N	1	1	1	1	1	L	Modify by vegetating soil stockpiles
		Fauna	Destruction of habitat	N	1	1	1	1	1	L	Limit the development footprint as far as possible
		Air quality	Dust	N	1	1	1	2	1	M	Dust suppression will be implemented using water carts wherever necessary during construction
		Surface water (no river or stream within	Water contamination	N	2	1	2	2	1	M	

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		the mining area)									
		Groundwater	Chemical pollution from moving machinery on site	N	2	1	2	2	1	M	Offsite maintenance of vehicles must be exercised If soil contamination takes place, the contamination area will be stripped and removed to a dedicated hazardous waste bin
TOPSOIL AND OVERBURDEN STOCKPILING											
Construction and Operation	Topsoil and overburden stockpiling	Geology	No geological alterations are anticipated	N	0	0	0	0	0	L	No mitigation necessary
		Topography	Change of topography	N	2	2	1	2	1	L	Soil disturbances and clearance of vegetation will be limited to the area to be mined, site office and road
		Soil	Soil destruction and erosion	N	2	1	2	4	2	M	The clearance footprint will be kept within the mining area Topsoil will be stored separately from overburden material and maintained by grassing to avoid erosion Stripped soils may be stockpiled as berms up slope to divert clean water from opencast pit The topsoil stockpiles will not exceed a height of six meters which is high enough to reduce leaching impacts of stockpiled topsoil

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Air quality	Dust	N	1	1	1	2	1	L	Stockpile and overburden heaps with cover crop to protect from storm water and wind erosion
		Groundwater	No impact anticipated	N	1	2	2	1	2	L	No mitigation necessary
		Groundwater	No groundwater impacts are anticipated during trenching	N	2	2	1	2	1	L	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines

CHEMICAL TOILETS AND SANITATION

Construction/ Operational	The use of chemical toilets on site	Natural resources Agricultural resources	Nuisance Pollution Soil contamination	N	2	2	1	1	1	L	Mobile toilets will be used on site. PVC sheet lining will be placed on the ground to form an entrapment of any seepage that might occur. Toilets are to be disposed weekly by a competent service provider Toilets will be serviced when needed and emptied when almost full If a leak occurs the correct emergency procedures must be followed
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	Water for drinking on site	Natural land	Waste Litter Soil contamination	N	2	1	1	1	1	L	Drinking water will be brought on site by tanks
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MOBILE OFFICES

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

Construction	The use of mobile office on site	Natural land	Waste Litter Soil contamination	N	2	1	1	1	1	L	Waste bins will be available at all times for all types of wastes (papers, glasses and plastics) on the site and collected weekly to the licensed dumping site. Separation of general waste and hazardous waste must be done
LOADING, HAULING AND TRANSPORT											
Operational	The use of transport on site	The road users	Traffic Social impact Dust	N	2	1	1	1	1	L	A speed of 20km/hour will be displayed on site entrance The applicant will be responsible for the upkeep and repair the farm roads used during mining activities to the satisfaction of the landowner The suppression of dust will be done using water tankers
Operational	Drilling	Geology	Permanent alteration of geology	N	3	2	2	2	3	M	Ensure that machinery used is up to standard and no leakage exists
		Soil	Possible soil contamination from hydrocarbons	N	2	1	2	1	1	L	Ensure that machinery used is up to standard and no leakage exists Hydrocarbon spillages must be cleaned immediately Contain any spillages by removing the affected soil surface and dispose at the designated waste bin to be disposed at a designated landfill site by service provide
		Fauna	Harm to possible surrounding fauna	N	2	1	1	1	1	L	Fauna of the surrounding area has already been affected by mining and agricultural activities within the property.
		Air quality	Poor visibility	N	2	2	1	2	2	M	Dust suppression measures will be applied

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

			Dust creation								
		Surface water	Water contamination	N	2	2	1	1	2	L	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
		Groundwater	Groundwater contamination from contaminated water seepage	N	2	2	2	3	2	H	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
		Surrounding people	Noise	N	2	2	2	1	2	M	Operators will use safety PPE such as ear plugs and the activity will take place during the day
		Within the mining area	Fire hazards due to drilling	N	2	2	2	1	2	M	Fire extinguishers will always be available on the site
DRILLING											
Operational	Stockpile will be used to store Gold from the mining area	Air quality	Dust	N	1	2	2	1	2	M	Dust suppression will be implemented wherever necessary. The suppression of dust will be done using water tankers A speed of 20km/hour will be displayed on the site

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Surface water	Contamination of water	N	2	2	1	2	1	M	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
		Ground water	Contamination of water	N	2	2	1	2	1	M	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
		Impact on the mine area	Erosion of ROM	N	2	1	2	1	1	M	The stockpile will also not exceed a height of 6m
		Surface contamination	Hydrocarbon spill	N	2	1	2	2	2	M	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
TRANSPORTAION OF SAMPLE											
Operational	hauling and transportation	Geology	No impacts are anticipated on the geology	N	1	1	1	1	1	L	No known mitigation is necessary at this point
		Topography	No further alterations to the topography are anticipated as haul road is already constructed	N	1	2	1	1	1	L	Hauling will be limited to the already constructed designated road
		Soil	Surface soil contamination from loose or spilled from trucks.	N	2	1	2	2	1	L	Spillages will be cleaned immediately.

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

			Soil compaction								
		Vegetation	Loss of natural vegetation	N	1	1	2	1	1	L	Modify by vegetating soil stock pile.
		Air quality	Dust	N	2	1	1	2	1	L	Dust suppression measure will be applied. All vehicle will be serviced regularly.
		Surface water	Contamination of water	N	1	2	1	2	1	L	
		Groundwater	No groundwater contamination is anticipated at this point	N	1	2	1	1	1	L	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
REHABILITATION AND BACKFILLING – CLOSURE PHASE											
Closure	Rehabilitation and backfilling	Geology	Permanent alteration to the geology	N	1	2	2	2	1	M	<p>Rehabilitate to as far reasonably possible to the initially found natural state</p> <p>Should acid mine drainage be suspected or detected, deployment of acid mine drainage migration and prevention measures should be enforced by collecting the acid water into the pollution control dam</p> <p>The disturbed area by mining activities will be rehabilitated following the rehabilitation plan, where hard material materials will be placed at the bottom of the pit compacted, followed by the softs, topsoil, profiled and seeded</p>

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Topography	Permanent change to the topography	N	2	1	1	2	2	L	<p>All carbonaceous material must be backfilled first to prevent oxidation</p> <p>The disturbed area will be rehabilitated following the rehabilitation plan, where hard materials will be placed at the bottom of the pit compacted, followed by the softs, topsoil, profiled and seeded</p> <p>Ensure that all areas are free draining</p>
		Soil	Soil erosion and hydrocarbon contamination	N	2	1	2	1	2	L	<p>Disturbed area will be backfilled and top soiled</p> <p>The area will be sloped to ensure that the rehabilitated area is free draining and the slopes are gentle</p> <p>Prevention of accidental releases of liquids through inspections and maintenance of storage and conveyance systems, including stuffing boxes on pumps and valves and other potential leakage points, as well as the implementation of spill response plans</p>
		Vegetation	Improvement of vegetation habitat	N	2	2	2	1	2	M	<p>The disturbed area will be re-vegetated/seeded</p> <p>Rehabilitation will be monitored by means of weekly visual inspections to ensure that rehabilitation has been effective</p>

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

											<p>A weed eradication programme will be implemented to ensure removal of invasive species</p> <p>Prevention of accidental releases of liquids through inspections and maintenance of storage and conveyance systems, including stuffing boxes on pumps and valves and other potential leakage points, as well as the implementation of spill response plans</p>
		Fauna	The rehabilitation of surface land use areas will result in an increase in the available habitat for fauna	N	2	1	2	2	2	M	Restrict movement of machinery used for rehabilitation to the designated rehabilitation area
		Air quality	Dust from the movement of machinery	N	2	1	1	2	1	L	<p>Moving machinery footprint will be limited activities to within this footprint as far as possible</p> <p>Keep the rehabilitation activity as small as possible</p> <p>Keep as much original land cover as possible and implement dust suppression by spraying wherever necessary during rehabilitation</p> <p>Implement dust suppression spray continuously using methods such as a water tanker</p>
		Surface water	Contamination of water	N	2	2	2	2	2	M	Disturbed mining area will be rehabilitated to as close to its pre-mining status as possible

											Ensure that the area is free draining post rehabilitation activities
		Groundwater	Potential hydrocarbons countersanction from hydrocarbons, oil lubricants leaks or spills and dirty storm water leaching into water table.	N	2	2	2	3	2	H	Disturbed mining area will be rehabilitated to as close to its pre-mining status as possible Ensure that the area is free draining post rehabilitation activities

k) 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): -

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
No specialist studies which are undertaken	No Specialist study will be conducted ,There is Heritage and Ecological study which were conduct on the same farm		

I) Environmental impact statement

Applicant will conduct a Health, Safety, Environment and Community awareness workshop with the employees to educate them about the possible environmental impacts and the controlling measures to be taken if they can happen. Monitoring will be conducted to ensure the compliance.

It was concluded that the proposed mining operation will not have a significant negative environmental impacts and that the socio-economic benefits of the proposed chrome and aggregate, Diamond Alluvial, General and Diamond in Kimberlite

mining outweigh the potential negative impacts on the environment if the mitigation measures outlined in this report are effectively implemented.

