



TSHIKOVHA GREEN & CLIMATE CHANGE ADVOCATES (PTY) LTD

We Advocate For Environmental Compliance Throughout Business Value Chain

**DRAFT BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME
FOR THE PROPOSED PROSPECTING RIGHT FOR CHROME, COBALT, GOLD, IRON, NICKEL,
PLATINUM GROUP METALS (PGM), SILVER AND VANADIUM ON FARM KROMDRAAI 265 KR
SITUATED WITHIN MOGALAKWENA LOCAL MUNICIPALITY, WATERBERG DISTRICT
MUNICIPALITY, LIMPOPO PROVINCE**

PREPARED BY TSHIKOVHA GREEN AND CLIMATE CHANGE ADVOCATES (PTY) LTD

PROPONENT: DLAMINI FAMILY TRUST

COMMENTING PERIOD: 10 JANUARY - 10 FEBRUARY 2019

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mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

DRAFT BASIC ASSESSMENT REPORT

AND

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATION 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).

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FILE REFERENCE NUMBER SAMRAD: LP30/5/1/1/2/13277PR

This Basic Assessment Report (Draft BAR) and Environmental Management Programme (EMPr) is being submitted to the Department of Mineral Resources (DMR) in support of the Prospecting Right Application lodged by Dlamini Family Trust.

The draft BAR and EMPr will be subjected to a mandatory 30-day public review and comment period in terms of Chapter 6 of the National Environmental Management Act (Act No. 107 of 1998) as amended (April 2017). All comments received will be included in the final BAR and EMPr to be submitted to the DMR. A full consultation report will be compiled once all comments are received and are responded to by the Environmental Assessment Practitioner (EAP).

i. IMPORTANT NOTICE

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

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

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

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

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

ii. OBJECTIVE OF THE BASIC ASSESSMENT PROCESS

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

- (a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- (b) identify the alternatives considered, including the activity, location, and technology alternatives;
- (c) describe the need and desirability of the proposed alternatives,
- (d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on 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.

Executive Summary

Dlamini Family Trust has applied for an Environmental Authorisation for the proposed prospecting activities for Chrome, Cobalt, Gold, Iron, Nickel, Platinum Group Metals (PGM), Silver and Vanadium on farm Kromdraai 265 KR situated within Mogalakwena Local Municipality, Waterberg District Municipality Limpopo Province

The application has been lodged in terms of Regulation 16 of the National Environmental Management Act (Act 107 of 1998) (NEMA): Environmental Impact Assessment (EIA) Regulations, 2014 and Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002). In terms of the NEMA (Act 107 of 1998). EIA regulations of 2014 (amended April 2017), the proposed prospecting activity triggers Activity 20 of Listing Notice 1 GNR 327 and the applicant cannot proceed without an Environmental Authorisation.

Tshikovha Green Climate Change Advocates (Pty) Ltd has been appointed by Dlamini Family Trust as an independent environmental assessment practitioner (EAP) to undertake the Environmental Impact Assessment for the proposed prospecting right project. The purpose of the study is to identify and assess all the possible impacts that may arise from the implementation of the proposed project and also to find the most effective way of enhancing environmental benefits and mitigating potential impacts to encourage sustainable development in the area.

The proposed prospecting activities will be undertaken over a period of five (5) years and the activities will be conducted in progressive phases which include Non-invasive and invasive methods. The Non-invasive method will include desktop studies and geological mapping, whereas Invasive methods will include drilling and sampling.

The potential risks and key issues identified were based on consultation with I&APs, internal process based on similar projects and the current state of the environment of the site. A description of the biophysical and social environment is included in the report, to ensure that all potential risks and issues are taken into consideration in all phases of the proposed project. A brief description of the potential aspects that will be impacted include,

- Policy requirements
- Air quality
- Fauna
- Flora
- Waste
- Ground water
- Geology
- Soils
- Traffic
- Cultural and Heritage
- Socio-economic

This document (DBAR) and the Environmental Management Programme (EMPr), was compiled in terms of the EIA Regulations of 2014 (amended, April 2017) and will be distributed for review by interested and affected parties including the competent authority.

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PART A: SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

1. Contact Person and correspondence address

1.1. Details of the EAP

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1.2. Expertise of the EAP

1.2.1. The qualifications of the EAP

Gregory Netshilindi

Bachelor of Sciences Science in Environmental & Geographical Sciences and Geology; Bachelors Science of honours in Geological Sciences

Basetsana Motha

National Diploma in Environmental Sciences

(Refer to Appendix 1)

1.2.2. Summary of the EAP's past experience

(In carrying out the Environmental Impact Assessment Procedure)

EAP's past experience	
Name	Background
Gregory Netshilindi	Mr Gregory Netshilindi is an Environmental Assessment Practitioner with approximately 3 and half years of experience. He holds an Honours BSc degree in Geology and BSc in Environmental & Geographical Sciences and is a candidate natural Scientist with the South African Council of Natural Science Profession (SACNASP) and with the Geological Society of South Africa (GSSA). He has undertaken environmental compliance/permitting (including basic assessments, applications for prospecting and mining rights and mining permits, and public participation/stakeholder engagement, he has also undertaken a role as an Environmental Control officer in the construction industry.
Basetsana Motha	Basetsana holds a National Diploma in Environmental Sciences. She is a Junior Environmental Assessment Practitioner at Tshikova Green and Climate Change Advocates and has an understanding of South African Environmental Legislation. Basetsana Motha has expertise in a wide range of environmental disciplines, including Environmental Impact Assessment (EIA), Environmental Management Programmes and Co-ordination and facilitation of the public participation process. She has acquired her experience through compiling Environmental Management Programme Reports (EMP), Environmental Impact Assessments (EIA), Scoping

	<p>Reports as well as Basic Assessments within the company.</p> <p>As a Junior Environmental Assessment Practitioner, Basetsana has been involved in several EIA projects including the establishment of a macadamia nut orchard on farm Sutton crest 11 in the Makhado Local Municipality, the application for a Prospecting Right for Coal on portions 2,9,10,11,14,15,16,24,25,30,32 of Farm Vlaklaagte 45 IS, within the Emalahleni Local Municipality, Nkangala District Municipality, Mpumalanga Province and the the proposed prospecting right for the prospecting of Coal on the Driefontein 398 JS Farm, in Middleburg within the Nkangala Magisterial District, Mpumalanga Province.</p>
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2. Location of the overall Activity

Farm Name:	Kromdraai 265 KR
Application area (Ha)	3140.0959 ha
Magisterial district:	Waterberg District Municipality
Distance and direction from nearest town	Approximately 10km west of Mokopane
21 digit Surveyor General Code for each farm portion	T0KR00000000026500000

4. Description of the scope of the proposed overall activity.

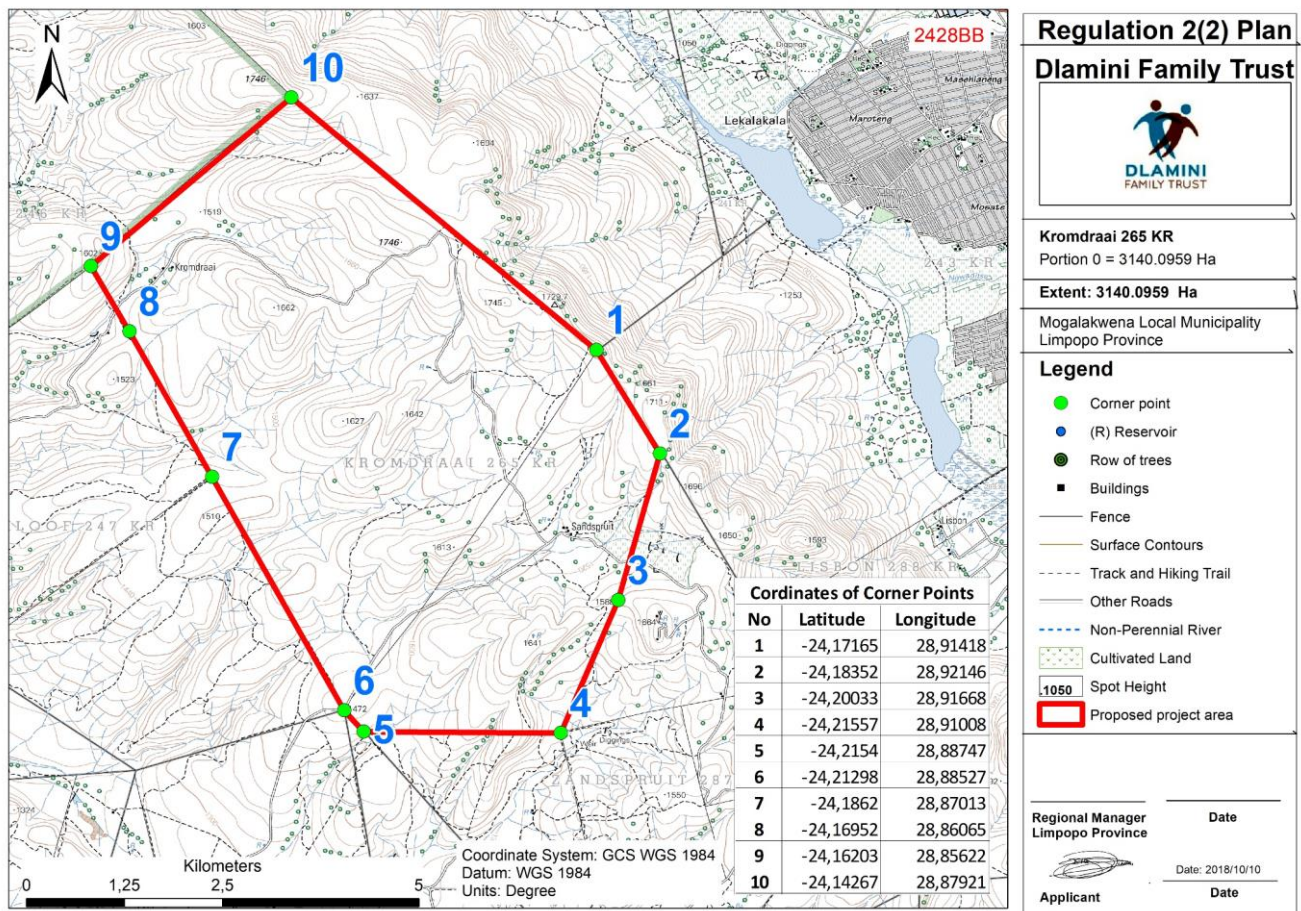


Figure 2: Regulation sketch plan for the proposed area

4.1. Listed and specified activities

Section 16 of the Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), as amended by Section 12 of the MPRDA, 2008 (Act No. 49 of 2008), An Environmental Authorization is required for a Prospecting Right and that the applicant must notify and consult with Interested and Affected Parties (I&APs). In terms of EIA Regulations 2014, published in Government Notice (GN) R324, R325, R327 as amended on 7 April 2017 under section 24(5) of the National Environmental Management Act (NEMA), the application for a prospecting right is subjected to an application for Environmental Authorization. The proposed prospecting activities trigger the following activity(s) under GNR 327 which requires a Basic Assessment Report (BAR) and Environmental Management Programme (EMPr):