DRAFT

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

NAME OF ACTIVITY (E.g. For prospecting – drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc. E.g. For mining, - excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	POTENTIAL IMPACT (Including the potential impacts for cumulative impacts) (E.g. dust, noise, drainage surface disturbance, flies rock, surface water contamination, groundwater contamination, air pollution etc...etc...)	ASPECTS AFFECTED	PHASE In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)	SIGNIFICANCE If not mitigated	MITIGATION TYPE (modify, remedy, control, or stop) Through (e.g. noise control measures, storm water control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc.) E.g. Modify through alternative method. Control through noise control, control through management and monitoring through rehabilitation.	SIGNIFICANCE If mitigated
Site preparation	Dust Noise Loss of flora and fauna Loss of topsoil	Air quality Land Habitat	Construction	Medium	Avoidance and control through dust and noise	Low

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

Removal of vegetation and topsoil for access road	Dust Noise Loss of topsoil Loss of vegetation Soil compaction	Land	Construction	High	Avoidance and control through dust and noise Control through management and monitoring through rehabilitation	Moderate
Excavation of storm water diversion trenches	Dust Noise Loss of flora Loss of topsoil Soil pollution Soil compaction	Land Air quality	Construction	Moderate	Avoidance and control through dust and noise Control through management and monitoring through rehabilitation	Low
Removal of overburden material	Water pollution Health impact	Water resources	Construction	High	Avoidance and control Rehabilitation	Moderate
	Dust Noise Loss of topsoil	Air quality Topsoil	Construction	High	Avoidance and control Rehabilitation	Moderate
Possible drilling and blasting to extract proposed minerals	Water pollution Vibration	Topography Geology Surface water Groundwater	Operational	Very high	Control, remedy, avoidance and rehabilitation	Moderate

(ii) Final Site Map

Provide a map at an appropriate scale 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.

Map attached as appendix 2



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

- See Section J above for details concerning the impacts identified as a result of the proposed mining activities.
- Most of the potential negative impacts identified during mining operational phase are rated as medium which can be mitigated to a low status. The potential negative impacts rated as medium before mitigation measures will be implemented, these include impacts such as – increased in dust level exposing soil may lead to soil erosion if not mitigated, increased sediment loads in water resources, impact on drainage lines, hydrocarbon spills, wastes from chemical toilets and litter, fire, increased traffic due to vehicles coming onto and leave the site.
- It was concluded that the proposed mining project will not have a significant negative environmental impact if the proposed mitigation measures are implemented and the EMP must be adhered to accordingly.

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

Phase	IDENTIFICATION		CONSEQUENCES	IMPACT BEFORE MITIGATION							MITIGATION MEASURES
	Activity	Aspect	Impact	Nature	Extent	Duration	Intensity	Probability	Significant	Classification	Mitigation and management measures
SITE CLEARANCE AND CREATION OF ACCESS ROAD											
Construction	Site clearance and access road	Geology	No impact is expected	N/A	0	0	0	0	0	N	No mitigation measures are anticipated
		Topography	No impact is expected	N/A	0	0	0	0	0	N	No mitigation measures are anticipated
		Soil	Soil compaction of surrounding areas due to movement of vehicles Loss of topsoil	N	1	1	1	2	1	L	Topsoil will be stripped from all areas where physical disturbance of the surface will occur and stored separately at a designated area for future topsoil backfilling
		Vegetation	Loss of vegetation	N	1	1	1	1	1	L	The disturbance of natural vegetation will be limited to the prospecting area.
		Fauna	Destruction of habitat	N	1	1	1	1	1	L	Limit the development footprint as far as possible
		Dust	Natural resources Road users Nearby people	N	1	1	1	2	1	L	Dust suppression will be implemented wherever necessary during construction.

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Air quality	Natural resources	N	1	1	1	2	1	L	<p>Vehicles and machinery on site will be monitored for excessive emissions</p> <p>Vehicles and machinery will be maintained to minimize the emissions.</p> <p>Generation of dust shall be minimised and dust nuisance for the surrounding community shall be kept to a minimum wherever possible.</p> <p>Dust suppression shall be implemented during dry period and windy condition.</p> <p>Ensure that shortest routes are used for material transport.</p> <p>Minimise travel speed on unpaved road</p>
		Surface water (no river or stream within the mining area)	Water contamination	N	1	1	1	2	1	L	<p>All vehicle and machinery will be regularly serviced to ensure that they are in proper working condition and to reduce risk of leak. Fuel and oil spill shall be treated immediately</p>
		Groundwater	No impact is anticipated	N	1	1	1	2	1	M	<p>All vehicle and machinery will be regularly serviced to ensure that they are in proper working condition and to reduce risk of leak. Fuel and oil spill shall be treated immediately</p>

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

TOPSOIL AND OVERBURDEN STRIPPING											
Construction	Topsoil and overburden stripping	Geology	Alter the geology of the area	N	1	2	2	1	2	L	Excavated topsoil and overburden should be stored and preserved separately for rehabilitation post mining. The mining operations will be remain within the limits of the designated mining area
		Topography	Alter the geology of the area	N	0	0	0	0	0	L	The disturbed area will be profiled and sloped to represent the natural topography when m is complete
		Soil and agricultural potential	Possible residual impact due to hydrocarbon spillages	N	2	1	2	4	2	M	Prevent through restricting the disturbance area. Control through implementation of storm water management. Remedy
		Vegetation	Loss of vegetation	N	1	1	1	1	1	L	Modify by vegetating soil stockpiles
		Fauna	Destruction of habitat	N	1	1	1	1	1	L	Limit the development footprint as far as possible
		Air quality	Dust	N	1	1	1	2	1	M	Dust suppression will be implemented using water carts wherever necessary during construction
		Surface water (no river or stream within the mining area)	Water contamination	N	2	1	2	2	1	M	
		Groundwater	Chemical pollution from moving machinery on site	N	2	1	2	2	1	M	Offsite maintenance of vehicles must be exercised

											If soil contamination takes place, the contamination area will be stripped and removed to a dedicated hazardous waste bin
TOPSOIL AND OVERBURDEN STOCKPILING											
Construction and Operation	Topsoil and overburden stockpiling	Geology	No geological alterations are anticipated	N	0	0	0	0	0	L	No mitigation necessary
		Topography	Change of topography	N	2	2	1	2	1	L	Soil disturbances and clearance of vegetation will be limited to the area to be mined, site office and road
		Soil	Soil destruction and erosion	N	2	1	2	4	2	M	The clearance footprint will be kept within the mining area Topsoil will be stored separately from overburden material and maintained by grassing to avoid erosion Stripped soils may be stockpiled as berms up slope to divert clean water from opencast pit The topsoil stockpiles will not exceed a height of six meters which is high enough to reduce leaching impacts of stockpiled topsoil
		Air quality	Dust	N	1	1	1	2	1	L	Stockpile and overburden heaps with cover crop to protect from storm water and wind erosion
		Groundwater	No impact anticipated	N	1	2	2	1	2	L	No mitigation necessary

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Groundwater	No groundwater impacts are anticipated during trenching	N	2	2	1	2	1	L	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
CHEMICAL TOILETS AND SANITATION											
Construction/ Operational	The use of chemical toilets on site	Natural resources Agricultural resources	Nuisance Pollution Soil contamination	N	2	2	1	1	1	L	Mobile toilets will be used on site. PVC sheet lining will be placed on the ground to form an entrapment of any seepage that might occur. Toilets are to be disposed weekly by a competent service provider Toilets will be serviced when needed and emptied when almost full If a leak occurs the correct emergency procedures must be followed
	Water for drinking on site	Natural land	Waste Litter Soil contamination	N	2	1	1	1	1	L	Drinking water will be brought on site by tanks
MOBILE OFFICES											
Construction	The use of mobile office on site	Natural land	Waste Litter Soil contamination	N	2	1	1	1	1	L	Waste bins will be available at all times for all types of wastes (papers, glasses and plastics) on the site and collected weekly to the licensed dumping site. Separation of general waste and hazardous waste must be done
LOADING, HAULING AND TRANSPORT											

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

Operational	The use of transport on site	The road users	Traffic Social impact Dust	N	2	1	1	1	1	L	A speed of 20km/hour will be displayed on site entrance The applicant will be responsible for the upkeep and repair the farm roads used during mining activities to the satisfaction of the landowner The suppression of dust will be done using water tankers
Operational	Drilling	Geology	Permanent alteration of geology	N	3	2	2	2	3	M	Ensure that machinery used is up to standard and no leakage exists
		Soil	Possible soil contamination from hydrocarbons	N	2	1	2	1	1	L	Ensure that machinery used is up to standard and no leakage exists Hydrocarbon spillages must be cleaned immediately Contain any spillages by removing the affected soil surface and dispose at the designated waste bin to be disposed at a designated landfill site by service provide
		Fauna	Harm to possible surrounding fauna	N	2	1	1	1	1	L	Fauna of the surrounding area has already been affected by mining and agricultural activities within the property.
		Air quality	Poor visibility Dust creation	N	2	2	1	2	2	M	Dust suppression measures will be applied
		Surface water	Water contamination	N	2	2	1	1	2	L	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Groundwater	Groundwater contamination from contaminated water seepage	N	2	2	2	3	2	H	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
		Surrounding people	Noise	N	2	2	2	1	2	M	Operators will use safety PPE such as ear plugs and the activity will take place during the day
		Within the mining area	Fire hazards due to drilling	N	2	2	2	1	2	M	Fire extinguishers will always be available on the site
DRILLING											
Operational	Stockpile will be used to store Gold from the mining area	Air quality	Dust	N	1	2	2	1	2	M	Dust suppression will be implemented wherever necessary. The suppression of dust will be done using water tankers A speed of 20km/hour will be displayed on the site
		Surface water	Contamination of water	N	2	2	1	2	1	M	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
		Ground water	Contamination of water	N	2	2	1	2	1	M	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Impact on the mine area	Erosion of ROM	N	2	1	2	1	1	M	The stockpile will also not exceed a height of 6m
		Surface contamination	Hydrocarbon spill	N	2	1	2	2	2	M	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
TRANSPORTAION OF SAMPLE											
Operational	hauling and transportation	Geology	No impacts are anticipated on the geology	N	1	1	1	1	1	L	No known mitigation is necessary at this point
		Topography	No further alterations to the topography are anticipated as haul road is already constructed	N	1	2	1	1	1	L	Hauling will be limited to the already constructed designated road
		Soil	Surface soil contamination from loose or spilled from trucks. Soil compaction	N	2	1	2	2	1	L	Spillages will be cleaned immediately.
		Vegetation	Loss of natural vegetation	N	1	1	2	1	1	L	Modify by vegetating soil stock pile.
		Air quality	Dust	N	2	1	1	2	1	L	Dust suppression measure will be applied. All vehicle will be serviced regularly.
		Surface water	Contamination of water	N	1	2	1	2	1	L	