NAME OF ACTIVITY	Aerial extent of the Activity Ha or m²	LISTED ACTIVITY	APPLICABLE LISTING NOTICE
Prospecting	3140.095 Ha	X	GNR 327, Listing Notice 1, Activity 20 Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including— (a) Associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource.
Drill site 20 boreholes will be drilled 1 drill hole= 0.01 ha (100 m²) Total 20 drilling site= 0.2 ha (2000m²)	0.2 Ha (2000m²)		
Site preparation, clearance of top soil and vegetation	50m² per prospecting site		
Sampling and storage	10 m² per soil sample per layer		
Access road	500m²		
Waste generated, stored and disposed	Less than 2m³		
Rehabilitation of prospected area and decommissioning of activities this includes: borehole capping; re-spreading of stockpiles covering cleared sites; and removal of temporary site facilities, water tanks, mobile toilets, waste and all machineries	0.25 ha (2500 m²)		

4.2. Description of the activities to be undertaken

Dlamini Family Trust intends to undertake prospecting on farm Kromdraai 265 KR situated within Mogalakwena Local Municipality, Waterberg District Municipality in the Limpopo Province. The commodity that is to be prospected is Chrome, Cobalt, Gold, Iron, Nickel, Platinum Group Metals (PGM), Silver and Vanadium and it is expected that a period of five (5) years will be needed to carry out this activity.

4.2.1. The prospecting method or methods to be implemented

4.2.1.1. Description of planned non-invasive activities:

(These activities do not disturb the land where prospecting will take place (e.g.: Aerial photography, desktop studies, aero magnetic surveys, etc.)

a) Desktop Study

The initial Phase 1 work will include the collection and interpretation of all available data (as extensive exploration was conducted in the proposed project area), and the compilation of a Geographic Information Systems database. The data to be collected will include aerial photos, orthophotos, aeromagnetic data, topo-cadastral maps, geological maps, historic exploration programmes and any other published literature and maps. The desktop study will aid in compiling a preliminary geological model of the area to be utilized in the planning, geological mapping and sighting of drill holes.

b) Geological Mapping

Mapping will be completed such that meaningful structural and geological data may be derived from it and to confirm that the desktop study is accurate.

c) Sample Analysis

The drill core will be sampled where a mineralized section is intersected. The core will be split into two halves, with one half of the core taken for assay purposes and the other half being retained. Each sample will be measured and weighed, and the sample lengths will be recorded before dispatch for assays at a South African National Accreditation System (SANAS) accredited laboratory.

d) Preliminary Economic Assessment

A preliminary economic assessment is conducted to determine whether a project has the potential to be viable. At this stage, the mineralization, regardless of its quantity and quality, is considered a mineral resource. This study is based on industry standards rather than detailed site-specific data.

e) Pre-feasibility Study

The pre-feasibility and feasibility studies are more detailed. By the time a decision is made to proceed with a pre-feasibility study, a preliminary mineral resource report has been finalized and an ore body model demonstrating its shape, tonnes, and grade is available. A resource cannot be converted to a reserve unless it is backed up by at least a pre-feasibility study. Their results will show with more certainty whether the project is viable. At this point, the mineral resource, or a portion thereof, becomes a mineral reserve.

4.2.1.2. Description of planned invasive activities:

a) Drilling:

Diamond drilling techniques will be utilized to prospect for mineralization across the Proposed Project Area. Geological, structural and geotechnical logging will be performed by experienced geologists to ensure appropriate and sufficient Mineral Resources estimation, mining and metallurgical studies. The results of the Phase 1 and Phase 2 will be used to assist in the ideal location of boreholes to be drilled. Also, since the Proposed Project Area has been previously explored, only ten boreholes will be drilled initially. Ten boreholes are planned for Phase 3 drilling. After Phase 3 drilling, the results will be used to design a systematic drilling programme aimed at delineating a Mineral Resource on the Proposed Project Area. The number of boreholes will depend greatly of the results of Phase 3 drilling. A further ten boreholes are planned for Phase 5 drilling (Figure 3).