		Groundwater	No groundwater contamination is anticipated at this point	N	1	2	1	1	1	L	Dripping trays will be placed under any standing vehicles and machinery. Proper maintenance will be done on the vehicle and drilling machines
REHABILITATION AND BACKFILLING – CLOSURE PHASE											
Closure	Rehabilitation and backfilling	Geology	Permanent alteration to the geology	N	1	2	2	2	1	M	<p>Rehabilitate to as far reasonably possible to the initially found natural state</p> <p>Should acid mine drainage be suspected or detected, deployment of acid mine drainage migration and prevention measures should be enforced by collecting the acid water into the pollution control dam</p> <p>The disturbed area by mining activities will be rehabilitated following the rehabilitation plan, where hard material materials will be placed at the bottom of the pit compacted, followed by the softs, topsoil, profiled and seeded</p>
		Topography	Permanent change to the topography	N	2	1	1	2	2	L	<p>All carbonaceous material must be backfilled first to prevent oxidation</p> <p>The disturbed area will be rehabilitated following the rehabilitation plan, where hard materials will be placed at the bottom of the pit compacted, followed by the softs, topsoil, profiled and seeded</p>

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

											Ensure that all areas are free draining
		Soil	Soil erosion and hydrocarbon contamination	N	2	1	2	1	2	L	<p>Disturbed area will be backfilled and top soiled</p> <p>The area will be sloped to ensure that the rehabilitated area is free draining and the slopes are gentle</p> <p>Prevention of accidental releases of liquids through inspections and maintenance of storage and conveyance systems, including stuffing boxes on pumps and valves and other potential leakage points, as well as the implementation of spill response plans</p>
		Vegetation	Improvement of vegetation habitat	N	2	2	2	1	2	M	<p>The disturbed area will be re-vegetated/seeded</p> <p>Rehabilitation will be monitored by means of weekly visual inspections to ensure that rehabilitation has been effective</p> <p>A weed eradication programme will be implemented to ensure removal of invasive species</p> <p>Prevention of accidental releases of liquids through inspections and maintenance of storage and conveyance systems, including stuffing boxes on pumps and valves and other potential leakage points, as well as the implementation of spill response plans</p>

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

		Fauna	The rehabilitation of surface land use areas will result in an increase in the available habitat for fauna	N	2	1	2	2	2	M	Restrict movement of machinery used for rehabilitation to the designated rehabilitation area
		Air quality	Dust from the movement of machinery	N	2	1	1	2	1	L	Moving machinery footprint will be limited activities to within this footprint as far as possible Keep the rehabilitation activity as small as possible Keep as much original land cover as possible and implement dust suppression by spraying wherever necessary during rehabilitation Implement dust suppression spray continuously using methods such as a water tanker
		Surface water	Contamination of water	N	2	2	2	2	2	M	Disturbed mining area will be rehabilitated to as close to its pre-mining status as possible Ensure that the area is free draining post rehabilitation activities
		Groundwater	Potential hydrocarbons countersanction from hydrocarbons, oil lubricants leaks or spills and dirty storm water leaching into water table.	N	2	2	2	3	2	H	Disturbed mining area will be rehabilitated to as close to its pre-mining status as possible Ensure that the area is free draining post rehabilitation activities

m) 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.

n) Aspects for inclusion as conditions of Authorisation.

The Environmentalist must be responsible with the following duties on a daily basis:

- Site inspection and record mine compliance with the Environmental Authorisation and the Environmental Management Plan
- Ensure that all mining activities are undertaken according to the Environmental Authorisation and the Environmental Management Plan
- Report to the Mine Operator of any non-compliance with the Environmental Authorisation and Environmental Management Plan and any other issue (environmental issue) that may rise that will need the attention

The following horizontal distance will be applied to the positioning of the mine:

- 500m away from any water resource
- 100m away from any infrastructure
- 500m away from any identified heritage resource.

o) Description of any assumptions, uncertainties and gaps in knowledge.

(Which relate to the assessment and mitigation measures proposed?)

- Part of the proposed area for mining is historically disturbed that have occurred previously and major environmental impacts could have been encountered. The landowner, interested and affected parties will be re-consulted prior to implementing any activities and their concerns will be considered.
- Based on the detailed Environmental Impact Assessment undertaken and the proposed management measures, the proposed mining project can be granted Environmental Authorisation provided adheres to the management and mitigation measures proposed. Environmental Authorization should include those conditions.

p) Reasoned option as to whether the proposed activity should or should not be authorised

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

The activity should be authorized because of the following reasons:

- The spatial extent of the physical impact is very minimal over a proposed mining area of 5 hectares.
- No impacts which are likely to cause detrimental harm to the environment were identified as part of this Basic Assessment Report, and therefore it is recommended that the proposed mining permit be approved by the Competent Authority with the condition that all prescribed mitigation measures included in this report be implemented and adhered to at all times.
- Most of the potential negative impacts identified for mining operational phase are rated as medium which can be mitigated to a low status. The potential negative impacts rated as medium before mitigation measures will be implemented, these include impacts such as – increased in dust level exposing soil may lead to soil erosion if not mitigated, increased sediment loads in water resources, impact on drainage lines, hydrocarbon spills, wastes from chemical toilets and litter, fire, increased traffic due to vehicles coming onto and leave the site.

ii) Conditions that must be included in the authorisation.

The applicant will apply the following horizontal distance that will be applied to the positioning of the mine:

- 500m away from any water resource
- 100m away from any infrastructure
- 500m away from any identified heritage resource
- 500m away from any identified heritage resource

q) Period for which the Environmental Authorisation is required.

The Environmental Authorisation is required for the duration of the mining permit which is two years from the date on which mining commences.

r) 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 undertaking has been provided at the end of the report as **(appendix 4)**

s) Financial Provision

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

R 78266

i) Explain how the aforesaid amount was derived.

Total number of 10 box will be excavated only 5 boxes will be excavated with total dimension of 20m (length) x 15m (breath) will be excavated at the same time

- i) **Confirm that this amount can be provided 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)

t) 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

A consultation process will be implemented and the purpose of consultation was to provide affected parties the opportunity to raise any potential concerns. As part of the consultation process the Land Restitution Commission was contacted to identify if there were any claims on land covered by this application.

- (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 mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of the Act, attach the investigation report as **Appendix 2.19.2** and confirm that the applicable mitigation is reflected in 2.53; 2.11.6. and 2.12. herein).

There are no sites of cultural and heritage resources that have been identified within the application area. If in case any human remain are excavated during the operation work should stopped and report made to SAHRA.

u) 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 infrastructure required in support of the proposed mining project and hence the activities included in this application, is therefore determined by the location of the chrome ore, aggregate, Diamond Alluvial, General and Diamond in Kimberlite, reserve and the mining method to be used.

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).

Mabirimisa Shumani Edmond holds a Bachelor Degree of Environmental Sciences, Certificate Course in GIS, Certificate of Occupational Health and Safety and Engineering Studies Certificates. I have 1 year working experience as an intern at Department of Mineral Resources under Mineral Regulation. Am currently working as an Environmental Consultant at Mabirimisa Consulting and Projects.

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).

- The aspects of the activity are covered in Part A of this report.

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 any areas that should be avoided, including buffers)



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)

The closure objectives and rehabilitation measures include the following:

- Open excavation will be closed, machinery and other structures will be removed, area will be sloped and the re vegetation will be done.
- To ensure closure compile with the Mineral and Petroleum Resource Development Act, 2002(Act 28 Of 2002).
- To ensure that the mining permit footprint are rehabilitated to an acceptable standard where the ecosystem functioning and that all environmental and social risk have been reduced and do not pose any treat to the environment post mine closure.
- Mobile office and toilets will be removed from the mining area.
- To propose monitoring programme, that will ensure that the strategies that have been proposed in the risk assessment have been implicated and will help to determine the progress of rehabilitation. This is important as it will help determine the progress of rehabilitation.
- Unnecessary roads and the plant site will be cleared.
- Restore disturbed area and re vegetate the area with grass species.

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

- 2000 to 5000 per day

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

Water will be transported to the site by trucks.

e) Impact Management Outcomes

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

ACTIVITY (Whether listed or not listed). (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.).	POTENTIAL IMPACT (E.g. dust, noise, drainage surface disturbance, flies rock, surface water contamination, groundwater contamination, and air pollution etc....etc....)	ASPECTS AFFECTED	PHASE In which impact is anticipated (e.g. Construction, commissioning, operational Decommissioning, closure, post closure)	MITIGATION TYPE (modify, remedy, control, or stop) through (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. Etc.) E.g. • Modify through alternative method. • Control through noise control • Control through management and monitoring • Remedy through rehabilitation.	STANDARD TO BE ACHIEVED (Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
Preparation of access road	Dust pollution	Air quality	Construction	Control through dust suppression • Control through minimisation of vehicle movement • Control through monitoring of dust fall to determine if measures are effective.	Conduct dust suppression techniques

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

	Soil erosion, compaction and contamination	Soil		<ul style="list-style-type: none"> . Prevent through restricting the disturbed area. • Prevent through restricting spillage from haulage vehicles. • Control through removal of all utilisable soil and storage of the same • Control through implementation of storm water management measures • Remedy through treatment of contaminated soils 	Rehabilitation standards/objectives
	Loss of vegetation	Vegetation		<ul style="list-style-type: none"> . Modify by vegetating soil stockpiles • Control though alien invasive eradication programme 	Rehabilitation standards/objectives
	Invasion by alien invasive species	Vegetation		<ul style="list-style-type: none"> . Modify by vegetating soil stockpiles • Control though alien invasive eradication programme 	Rehabilitation standards/objectives
	Visual impact	Visual receptors		Avoid/prevent leaving any building material or waste on site	Rehabilitation standards/objectives
	Heritage	Archaeological or heritage features		<ul style="list-style-type: none"> • Control through appropriate management measures; • Prevent through HSEC management measures 	Impact avoided
Clearing of vegetation within the footprint of the topsoil stockpile and the proposed mine	Dust pollution	Air quality	Construction	<ul style="list-style-type: none"> • Control through dust suppression • Control through minimisation of vehicle movement • Control through monitoring of dust fall to determine if measures are effective 	Conduct dust suppression techniques

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

	Soil erosion, compaction and contamination	Soil		<ul style="list-style-type: none"> • Prevent through restricting the disturbed area • Prevent through restricting spillage from haulage vehicles • Control through removal of all utilisable soil and storage of the same • Control through implementation of storm water management measures • Remedy through treatment of contaminated soils 	Rehabilitation standards/objectives
	• Loss of vegetation	Vegetation		<ul style="list-style-type: none"> • Control through restricting the footprint to be cleared • Control though alien invasive eradication programme 	Rehabilitation standards/objectives
	• Invasion by alien invasive species	Vegetation		<ul style="list-style-type: none"> • Control through restricting the footprint to be cleared • Control though alien invasive eradication programme 	Rehabilitation standards/objectives
	Visual Impact	Visual receptors		<ul style="list-style-type: none"> • Avoid/prevent leaving any building material or waste on site 	Rehabilitation standards/objectives
	Heritage	Archaeological or heritage features		<ul style="list-style-type: none"> • Prevent through reporting and evaluation of any archaeological or heritage features found 	Impact avoided
Hauling and transport of Chrome Ore,Aggregate,Diamond	Dust pollution	Air quality	Operational	<ul style="list-style-type: none"> • Control through dust suppression • Control through minimisation of vehicle movement 	Conduct dust suppression techniques

Alluvial and diamond in kimberlite during operations				<ul style="list-style-type: none"> Control through monitoring of dust fall to determine if measures are effective 	
	Soil erosion, compaction and contamination	Soil		<ul style="list-style-type: none"> Prevent through restricting the disturbed area Prevent through restricting spillage from haulage vehicles Control through removal of all utilisable soil and storage of the same Control through implementation of storm water management measures Remedy through treatment of contaminated soils 	Rehabilitation standards/objectives

a) 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).

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	TIME PERIOD FOR IMPLEMENTATION	COMPLIANCE WITH STANDARDS
Whether listed or not listed. (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores,	(E.g. dusts, noise, drainage surface disturbance, fly rock, surface water	(modify, remedy, control, or stop) through (E.g. noise control measures, storm-water control, dust control, rehabilitation, design measures,	Describe the time period when the measures in the environmental management program 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:-..	(A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

<p>workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.).</p>	<p>contamination, groundwater contamination, and air pollution etc....etc....)</p>	<p>blasting controls, avoidance, relocation, alternative activity etc.) E.g.</p> <ul style="list-style-type: none"> • Modify through alternative method. • Control through noise control • Control through management and monitoring <p>Remedy through rehabilitation..</p>	<p>Upon cessation of the individual activity or.</p> <p>Upon the cessation of mining, bulk sampling or chrome as the case may be.</p>	<p>comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)</p>
<p>Access road</p>	<p>Destruction and disturbance on site fauna and flora.</p>	<ul style="list-style-type: none"> - Use existing track and road in all instance as far as possible -Where track clearing is necessary, raised blade clearing will be conducted to minimise disturbed. - vehicle speed limit will be reduced ,particularly in high vegetated areas is one way to avoid dearth by vehicle impact 	<p>During the construction phase</p>	<p>Environmental Authorisation</p>
	<p>Soil compaction</p>	<ul style="list-style-type: none"> -where track clearing is necessary, raised blade clearing be conducted to minimise disturbance and aid rehabilitation effort -as part of rehabilitation, all compacted road dill and excavated area will be ripped off. 	<p>During the construction phase</p>	<p>Environmental Authorisation</p>

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

	Vehicle traffic and noise impact	-Site activity will be conducted during day time -	During the construction phase	Environmental Authorisation
	Affect cattle and wildlife	-working hours will be between 07 h00 to 17h30	During the construction phase	Environmental Authorisation
Site establishment activities including :clearing of vegetation, top soil striping and stockpile, drill pad compaction ,excavation ,erection of temporary site office shaded area, portable ablution,erection of fuel or storage tank, safety barrier	Destruction or disturbance of fauna and flora	-The removal of vegetation within the drilled and excavated area will be minimized.	Operational phase	Environmental Authorisation
	Soil disturbance and top soil stockpiling resulting in soil compaction and erosion	-top soil including remaining vegetation, will be stripped and stockpiled up-slope of the pad. -the stock pile will be shaped to divert storm water around the drill pad. -where practicable top soil will be stripped to depth of 10 cm. -top soil will be stockpile to maximum height. -Vegetation removed through lower blade clearing will be mixed with topsoil.	Operational	Environmental Authorisation.
	Dust emission resulting from	-wet dust suppression will be undertaken to manage dust emission from vehicle	operational	Environmental Authorisation.

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

	site clearing ,soil stripping	movement and other construction activities.		
	Influx of person (job seeker)	-Casual labour will not be recruited on the site.	operational	Applicant
	Potential disturbance of heritage resource	Prior to the site establishment, a heritage impact assessment must be undertaken and mitigation and or management measure for the protection of such resource must be implemented	operational	Environmental Authorisation
Drilling and Excavation	Water and soil pollution resulting from movement of machinery and heavy vehicles	-Operational activities will be limited to hours during the day .no activity will take place on Sundays and public holiday unless if instructed to do an activity by those days by authorities. -dust suppression measure such as wet suppression will be used in order to minimise any dust that might arise from the movement of the vehicles and the activities of the mine	Operational	Environmental Authorisation
Closure	Decommission and rehabilitation	-the area will be rehabilitated at the end of the mine life. -rehabilitation will include filling up of open trenches, vegetation if the area, removal of any vehicle, equipment and machineries within the site.	decommissioning	Environmental Authorisation

i) Financial Provision

(1) Determination of the amount of Financial Provision.

R 78266

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

Concurrent rehabilitation will be exercised to ensure that completed trenches will be closed and rehabilitated before opening the next one. There will be no sites which will be left unattended, thus minimizing environmental impacts and final closure liabilities. To leave site in safe state for human and animals. To promote indigenous vegetation growth suitable for animals that graze over the disturbed area on the site. Backfilling all excavated with overburden and discard material to adopt the shape similar to its initial state diverting of water catchment will be avoided at all cost. Removal of all surface infrastructure on the site. Cleaning and upgrading of all access roads to fit the current land use. Leave rehabilitated ground to ensure blending with the surrounding environment.

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

- The closure objectives were included in the BID documents which were sent to land owner and I&AP during consultation.

(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.

- Top soil will be stripped and stored separately for rehabilitation.
- Ensure that all roads rehabilitated and or left behind is safe in good working condition, ensuring public safety and access to site and monitoring points
- Any degradation to roads will be repaired with consultation of the roads department
- Rehabilitated profiles must ensure free drainage of water and should be contoured to fit in with the catchment dynamics
- Removal of waste and their appropriate disposal
- Facilitation of the re-establishment of the land use and land capability to an acceptable condition as it was before the construction phase
- Ensure land is rehabilitated to, as far as is practicable, its natural state, or to a predetermined and agreed standard or land use which conforms with the concept of sustainable development
- Areas will be fenced off once seeded to prevent surface disturbance to the site and allow for vegetation to establish and stabilise

(d) Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives.

Due to the nature of the activity, the impact will be very limited and short duration. The management plan is provided in such a manner to ensure concurrent rehabilitation. The area experiencing impact

in this event the impact will be temporary in nature and detailed management plan has been provided to address potential impacts associated with this activity.

(e) Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline.

Attached as appendix 4

(f) Confirm that the financial provision will be provided as determined.

The financial provision will be provided when it's requested.