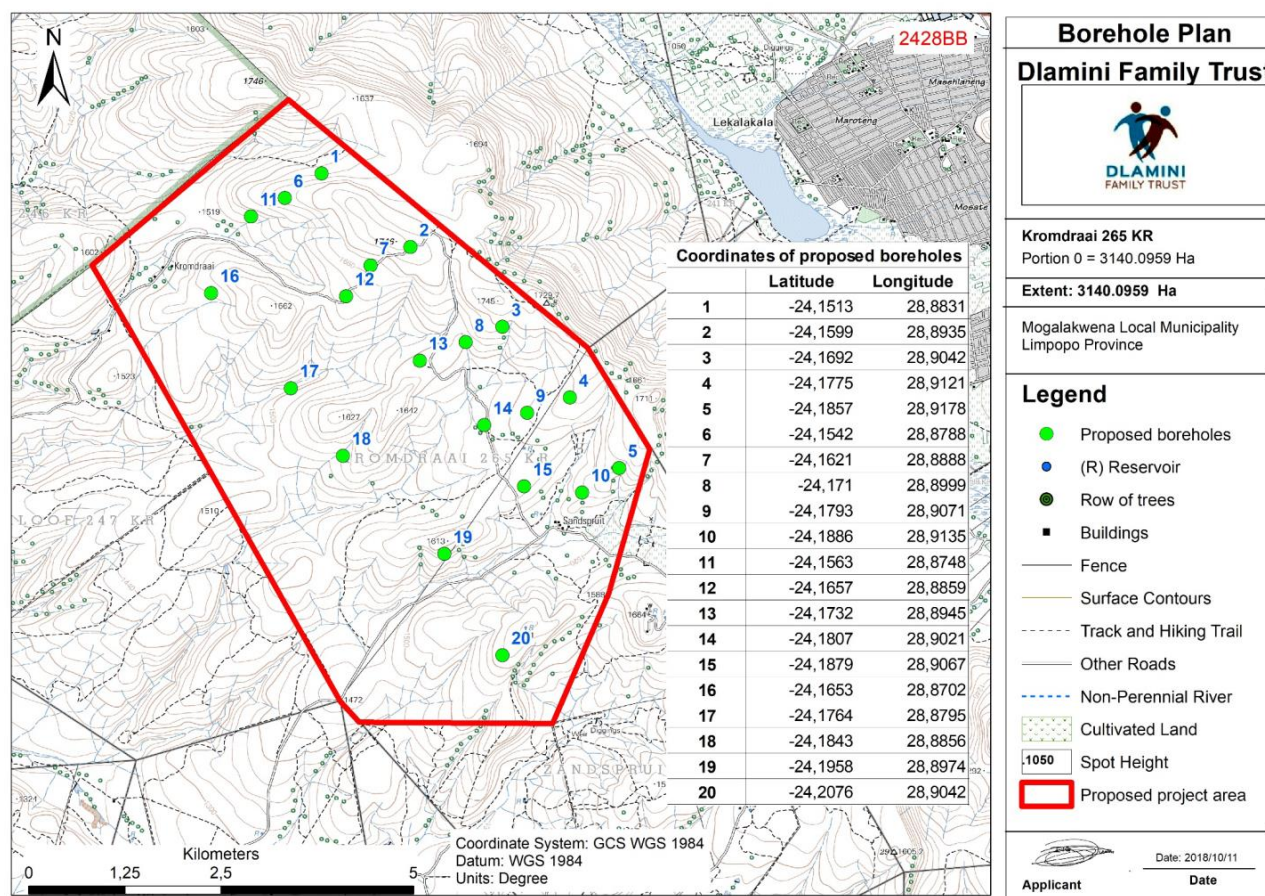


Figure 3: Map showing the location of proposed boreholes

4.2.1.3 Description of pre- feasibility Studies

(Activities in this section include but are not limited to: initial, geological modeling, resource determination, possible future funding models, etc.)

Pre-feasibility studies are detailed studies that involve the use of metrics and data specific to the project under consideration not standard industry methods. Pre-feasibility studies usually include a range of options for the technical and economic aspects of a project and are used to justify continued exploration, to complete the required project permitting or to attract a joint venture partner. The overriding aim of a pre-feasibility study is to select the preferred option, also known as base case scenario, for the project development. This base case scenario is then developed in enough detail to underpin decisions to devote any additional funds required to move the project through subsequent stages of development and to a final feasibility study.

4.2.1.4 The Prospecting Phases to be implemented

These intended prospecting activities will be conducted in phases using the aforementioned methods. The intended phases in sequence are indicated in the table below.

Table 1: Planned Prospecting Phases

Phase	Activity (What are the activities that are planned to achieve optimal prospecting)	Skills Required (Refers to the competent personnel that will be employed to achieve the required results)	Timeframe (In Months for the activity)	Outcome (What is expected deliverable, e.g. Geological report, analytical results, feasibility study, etc.)	Timeframe for outcome (Deadline for the expected outcome to be delivered)	What technical expert will sign off on the outcome (E.g. Geologist, mining engineers, Surveyors, Economists etc.)
1.	Non-Invasive Prospecting Desktop Study	Geologist	Month 1-8 (8 months)	Desktop study report	Month 8	Geologist
2.	Non-Invasive Prospecting Geological Mapping	Geologist	Month 9-10 (2 months)	Geological report	Month 10	Geologist
3.	Invasive Prospecting Drilling	Geologist	Month 11-22 (12 months)	Drilling report	Month 22	Geologist

	Invasive Prospecting Sampling	Geologist				
	Non-Invasive Prospecting Sample analyses	Laboratory	Month 23-24 (2 months)	Analysis results	Month 24	Laboratory
4.	Non-Invasive Prospecting Preliminary economic assessment	Geologist	Month 25-30 (6 months)	Preliminary economic assessment report	Month 30	Geologist
5.	Invasive Prospecting Drilling	Geologist	Month 31-42 (12 months)	Drilling report	Month 42	Geologist
	Invasive Prospecting Sampling	Geologist				

	Non-Invasive Prospecting Sample analyses	Laboratory	Month 43-44 (2 months)	Analysis results	Month 44	Laboratory
6	Non-Invasive Prospecting Pre-feasibility study	Geologist, Mining Engineer	Month 45-50 (6 months)	Pre-feasibility study report	Month 50	Geologist, Engineer Mining
7.	Mining Right Application	Geologist, Mining Engineer	Month 51-60 (10 months)	Mining Works Programme	Month 60	Geologist, Engineer Mining

5. Policy and Legislative Context

Table 2: Policy and Legislative Context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT?
Constitution of the Republic of South Africa, 1996	During Operational and Decommissioning phase of the proposed development	<p>Section 24 of the Constitution of the Republic of South Africa provides the overarching environmental legislative framework for environmental management. According to this section:</p> <p>“Everyone has the right: to an environment that is not harmful to their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that- Prevent pollution and ecological degradation; Promote conservation; and Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development</p>
National Environmental Management Act, 1998 (Act No. 107 of 1998)	During Planning phase of the project, the proposed development is listed in GNR 327 Listing Notices 1. Activity	Dlamini Family trust has appointed Tshikovha Green and Climate Change Advocates (Pty) Ltd to conduct