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

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

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Establishment of campsite ,movement of vehicles	Air pollution(dust ,gaseous emissions)	Dust suppression measure such as spraying with water. Speed limits will be established and enforced. Equipment and vehicles equipped with standard exhaust system which minimize the amount of emissions.prohobiting of burning of waste.	Site manager and or Appointed Environmental officer.	On-going Monitoring, Quarterly repoting.Continuous implementation.
Soil and Agricultural potential	Loss and contamination of top soil through wind and water erosion and incorrect stockpiling	Clearing of mining area to take place a maximum of one month prior to intend mining in the area. Striping of top soil will not take place during rainy or excessive wind. The top 30 cm of vegetation and topsoil is to be stripped from the area to be mined.	Environmental and Site manager	Inspection of area for erosion

Ground water and surface water quality	Potential hydrocarbon contamination from hydrocarbons, oil or lubricants leaks or oil spills and dirty strum water.	All vehicles and machinery will be regularly serviced to ensure they are in proper working condition and to reduce risk of leaks. Clean and dirty storm water needs to be separated. No contaminated water should be allowed to enter the clean storm water needs to be separated. Fuel and oil spill shall be treated immediately by appropriate mop up products.	Environmental and site manager	Ensure vehicle and Machinery serviced plans are Maintained.
Vehicle movement	Noise	Vehicles will be regularly serviced to ensure acceptable noise level are not exceeding. Silencer will be utilised where possible. Heavy vehicles traffic should be routed away from noise sensitive areas.	Site Manager	Occupational and Environmental noise monitoring
Traffic and safety	Road degradation	Drivers will be enforced to keep setting speed limit. Truck will be in road –worthy condition. Road should be maintained, if any potholes are observed during monitoring, these must be fixed as soon as possible	Site Manager	Ensure speed limit. Ensure Vehicles and machinery Serviced plans are maintain.
Socio -economic	Potential physical injuries or loss of life	Implementation of safety measure, work procedures and first aid should be implemented on site. A health and safety plan in terms of the Mine Health and Safety Act, 1996(Act No.29 of 1996) should be drawn up to ensure worker safety. A record of health and safety incidents should be kept on site and made available for site inspection. Any health and safety incidents should be reported to the site manager immediately. First aid kit should be available on site at all times.	Health and Safety control officer and site manager	As per health and safety plan

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

The Environmental Performance Assessment report will be submitted to the DMRE once in two years.

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.

The environmental awareness plan aims

An overview of the applicable legislation and regulation as it relates to environmental, Health, Safety and community. Training will be provide to all employees on the site. Content and implementation of the approved EMP. Intial environmental induction and awareness will be conducted before commencement of any daily activities t al employee. The objectives of this procedure are to ensure that all employees on the site are competent to perform their duties, thereby eliminating negative impacts.

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

1 Open fire

- No open fire will be tolerated during the mining activities period and as this is regarded by law as a criminal related penalty can be issued.
- The littering of self-ignitable substances e.g. matches are also not allowed as it always poses a danger regarding field fire.
- Fire equipment must be served.
- All basic firefighting equipment is available on the site
- Approved and tested fire extinguisher will be available on-site.
- The disposal of material by burning is prohibited.
- Fire response and Evacuation area will be visible to all employees.

2 Sanitation and Personal Hygiene

- Sanitation and personal hygiene is a very important subject for environmental and social health.
- Improper sanitation habit can lead to intestinal parasite infections with human and animals.
- Employees will be further being advised and educated on the important of consuming clean and fresh water. Tank for clean drinking water will be erected on the site.

3 Surface water and Ground water

- All vehicles and machinery will be regularly serviced to ensure they are in proper working condition.
- Fuel and oil spill will be treated immediately
- Increased runoff should be manage using berms and other suitable structure

4 Soils and Agricultural Potential

- All vehicles and machinery will be regularly serviced to ensure they are in proper working condition and to reduce the risk of leak
- All leak will be cleaned up immediately using absorbent material

5 Maintenance of access road

- The liberation of dust into the surrounding environment shall be effectively controlled by dust suppression measures.
- The speed of haul trucks and other vehicles must be strictly controlled to avoid dangerous conditions.

(n) Specific information required by the competent authority

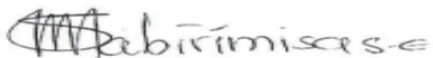
(Among others, confirm that the financial provision will be reviewed annually).

No specific information requirements have been stated by the competent authority to date.

2) UNDERTAKING

The EAP herewith confirms:

- a) The correctness of the information provided in the reports X
- b) The inclusion of the comments and inputs from stakeholders and I&As X
- c) The inclusion of input and recommendations from the specialist report where X relevant, and X
- d) That the information provided by the EAP to the interested and affected parties and any responses by the EAP to comments or input made by interested and affected parties are correctly reflected herein X



Signature of the environmental assessment practitioner

Mabirimisa Consulting and Projects.

Name of company

Date

2022/07/27

-END

APPENDIX 1

EAP CV

PERSONAL DETAILS

Surname : Mabirimisa
Name : Shumani Edmond
Gender : Male
Date of birth : 04 December 1984
ID Number : 8412046115084
Driver's License : Code 10 (C1)
Marital status : Single
Nationality : South African
Home language : Tshivenda
Other languages : English, Tswana, Zulu, Afrikaans, Tsonga

CONTACT DETAILS

Postal Address : Flat 103 Campbell Court Building
Klerksdorp
2570
Cell number : 0827521754
Email Address : shumani.edmond@gmail.com

EDUCATIONAL QUALIFICATION

High school attended : Jonathan Mushaathama Secondary School
Highest grade passed : Grade 12
Year completed : 2006
Subject passed : Tshivenda, English, Economics, History
Geography, Agricultural science and Biology

INSTITUTION

Qualification : Bachelor of Environmental Sciences
Year completed : 2013

INSTITUTION

Qualification : Certificate in GIS
Year completed : 2012

INSTITUTION : Vhembe FET College (Mavhoi Campus)
Qualification : Engineering studies (N1)
Year completed : 2014

INSTITUTION : Masana Social & Training Development
Qualification : Occupational Health and Safety
Year completed : 2013

WORK EXPERIENCES

Name of employer : Department of Mineral Resources
Region : North West (Klerksdorp)
Position : Intern
Duration : 01 September 2015 to 31 August 2016
Directorate : Mineral Regulation

SUPPORTING SKILLS AND COMPETENCES

- Computer skills – MS Word, PowerPoint, Access, Outlook and Excel.
- Communication skills – report writing, presentation skills, verbal and oral communication skills.
- I have strong skills in drawing using GIS, CAD, Map source and 1 Map software's, interpretation of raster image, vector Geographic information and engineering drawing.
- Interpersonal skills –team player, conflict resolution and sociable.

KNOWLEDGE

- Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).
- National Environmental Management Act, 1998 (Act 107 of 1998).
- National Environmental Management: Waste Management Act, 2004 (Act 39 of 2004).
- National Water Act, 1998 (Act 36 of 1998).
- Mine Health and Safety Act, 1996 (Act 29 of 1996).
- Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).
- National Environment Management: Air Quality Act, 2004 (Act 39 of 2004).
- Knowledge of international convention such as, RAMSAR, CBU, UNCCD, CITES and UNFCCC.
- Knowledge of Integrated Water Resource Management.
- I have knowledge in using other GIS software's such as Tutuk GIS, Model Maker 6.11, Arc Pad, and Arc Explorer Version 2, 9 and 10 and National Mining Promotion System (NMPS).

MIM (MINERAL INFORMATION MANAGEMENT)

- Verifying and confirmation of the sketch plan of the client.
- Analyses spatial data and aerial photography/remote sensing data accordance with user. Requirements and analyse geographical data to provide decision support mechanism.
- Data capturing, updating, digitizing and editing mines application using Arc GIS.
- Provide geographic information to other officials within the department e.g. land use information, spatial data, coordinate.
- Provide decision support for rezoning, change, of land use and town applications.
- Provide technical support and training users on basic GIS skills.
- Manage and update records of spatial database daily.
- Maintain and manage South African Mineral Resource Administration System (SAMRAD) within the region.
- Ensure that the information received in term of prospecting and mining application does not represent spatial conflict with the previous applications.
- Editing application on ArcGIS (Spatial and attribute data).
- Resolve problems, enquiries, complains and decision making.
- Help clients applying for new application, lodging section 20 and 102.
- Verify regulation 4 (2) plan during the execution of Right.

MEM (Mine Environmental Management)

- Evaluate Environmental Impact Assessment Report, Basic Assessment report, Scoping Report, Environmental Management Plans, closure plans and other technical and environmental documents.
- Implement the Mineral and Petroleum Resource Development Act 2002(Act 28 of 2002)

(MPRDA) policies, strategies and regulation.

- Conduct environmental audit and compliance inspection, closure inspection and pre approval inspection around North West Province.
- Regulate the closure of mine within the stipulated time frame.
- Identify environmental liabilities for mining operations and ensure evaluation of adequacy of financial provision.
- Investigate and resolve mine environmental related issue, attend to environmental related queries and complain on mines.
- Advise mining companies for apply Water Use License.
- Assist public clients through promotion of administrative justice, environmental, enforcement and investigate illegal mine.
- Response, investigate emergency incidents and monitor the rehabilitation in terms of Section 30 of NEMA
- Participate in environmental related forum and meetings.
- To prepare directives and authorization in term of section 24G.
- Coordinate and implementation of pollution control strategies, promote sustainability development and conservation of natural resources.
- Coordinates Councils comments on EIA process and reports.

Name of employer : Mabirimisa Consulting and Projects
Position : Environmental Consultant
Duration : 01 September 2016 up to date

1. RESPONSIBILITIES

- Compile Environmental Impact Assessment Report, Basic Assessment Report, Scoping report, environmental management plans, closure plans and other technical and environmental documents.
- Implement the Mineral and Petroleum Resource Development Act 2002(Act 28 of 2002) (MPRDA) policies, strategies and regulation.
- Apply for Environmental Authorization for different projects
- Conduct Public Participation and compile relevant reports.
- Compile and lodge application for Mining, Prospecting Right and Mining Permit.
- Conduct environmental audit and compliance inspection, closure inspection and pre approval inspection around North West Province.
- Regulate the closure of mine within the stipulated time frame.
- Identify environmental liabilities for mining operations and ensure evaluation of adequacy of financial provision.
- Investigate and resolve mine environmental related issue, attend to environmental related queries and complain on mines.
- Advise mining companies for apply Water Use License.
- Participate in environmental related forum and meetings.
- Coordinate and implementation of pollution control strategies, promote sustainability development and conservation of natural resources.

DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

- Draw plan using GIS software.
- Overlay layers to check if application area is not overlapping with the protected areas or any other sensitive resources from the Environment using Arc Gis, Map Source, 1 Map and BGIS from SANBI.
- Manage Company Project

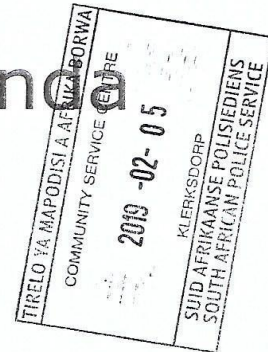
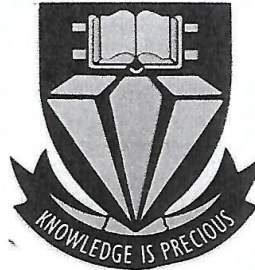
REFERENCES

Surname : Tshipate Thabelo
Company : Department of Water and Sanitation
Position : Environmental Officer
Cell : 076 7418 896
Tell : 012 3180 570
Email : tshipate.thabelo@gmail.com

Surname : Mashawana Mukundi
Institution : Department of Mineral Resources
Position : Registry Clerk
Cell : 072 469 8873
Tell : 018 4879 453
Email : Mukundi.Mashawana@dmr.gov.za

Surname : Nemabaka Ntshavheni
Company : Mabirimisa Bus Services
Position : Admin Clerk
Cell : 072 555 2331
Tell : 015 516 4688
Email : nemabakan@gmail.com

University of Venda



This is to Certify that the Degree of
Bachelor of Environmental Sciences

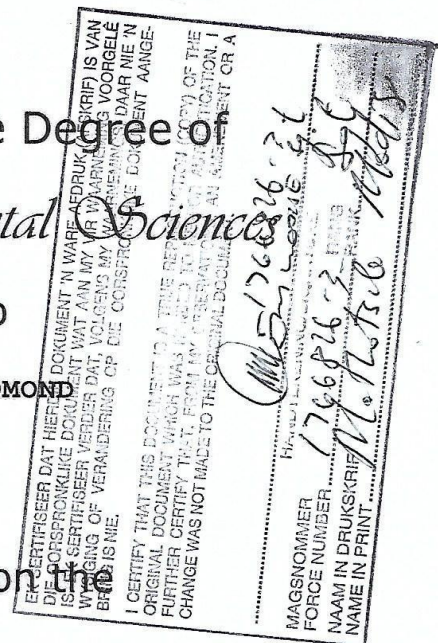
was Awarded to

MABIRIMISA SHUMANI EDMOND

8412046115084

at a Ceremony held on **20-SEP-2013**

in Accordance with the Provisions of the
Act and Statute



Vice Chancellor

1709130164



University Registrar

Dean



DRAFT BAR & EMPR REPORT FOR MINING PERMIT APPLICATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP SITUATED IN THE MAGISTERIAL DISTRICT OF MAKWE.

APPENDIX 3 (TITTLE DEED)

Printed: 2017/10/29 19:40



Farm List

Date Requested 2017/10/29 19:39
 Deeds Office PRETORIA
 Registration Division JP
 Farm Name -
 Farm Number 173
 Remaining Extent NOT SELECTED

PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	NATIONAL GOVERNMENT OF THE REPUBLIC OF SOUTH AFR	T12788/1937B P	1937/09/03	R0.00
1	RABORIFFE KGATITSWE	T107793/2002	2002/09/03	ESTATE *
2	MOLOANA MOSES	T12342/1938B P	1938/07/15	-
3	BELFAST LAND DEVELOPMENT CO PTY LTD	T5602/1972B P	1972/02/29	R0.00
4	REPUBLIC OF BOPHUTHATSWANA	T5720/1929B P	1929/05/18	R0.00
5	MALEKA MABANNA ANNA	T26892/1957B P	1957/11/01	-
6	REPUBLIC OF BOPHUTHATSWANA	T3999/1922B P	1922/04/20	0
7	** FOR INFO REFER TO REGISTRAR OF DEEDS **	REPLACED	-	-

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APPENDIX 4 (BID)

1. INTRODUCTION

2 SSS (Pty) Ltd applied for Mining Permit with the Department of Mineral Resources & Energy for Chrome Ore on certain portion of portion 4 of the farm Vogelstruisnek 173 JP in the Magisterial District of Mankwe situated in Moses Kotane Local Municipality in the North West province.

The farm is situated approximately 45.5 km from Rustenburg town in the North West Province: figure 1 indicates the location of the proposed area. (**Map attached appendix 1**).

The applicant is required to comply with the requirements of the Mineral and Petroleum Resources Development Act 28 (Act No. 28 of 2002), section 27(5) as amended by section 23(e) of the act which stipulates that upon acceptance of its Mining Permit application, Applicant) must

- Submit a BAR & EMPr as required in terms of chapter 5 of the National Environmental Management Act 107 of 1998.
- Notify in writing and consult with the landowner (traditional and title deeds owners), lawful occupiers of the property (and any other affected parties including adjacent and non-adjacent properties), whose socio-economic conditions may be directly affected, the municipality, relevant state departments and other agencies must be consulted and submit the results of the said consultation to the department of mineral resources.

2. PURPOSE OF THIS BACKGROUND INFORMATION DOCUMENT.

The purpose of this document is:

- To notify potential stakeholders of the Mining Permit application -the Department of Mineral Resources Reference Number: NW **30/5/1/3/2/11070 MP**
- To provide I&APs with the information that will allow them to participate in the proposed project and meaningful provide comment and concerns that will be incorporated into the BAR & EMPr Report.
- Invite potential stakeholders to register themselves as I&APs.
- Inform potential stakeholders of the process to be followed in the Report
- To provide information on the environmental work to be done to meet the requirements of the environmental and mining legislation.

3) INFORMATION REGARDING THE PROPOSED MINING ACTIVITIES

3.1) PROJECT OVERVIEW

The Mining Permit application is approximately 4.9 hectares in extent. The life of the mine is estimated at 2 years from the construction to the closure and includes the period of rehabilitation.

The major products would be Chrome Ore, Diamond Alluvial, General and Diamond in Kimberlite which would be mined optimally via the open cast using excavator, front end loader and damper.

3.2) DESCRIPTION OF THE PROPOSED MINING ACTIVITY

The mining activities can be divided into three categories

i. CONSTRUCTION PHASE

During this phase, the infrastructure for the proposed mining activities is constructed and, includes the following:

- Fencing of the mine area
- Site preparation and clearing

- Construction of mine infrastructure such as refuelling site, stockpile areas, mobile offices and mobile toilets.
- Construction of access roads.

ii. PRODUCTION PHASE

During this phase vegetation, top soil, and subsoil will be removed, drilling and excavation of the overburden will be done in order to remove the proposed minerals. Rehabilitation will be done concurrently. Removed topsoil will be stored on the site separately from the subsoil to prevent mixing of soil layers and to be used for rehabilitation.

Once minerals are removed, the overburden is placed back into the void. The topsoil will then be placed back onto the levelled area rehabilitated. The following activities will take place during production phase: topsoil removal, overburden drilling, excavation, loading and hauling, transportation.

iii. DECOMMISSIONING OR CLOSURE PERIOD

Although rehabilitation will be done concurrently with the proposed project, filling of the final void and reinstatement of roads will be done after the mining is complete. After decommissioning, closure activities will include maintenance and aftercare to ensure that rehabilitation is successful. In this regard, although closure objectives have not been finalised, the goal that will be considered is to rehabilitate the area to a close as reasonably possible to pre-mining.

4) WHO ARE THE INTERESTED AND AFFECTED PARTIES?

- In terms of chapter 5 of NEMA and in relation to the assessment of environmental impact of a listed activities or related activity, means an interested and affected party contemplated in section 24(4) (a) (v), and which includes any person, group of persons or organisation interested in or affected by such operation or activity.
- I&APs also often referred to as stakeholders, need to be notified and consulted with, as part of the application process for application. All to register themselves as I&APs, if they felt it is relevant.
- Please note that only registered I&APs will receive follow-up information as the application process continues. Any person can at time throughout the application process identify and register him/herself as an I&AP, keeping in mind that some processes would already be completed at that time.
- All I&APs are invited to also identify other parties they feel should regard this mining permit application or to share this information document with them. Please notify the applicant of any other party you feel should be included in the contact database, we need to contact them directly.
- I&APs are invited to participate in the consulting process by sharing their input, concerns, comments and/or suggestions throughout the process. Please note that you keep to the specified timeframe and we kindly request that you keep to the specified

time frames which will be communicated I&APs throughout the process. Input received will be included in an issues & response register as part of the Report to be submitted to DMR.

5) IMPORTANT

- Please contact Mabirimisa S. E to register yourself or your company/ organization as interested and affected party. Only registered I&AP will receive further information and notification regarding the proposed project.
- Please send us your comments or concerns. Preferably in writing to Mabirimisa Shumani Edmond, Flat 103 Campbell court building 2570, or by e-mail to shumaniedmond@gmail.com or by fax 086 557 9215 within 30 days of this information of this information. You are also welcome to call 082 752 1754 or 063 855 9539

Full names	Affiliation(e.g. company/farm/community):
Tel/cell phone number	Email address: Fax: Cell:
Postal address	
Signature:	
Date:	

DRAFT

APPENDIX 5 (Proof of consultation)



MABIRIMISA CONSULTING AND PROJECTS

Contact Details:
Cell: 082 752 1754
Fax: 086 557 9215
Email: mabirimisaconsulting@gmail.com

Address:
Post Office Box 10640
Klerksdorp
2570

TO
North West Parks Board
Post Office Box 4488
Mmabatho
2745

NOTICE FOR CONSULTATION FOR A MINING PERMIT APPLICATION AND ENVIRONMENTAL AUTHORISATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP, SITUATED IN THE MAGISTERIAL DISTRICT OF MANKWE IN MOSES KOTANE LOCAL MUNICIPALITY, NORTH WEST PROVINCE.