	Number 20 is triggered.	<p>Environmental Impact Assessment for the proposed project in line with Impact Assessment Regulations of the National Environmental Management Act 107 of 1998 as amended in 2017.</p> <p>Submission of Basic Assessment Report and Environmental Management Programme Report to the Competent Authority as required by NEMA</p>
Mineral and Petroleum Resources Development Act	The prospecting right activities requires the prospecting right from the Department of Mineral Resources	A prospecting right application has been lodged with and accepted by the DMR as the competent Authority
National Heritage Resources Act (Act No 25 of 1999)	All cultural and heritage resources should be protected if or when encountered	A permit may be required if identified cultural/heritage sites on the proposed site will be disturbed or destroyed as a result of the prospecting activities.
National Environmental Management: Air Quality Act (Act No 39 of 2004)	Minimal Dust from moving vehicles and drilling can be generated.	This Act governs the standards associated with dust generation which are used in Impact Assessments to regulate the concentration of particulates that can be tolerated without the deterioration of environmental aspects.
Occupational Health and Safety Act (No 85 Of 1993)	During construction and operational phase, contractors and employees should adhere to the requirements of this	The Act provides for the health and safety of persons at work and for the health and safety of persons in connection with the use of machinery; the protection of persons other than

	legislation for a safe working environment.	persons at work, against hazards to health and safety arising out of or in connection with the activities of persons at work.
National Environmental Management: Biodiversity Act (Act No 10 of 2004)	The prospecting activities may encounter critical endangered species	The Act provides for listing threatened or protected ecosystems, in one of four categories: critically endangered (CR), endangered (EN), and vulnerable (VU) or protected.
National Forests Act (Act No. 84 of 1998)	During the Site establishment, there may be a clearance of vegetation which includes trees.	In terms of S5(1) no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell donate or in any other manner acquire or dispose of any protected tree or any forest product derived from a protected tree.
National Road Traffic Act (Act No 93 of 1996)	<p>The technical recommendations for highways (TRH 11): “Draft Guidelines for Granting of Exemption Permits for the Conveyance of Abnormal Loads and for other Events on Public Roads” outline the rules and conditions which apply to the transport of abnormal loads and vehicles on public roads and the detailed procedures to be followed in applying for exemption permits are described and discussed.</p> <p>Legal axle load limits and the restrictions imposed on abnormally heavy loads are discussed in relation to the damaging effect on road pavements, bridges, and culverts.</p>	An abnormal load/vehicle permit may be required for the drill rig to be taken to the site. These include route clearances and permits will be required for vehicles carrying abnormally heavy or abnormally dimensioned loads.

	<p>The general conditions, limitations, and escort requirements for abnormally dimensioned loads and vehicles are also discussed and reference is made to speed restrictions, power/mass ratio, mass distribution, and general operating conditions for abnormal loads and vehicles. Provision is also made for the granting of permits for all other exemptions from the requirements of the National Road Traffic Act and the relevant Regulations.</p>	
<p>Mine Health and Safety Act, 1996 (No. 29 of 1996)</p>	<p>The mine Health and Safety Act, 1996 (No. 29 of 1996) provides for the protection of the health and safety of employees and other persons at mines and, for that purpose, promote culture of health and safety</p>	<p>The applicant will be required to meet the requirements of the Mine Health and Safety Act during invasive and non-invasive prospecting phases.</p>
<p>National Water Act (Act No. 36 of 1998)</p>	<p>The proposed activities require minimum use of water, however it will not consume enough water to trigger a water use license application.</p>	<p>No water use license is required for this application. Any water required for drilling activities will be brought in via a mobile water tanker.</p>
<p>National Environmental Management: Waste Act, Act 59 of 2008</p>	<p>Management measures environmental awareness plan</p>	<p>The generation of potential waste will be minimised through ensuring employees of the drilling contractor are subjected to the appropriate environmental awareness campaign before commencement of drilling. All waste generated during drilling activities will be disposed of in a responsible legal manner.</p>

Conservation of Agricultural Resources Act, 1983	The overall Prospecting Activities	The project should promote the conservation of soil, water and vegetation
Section 34 of the Local Government: Municipal Systems Act, 2000 (ACT 32 of 2000)	The overall prospecting activities	Municipal System Act compels municipalities to draw up the IDP's as a singular inclusive and strategic development plan. In terms of section 26 of the MSA, A municipality produces an IDP every five year.
National Development Plan 2030	The overall prospecting activities	The NDP aims to eliminate poverty and reduce inequality by 2030. According to the plan, South Africa can realise these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnership throughout society.

6. Need and desirability of the proposed activities

Assessment of the geological data available has determined that the area in question may have the proposed minerals. In order to ascertain the above and determine the nature, location and extent of the subject minerals within the proposed prospecting area, it will be necessary that prospecting be undertaken. The prospecting will also determine if there are any features that may have an impact on the economic extraction of the subject minerals. The mineral that will be prospected is Chrome, Cobalt, Gold, Iron, Nickel, Platinum Group Metals (PGM), Silver and Vanadium.

A prospecting right allows a company to survey or investigate the area of land for the purpose of identifying an actual or probable mineral deposit. The data that will be obtained from the prospecting of the minerals being applied for will be necessary to determine how and where the minerals will be extracted and how much economically viable mineral reserves are available within the proposed prospecting area.