DMRE REFERENCE NUMBER: NW30/5/1/3/2/11070 MP

Notice is given in terms of section 27 of Mineral and Petroleum Resources Development Act of 2002 (Act 28 of 2002), Regulation 41 of the Environmental Impact Assessment Regulations published in Government Notice R 982 of 08 December 2014, under Section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended. In terms of Sections 24 and 24(D) of the Act, as read with Government Notice Regulation 982 of 08 December 2014 as amended, an Environmental Impact Assessment (EIA). The project triggered Listing Notice 1 (BAR & EMPr): Listed activity 21 and 27.

Competent Authority: Department of Mineral Resources & Energy

Commodity: Chrome Ore.

Applicant: 2SSS (Pty) Ltd

Size: 4.9 Hectares

In order to participate in this Process, or to obtain further information, please contact **Mabirimisa Consulting and Projects**, Mr Mabirimisa S.E Address: **P.O. Box 10640, Klerksdorp 2570. Cell phone number: 082 752 1754. Fax Number: 086 5579 215. E-Mail: shumaniedmond@gmail.com.** A Draft BAR and EMPr will be released for a 30 days' comments period from 16 July 2022.

MABIRIMISA CONSULTING AND
PROJECTS (PTY) LTD
REG NR: 2016/357429/07
TEL: 082 752 1754 - 063 855 9539
EMAIL: shumaniedmond@gmail.com

APB Mabirimisa
16/07/2022



MABIRIMISA CONSULTING AND PROJECTS

Contact Details:

Cell: 082 752 1754

Fax: 086 557 9215

Email: mabirimisaconsulting@gmail.com

Address:

Post Office Box 10640

Klerksdorp

2570

TO

Maleka Family Trust

1004 Manyame Section Maologane Village

Sun City

0316

NOTICE FOR CONSULTATION FOR A MINING PERMIT APPLICATION AND ENVIRONMENTAL AUTHORISATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP, SITUATED IN THE MAGISTERIAL DISTRICT OF MANKWE IN MOSES KOTANE LOCAL MUNICIPALITY, NORTH WEST PROVINCE.

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Mabirimisa S.E

MABIRIMISA CONSULTING AND PROJECTS (PTY) LTD

REG NR: 2016/357429/C7

TEL: 082 752 1754 - 063 855 9539

EMAIL: shumaniedmond@gmail.com

16/07/2022



Shumani Mabirimisa <mabirimisaconsulting@gmail.com>

NOTICE FOR CONSULTATION FOR MINING PERMIT APPLICATION 11070 MP

2 messages

Shumani Mabirimisa <mabirimisaconsulting@gmail.com>
To: herbet.molotsi@lonmion.com, herbet.molotsi@sibanyestillwater.com

16 July 2022 at 18:15

Dear land owners

NOTICE FOR CONSULTATION FOR A MINING PERMIT APPLICATION AND ENVIRONMENTAL AUTHORISATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP, SITUATED IN THE MAGISTERIAL DISTRICT OF MANKWE IN MOSES KOTANE LOCAL MUNICIPALITY, NORTH WEST PROVINCE.

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Competent Authority: Department of Mineral Resources & Energy

Commodity: Chrome Ore.

Applicant: 2SSS (Pty) Ltd

Size: 4.9 Hectares

In order to participate in this Process, or to obtain further information, please contact **Mabirimisa Consulting and Projects**, Mr Mabirimisa S.E
Address: P.O. Box 10640, Klerksdorp 2570. **Cell phone number:** 082 752 1754. **Fax Number:** 086 5579 215. **E-Mail:** shumaniedmond@gmail.com. A Draft BAR and EMPr will be released for a 30 days' comments period from 16 July 2022.

Kind regards

Mabirimisa Consulting and Projects

Post Office Box 10640

Klerksdorp

North West

2570

Cell: 063 855 9539

Email: Mabirimisaconsulting@gmail.com



2 attachments

BID FOR 2SSS (PTY) LTD.pdf
348K

REGULATION 2.2.pdf
4321K

Mail Delivery Subsystem <mailer-daemon@googlemail.com>
To: mabirimisaconsulting@gmail.com

16 July 2022 at 16:13

Address not found



Shumani Mabirimisa <mabirimisaconsulting@gmail.com>

NOTICE FOR CONSULTATION FOR MINING PERMIT APPLICATION 11070 MP

1 message

Shumani Mabirimisa <mabirimisaconsulting@gmail.com>
To: Eva Mahlangu <emahlangu@nwpg.gov.za>

16 July 2022 at 18:06

TO
Department of Economic Development ,Environment ,Conservation and Tourism
Private Bag X2039
Mmabatho
2735

NOTICE FOR CONSULTATION FOR A MINING PERMIT APPLICATION AND ENVIRONMENTAL AUTHORISATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP, SITUATED IN THE MAGISTERIAL DISTRICT OF MANKWE IN MOSES KOTANE LOCAL MUNICIPALITY, NORTH WEST PROVINCE.

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Commodity: Chrome Ore.

Applicant: 2SSS (Pty) Ltd

Size: 4.9 Hectares

In order to participate in this Process, or to obtain further information, please contact **Mabirimisa Consulting and Projects**, Mr Mabirimisa S.E
Address: P.O. Box 10640, Klerksdorp 2570. **Cell phone number:** 082 752 1754. **Fax Number:** 086 5579 215. **E-Mail:** shumaniemond@gmail.com. A Draft BAR and EMPr will be released for a 30 days' comments period from 16 July 2022.

Kind regards

Mabirimisa Consulting and Projects

Post Office Box 10640

Klerksdorp

North West

2570

Cell: 063 855 9539

Email: Mabirimisaconsulting@gmail.com



2 attachments

BID FOR 2SSS (PTY) LTD.pdf
348K

REGULATION 2.2.pdf
4321K



Shumani Mabirimisa <mabirimisaconsulting@gmail.com>

NOTICE FOR CONSULTATION FOR MINING PERMIT APPLICATION 11070 MP

1 message

Shumani Mabirimisa <mabirimisaconsulting@gmail.com>
To: Keoagile Sitase <sitase@nwpg.gov.za>

16 July 2022 at 18:11

Department of Public Works Road and Transport .
Private Bag X2080
Mmabatho
2735

NOTICE FOR CONSULTATION FOR A MINING PERMIT APPLICATION AND ENVIRONMENTAL AUTHORISATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP, SITUATED IN THE MAGISTERIAL DISTRICT OF MANKWE IN MOSES KOTANE LOCAL MUNICIPALITY, NORTH WEST PROVINCE.

DMRE REFERENCE NUMBER: NW30/5/1/3/2/11070 MP

Notice is given in terms of section 27 of Mineral and Petroleum Resources Development Act of 2002 (Act 28 of 2002), Regulation 41 of the Environmental Impact Assessment Regulations published in Government Notice R 982 of 08 December 2014, under Section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended. In terms of Sections 24 and 24(D) of the Act, as read with Government Notice Regulation 982 of 08 December 2014 as amended, an Environmental Impact Assessment (EIA). The project triggered Listing Notice 1 (BAR & EMPr): Listed activity 21 and 27.

Competent Authority: Department of Mineral Resources & Energy

Commodity: Chrome Ore.

Applicant: 2SSS (Pty) Ltd

Size: 4.9 Hectares

In order to participate in this Process, or to obtain further information, please contact **Mabirimisa Consulting and Projects**, Mr Mabirimisa S.E

Address: P.O. Box 10640, Klerksdorp 2570. **Cell phone number:** 082 752 1754. **Fax Number:** 086 5579 215. **E-Mail:** shumaniedmond@gmail.com. A Draft BAR and EMPr will be released for a 30 days' comments period from 16 July 2022.

Kind regards

Mabirimisa Consulting and Projects

Post Office Box 10640

Klerksdorp

North West

2570

Cell: 063 855 9539

Email: Mabirimisaconsulting@gmail.com



2 attachments

BID FOR 2SSS (PTY) LTD.pdf
348K

REGULATION 2.2.pdf
4321K



Shumani Mabirimisa <mabirimisaconsulting@gmail.com>

NOTICE FOR CONSULTATION FOR MINING PERMIT APPLICATION 11070 MP

1 message

Shumani Mabirimisa <mabirimisaconsulting@gmail.com>
To: RaesibeM@dalrrd.gov.za

16 July 2022 at 18:12

TO
Department of Agriculture and Land Reform
P.O.Box 2557
Potchefstroom
2570

NOTICE FOR CONSULTATION FOR A MINING PERMIT APPLICATION AND ENVIRONMENTAL AUTHORISATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP, SITUATED IN THE MAGISTERIAL DISTRICT OF MANKWE IN MOSES KOTANE LOCAL MUNICIPALITY, NORTH WEST PROVINCE.

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Address: P.O. Box 10640, Klerksdorp 2570. **Cell phone number:** 082 752 1754. **Fax Number:** 086 5579 215. **E-Mail:** shumaniedmond@gmail.com. A Draft BAR and EMPr will be released for a 30 days' comments period from 16 July 2022.

Kind regards

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Post Office Box 10640

Klerksdorp

North West

2570

Cell: 063 855 9539

Email: Mabirimisaconsulting@gmail.com



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4321K



Shumani Mabirimisa <mabirimisaconsulting@gmail.com>

NOTICE FOR CONSULTATION FOR MINING PERMIT APPLICATION 11070 MP

1 message

Shumani Mabirimisa <mabirimisaconsulting@gmail.com>

16 July 2022 at 18:14

To: Agnes Montwedi <Agnes.Montwedi@dalrrd.gov.za>, Keabetswe Mothupi <keabetswe.mothupi@dalrrd.gov.za>

TO
Land Claim Commissioner
Private Bag X74
Mmabatho
2735

NOTICE FOR CONSULTATION FOR A MINING PERMIT APPLICATION AND ENVIRONMENTAL AUTHORISATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP, SITUATED IN THE MAGISTERIAL DISTRICT OF MANKWE IN MOSES KOTANE LOCAL MUNICIPALITY, NORTH WEST PROVINCE.

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Competent Authority: Department of Mineral Resources & Energy

Commodity: Chrome Ore.

Applicant: 2SSS (Pty) Ltd

Size: 4.9 Hectares

In order to participate in this Process, or to obtain further information, please contact **Mabirimisa Consulting and Projects**, Mr Mabirimisa S.E
Address: P.O. Box 10640, Klerksdorp 2570. **Cell phone number:** 082 752 1754. **Fax Number:** 086 5579 215. **E-Mail:** shumaniemond@gmail.com. A Draft BAR and EMPr will be released for a 30 days' comments period from 16 July 2022.

--
Kind regards
Mabirimisa Consulting and Projects
Post Office Box 10640
Klerksdorp
North West
2570
Cell: 063 855 9539
Email: Mabirimisaconsulting@gmail.com



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Shumani Mabirimisa <mabirimisaconsulting@gmail.com>

NOTICE FOR CONSULTATION FOR MINING PERMIT APPLICATION 11070 MP

1 message

Shumani Mabirimisa <mabirimisaconsulting@gmail.com>
To: mphosephoti@gmail.com, davlelaka@gmail.com

16 July 2022 at 18:31

Dear adjacent landowners.

NOTICE FOR CONSULTATION FOR A MINING PERMIT APPLICATION AND ENVIRONMENTAL AUTHORISATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP, SITUATED IN THE MAGISTERIAL DISTRICT OF MANKWE IN MOSES KOTANE LOCAL MUNICIPALITY, NORTH WEST PROVINCE.

DMRE REFERENCE NUMBER: NW30/5/1/3/2/11070 MP

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Competent Authority: Department of Mineral Resources & Energy

Commodity: Chrome Ore.

Applicant: 2SSS (Pty) Ltd

Size: 4.9 Hectares

In order to participate in this Process, or to obtain further information, please contact **Mabirimisa Consulting and Projects**, Mr Mabirimisa S.E
Address: P.O. Box 10640, Klerksdorp 2570. **Cell phone number:** 082 752 1754. **Fax Number:** 086 5579 215. **E-Mail:** shumaniedmond@gmail.com. A Draft BAR and EMPr will be released for a 30 days' comments period from 16 July 2022.

Kind regards

Mabirimisa Consulting and Projects

Post Office Box 10640

Klerksdorp

North West

2570

Cell: 063 855 9539

Email: Mabirimisaconsulting@gmail.com



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Shumani Mabirimisa <mabirimisaconsulting@gmail.com>

NOTICE FOR CONSULTATION FOR MINING PERMIT APPLICATION 11070 MP

2 messages

Shumani Mabirimisa <mabirimisaconsulting@gmail.com>
To: herbet.molotsi@lonmion.com, herbet.molotsi@sibanyestilwater.com

16 July 2022 at 18:15

Dear land owners

NOTICE FOR CONSULTATION FOR A MINING PERMIT APPLICATION AND ENVIRONMENTAL AUTHORISATION ON CERTAIN PORTION OF PORTION 4 OF THE FARM VOGELSTRUISNEK 173 JP, SITUATED IN THE MAGISTERIAL DISTRICT OF MANKWE IN MOSES KOTANE LOCAL MUNICIPALITY, NORTH WEST PROVINCE.

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Competent Authority: Department of Mineral Resources & Energy

Commodity: Chrome Ore.

Applicant: 2SSS (Pty) Ltd

Size: 4.9 Hectares

In order to participate in this Process, or to obtain further information, please contact **Mabirimisa Consulting and Projects**, Mr Mabirimisa S.E
Address: P.O. Box 10640, Klerksdorp 2570. **Cell phone number:** 082 752 1754. **Fax Number:** 086 5579 215. **E-Mail:** shumaniedmond@gmail.com. A Draft BAR and EMPr will be released for a 30 days' comments period from 16 July 2022.

Kind regards

Mabirimisa Consulting and Projects

Post Office Box 10640

Klerksdorp

North West

2570

Cell: 063 855 9539

Email: Mabirimisaconsulting@gmail.com



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Mail Delivery Subsystem <mailer-daemon@googlemail.com>
To: mabirimisaconsulting@gmail.com

16 July 2022 at 16:13

Address not found



mineral resources
& energy

Department:
Minerals Resources and Energy
REPUBLIC OF SOUTH AFRICA

Private Bag A1, KLERKSDORP 2570

Fax No: (018) 487 4350 / Tel No: (018) 487 4300

Enquiries: P. Chuene Email: Pinky.chuene@dmre.gov.za

Ref No. NW 30/5/1/2/3/2/1/11063 EM

2 SSS (Pty) Ltd
11 Skoolplus Section
Bapong
0269

Attention: Derick Duma

ACKNOWLEDGEMENT RECEIPT OF AN APPLICATION FOR ENVIRONMENTAL AUTHORISATION (HEREIN REFERRED TO AS AN "EA") AS REQUIRED IN TERMS OF REGULATION 3 (6) OF THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 SUBMITTED IN TERMS OF SECTION 24 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND REGULATION 16 OF THE ABOVE-MENTIONED REGULATIONS AS READ TOGETHER WITH SECTION 27 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT NO.28 OF 2002) AS AMENDED BY SECTION 23 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2008 (ACT NO.49 OF 2008).

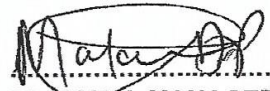
1. The above-mentioned application for an Environmental Authorisation lodged on the 01 June 2022 refers.
2. You are requested to submit a screening tool report in respect of the proposed prospecting activity. Kindly note that is compulsory requirement for utilization of screening tool as from 4 October 2019. The screening tool can be accessed at <https://screening.environment.gov.za> and must be submitted to this office within 7 days from the date of signing of this letter.
3. You are required to consult with every organ of state that administers a law relating to a matter affecting the environment relevant to this application in terms of Chapter 3, Regulation 7(2) read with Chapter 6, Regulation 41(b). This includes; but is not limited to the **National Department of Agriculture, Forestry and Fisheries, Department of Rural, Environmental and Agricultural Development (READ); Department of Water and Sanitation (DWS); Provincial Heritage Resources Agency (PHRA) North West.**
4. In case of the tribal authority, you are required to ensure that proof of consultation of the community concerned is supported by a resolution which is taken in a meeting attended/ facilitated by the Department of Rural Development and Land reform.

NW 30/5/1/2/3/2/1/11070 EM



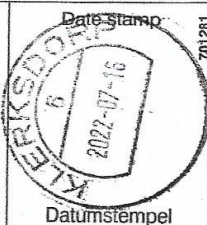
1

5. In addition to the Basic Assessment Report, the National screening tool report must also be submitted.


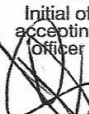
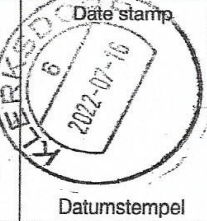
Yours faithfully


.....
REGIONAL MANAGER: MINERAL REGULATION
NORTH WEST REGION
DATE: 6/6/2021

11070 MP

REGISTERED LETTER GEREGISTREERDE BRIEF (with an insurance option/met 'n versekeringsopsie)		 Post Office	
Full tracking and tracing/Volledige volg en spoor		Postage paid R _____ C Service fee/Diensgeld R _____ C Insurance/Versekering R _____ C Total/Totaal R _____ C	
Addressed to/Geadresseer aan NORTH WEST PARKS BOARD PO. BOX 4688 MMABATHO		Insured value of contents Versekerde waarde van inhoud R _____ C	
Postcode 2745		Enquiries/Navrae Toll-free number Tolvry nommer 0800 111 502	
The value of the contents of this letter is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100.00. No compensation is payable without documentary proof. Optional insurance up to R2000.00 is available and applies to domestic registered letters only. Die waarde van die inhoud van hierdie brief is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100.00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering tot R2 000.00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.		Initial of accepting officer  Paraaf van aaneem-beampte	
Affix Track and Trace REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC458480139ZA CUSTOMER COPY 301028R		Date stamp  Datumstempel	
		kliëntafskrif	

11070 MP

REGISTERED LETTER GEREGISTREERDE BRIEF (with an insurance option/met 'n versekeringsopsie)		 Post Office	
Full tracking and tracing/Volledige volg en spoor		Postage paid R _____ C Service fee/Diensgeld R _____ C Insurance/Versekering R _____ C Total/Totaal R _____ C	
Addressed to/Geadresseer aan MALEKA FAMILY 10004 MANYAME SECTION MADLOGANE VILLAGE SIM CITY		Insured value of contents Versekerde waarde van inhoud R _____ C	
Postcode 0316		Enquiries/Navrae Toll-free number Tolvry nommer 0800 111 502	
The value of the contents of this letter is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100.00. No compensation is payable without documentary proof. Optional insurance up to R2000.00 is available and applies to domestic registered letters only. Die waarde van die inhoud van hierdie brief is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat sonder voorbehoud ontvang word nie. Vergoeding is beperk tot R100.00. Geen vergoeding is sonder dokumentêre bewys betaalbaar nie. Opsionele versekering tot R2 000.00 is beskikbaar en is slegs op binnelandse geregistreerde briewe van toepassing.		Initial of accepting officer  Paraaf van aaneem-beampte	
Affix Track and Trace REGISTERED LETTER (with a domestic insurance option) ShareCall 0860 111 502 www.sapo.co.za RC458480111ZA CUSTOMER COPY 301028R		Date stamp  Datumstempel	
		kliëntafskrif	