Currently South Africa is faced with an outbreak of illegal mining at a national scale which is associated with death of illegal miners as a result of conflict, thus mining prospecting activities reduces the probability of these incidents and on other hand promoting the sustainable and regulated exploration of natural resources in an environmental friendly manner

Additionally, the mineral prospecting activities will stimulate an income for the local minority that will be involved in the activity from site clearance, excavation to testing. The result will provide a gateway for the stimulation of sustainable income for local community at the operational stage of mining.

7. Motivation for the overall preferred site, activities and technology alternative including Full description of the process followed to reach the proposed preferred alternatives within the site.

The proposed site was selected based on extensive research and also following on information from previous prospecting activities in the area. In terms of the technologies proposed, the proposed prospecting methods and technologies have been chosen based on the known successful prospecting processes within the area. The prospecting activities proposed in the Prospecting Works Programme (PWP) is dependent on the preceding phase as previously discussed, therefore no alternatives are indicated, but rather a phased approach of trusted prospecting techniques

7.1. Details of the development footprint alternatives considered.

7.1.1. Location Alternatives

There is no preferred site alternative for the proposed prospecting project because the mineral the applicant proposes to prospect is located within the preferred site.

7.1.2. Design/Layout Alternatives

Since exploration is temporary in nature, no permanent structures will be constructed. Negotiations and agreements will be made with the land owners to use any existing infrastructure like access roads for the explorers, and any infrastructures that may exist on site.

7.1.3. Technology Alternatives

The diamond drilling technique is the only major method used in exploring for deposits of this type and also for resource definition and evaluation. The technology to be used cannot be replaced by any other methods thus these are the preferred activities.

7.1.4. Operational Alternatives

Exploration Drilling Methods

The principal prospecting activity will be diamond core drilling. One drill rig will be utilised to drill NQ – 60mm diameter of core size. This core size provides sufficient sample mass for laboratory analysis. Thus no other methods have been considered for the proposed prospecting.

7.2. The option of not implementing the activity (no-go option)

The 'no-go' alternative is the option of not undertaking prospecting activities on the project site. The no-go option assumes the site remains in its current state. Drilling is required in order to investigate the potential and feasibility of the minerals on site. There is no potential for any future investment in a mine without the confirmation of the mineral resources availability which can only be obtained from drilling activities. Should the prospecting right not be granted, effectively the minerals being applied for will not benefit the local community. The socio-economic benefit and most notably the future employment and potential of mine development will be lost if the prospecting activities are not implemented in order to determine the feasibility of any deposits that may occur within the area.

- The mining sector forms part of the backbone of the South African economy. The Limpopo Province is one of the main contributors to the Provincial GDP and as such the option of not carrying out the prospecting activities would prevent future prospects of mining thus reducing the contribution to the GDP.
- The jobs that were to be created during prospecting phase will also be missed; these employment opportunities would be reduced, causing an economic burden on the government as people dependant on social grants would not be reduced.
- The state of the natural environment will remain the same, amongst other things the following will be beneficial:
 - There will be no geological and soil disturbance which may lead to ground water contamination

- No excessive generation of wastes from the proposed activities
- No compaction of path ways affecting the growth pattern of grasses and movement of micro animals
- No disturbance of wild life in the surrounding game farms will occur.
- The biodiversity will not be altered as there will be no removal of plants and induced noise from prospecting activities.

8. Details of the Public Participation Process Followed

This section of the report provides an overview of the tasks undertaken for the Public Participation Process (PPP) to date. The PPP was conducted in terms of Chapter 6 of the NEMA and included the following:

- 1) Identification of key Interested and Affected Parties (affected and adjacent landowners) and other stakeholders (organs of state and other parties) (Appendix 3 A- Stakeholder Database)
- 2) Placement of site notices on farms, and other accessible public areas (Appendix 3 B)
- 3) Formal notification of the application to key Interested and Affected Parties and other stakeholders (Appendix 3C-BID);
- 4) Consultation and correspondence with I&AP's and Stakeholders and the addressing of their comments;(Appendix 3D)
- 5) Newspaper adverts (Appendix 3E)

8.1. Identification of key Interested and Affected Parties:

Public Participation is the involvement of all parties who are either potentially interested and/or affected by the proposed development. The principal objective of public participation is to inform and enrich decision-making. This is also its key role in this Environmental Impact Assessment (EIA) process.

Land owners (affected and adjacent) were identified through the site visit. Additional relevant organisations were also identified and notified of the application. This includes municipal and State departments with jurisdiction in the project area. Interested and Affected parties (I&AP's) representing the following sectors of society were identified:

- Provincial and local government;
- Landowners
- Department of Economic Development, Environment and Tourism Limpopo(LEDET)
- Department of Water and Sanitation(DWS)
- Department of Agriculture Forestry and Fisheries (DAFF)

- Limpopo Heritage Resource Authority (LIHRA)
- Industry and mining;

8.2. Formal notification of the application to key Interested and Affected Parties

The project was announced as follows:

- **Newspaper Advert Notice:**

The project announcement advertisement was published on **16th of November 2018** in the Bosvelder Newspaper. The newspaper advert was used to notify all interested and affected parties (I&APs) of the proposed project and for them register as stakeholders for the project. Registered I&APs will be forwarded a draft BAR & EMPr for a 30-day commenting period. Comments received will be included in the final BAR & EMPr to be sent to the Competent Authority.

- **Site notice placement: -**

In order to inform surrounding communities and adjacent landowners of the proposed development, site notices were erected on site and at visible locations close to the site on the **12th of November 2018**.

- **Written notification: -**

I&AP's and other key stakeholders will be sent the Background Information Document (BID) notifying them of the project and the Draft Basic Assessment report will be sent to all registered I&AP's for a 30-day commenting period.

- **Public Meeting: -**

Registered stakeholders and I&APs will also be invited to a public meeting should a need arise.

- **Distribution of Draft BAR and EMPr**

All registered stakeholders and I&APs will be informed of the availability of the Draft Basic Assessment Report and Environmental Management Programme for public viewing. The stakeholders and I&APs will also be invited to submit their comments regarding the proposed project.

8.3. Summary of issues raised by I&As

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

Table 3: Issues raised by Interested and Affected Parties (I&As)

Interested and Affected Parties	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.
No comments have yet been received on the draft BAR and EMP. The draft will be distributed to all I&As for a 30-day commenting period. The comments from I&A will be included in the final BAR and EMP for submission to DMR.				

9. The Environmental attributes associated with the alternatives.

9.1. Geology

The greater Waterberg District area is unique due to its geological formations (predominantly sandstone). The Waterberg district has a fairly complex geology with a relative high degree of minerals. The most important intrusive rock formation is the Bushveld Igneous Complex that holds large reserves of platinum (Environmental Potential Atlas for South Africa, 1997). The minerals are found in clusters in varying concentrations.

The proposed project area is located on the Northern Limb of the Bushveld Igneous Complex (BIC). Mineralisation in the northern limb is located within the Platreef. The project area is located west of the Platreef. The Platreef is predominantly a pyroxenitic PGE-Cu-Ni-bearing package with a hanging wall of Main Zone gabbronorite and a footwall of Transvaal Supergroup in the south and Archaean granite and gneiss in the north. The Platreef generally shows lower PGE grade than the Merensky Reef and UG-2 chromitite. Overall grade is typically 4g/t where footwall is dolomite, but commonly 1-2 g/t elsewhere with intersections sometimes >10g/t. The Platreef varies from 400 m thick in the South to <50 in the North (Kinnaird et al 2005). Although the overall strike is NW or N, with dips 40-45°W at surface, shallowing down dip, the overall geometry appears to have been controlled by irregular floor topography.

There are basement highs on southern Macalacaskop and on southern Turfspruit with thinned Platreef on the flanks and thick reef in the intervening basins. In the southern basin, it is 400 m thick; dips are 32°NE on the S side and 47°SW on the N side. In the Turfspruit basin, the Platreef is 250 m thick with 40°inward dips (Kinnaird et al 2005). Faults offset the strike of the Platreef: a N-S, steeply dipping set is predominant with secondary ENE and ESE sets dipping 50-70°S. The fault architecture was pre-Bushveld and locally controlled thickening and thinning of the succession, especially in the south.

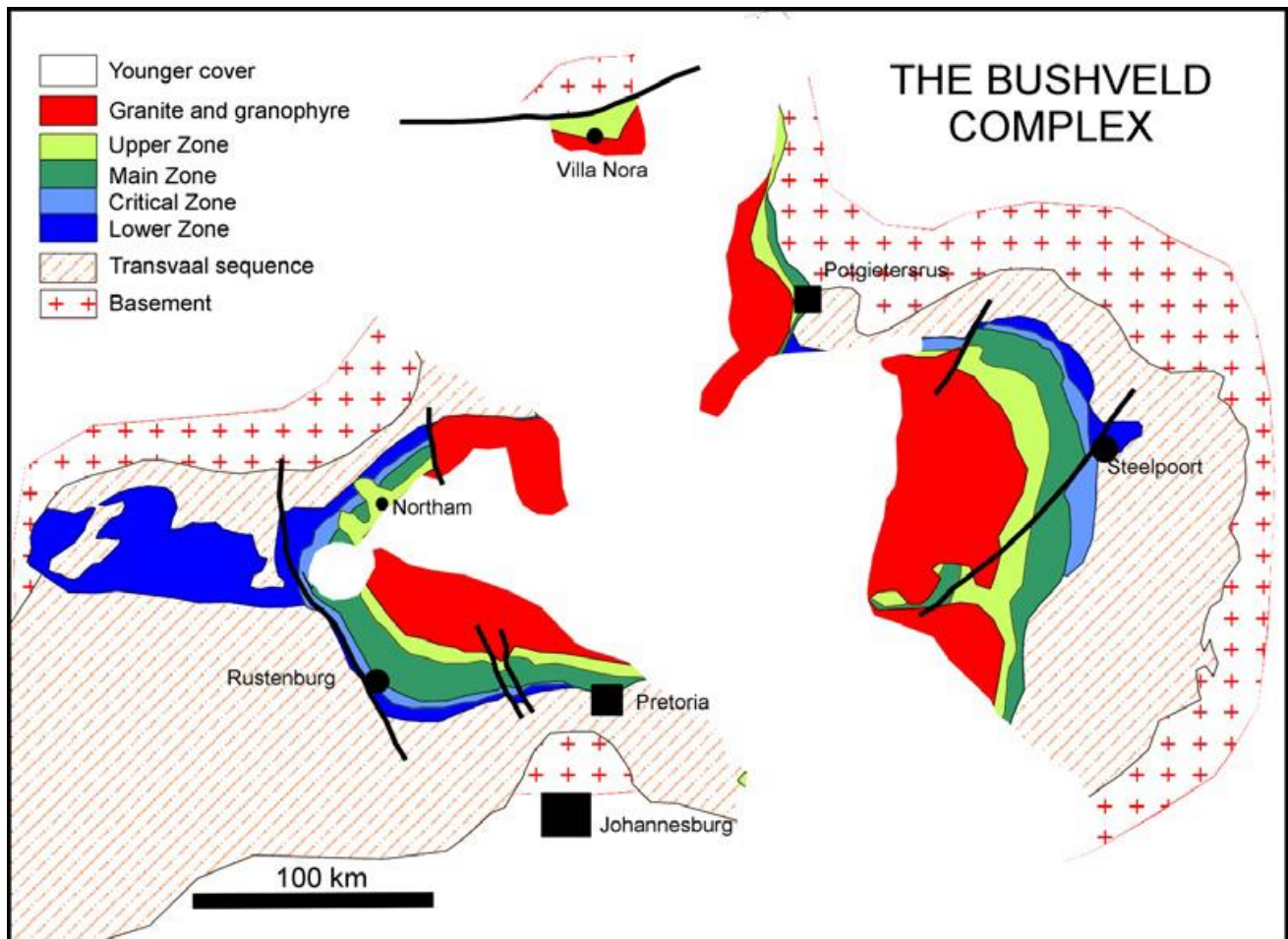


Figure 4: Simplified geological map of the Bushveld Complex.

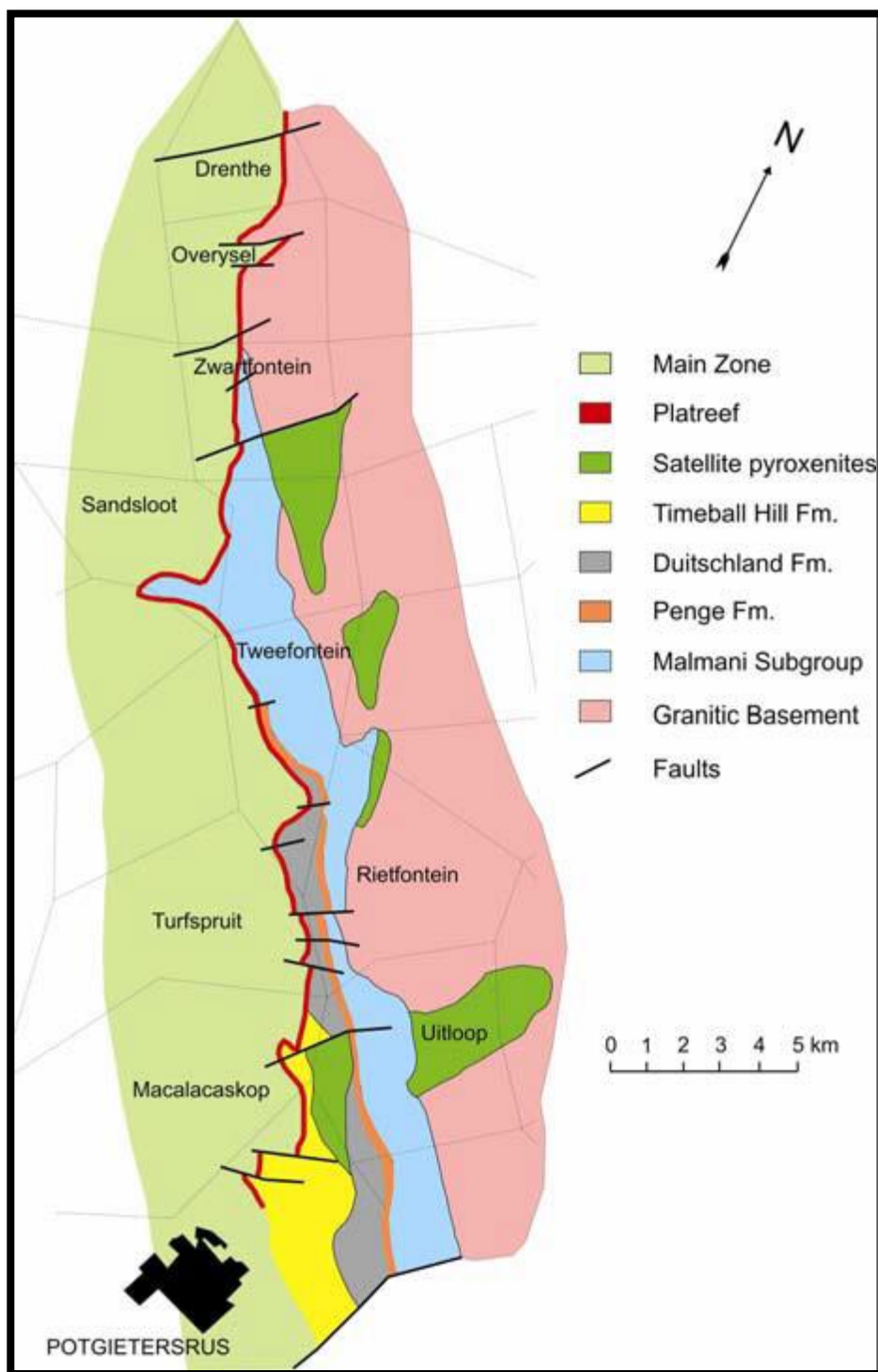


Figure 5: Geological map of part of the Northern limb.

9.2 Regional Climate

9.2.1 Rainfall

The Mogalakwena Local Municipality area falls within the summer rainfall region of Limpopo, with the rainy season lasting from November to March. Average rainfall is 600-650mm. The rainfall period occurs from November to February. The highest rainfall occurs in January and December. The average rainfall declines from east to west. Thunderstorms are recorded fairly often. Hail and fog are infrequent.

9.2.2 Temperature

Mogalakwena generally experiences a hot semi-arid climate. Summer days are hot with temperatures varying between 28°-34° C in October to March. Summer night temperatures are hot to mild varying between 16°-21°C. The winter day temperatures are mild to warm varying between 19.6°-25.2° C in April to September. Winter nights are cold with temperatures of 4.3°-12.1°C.

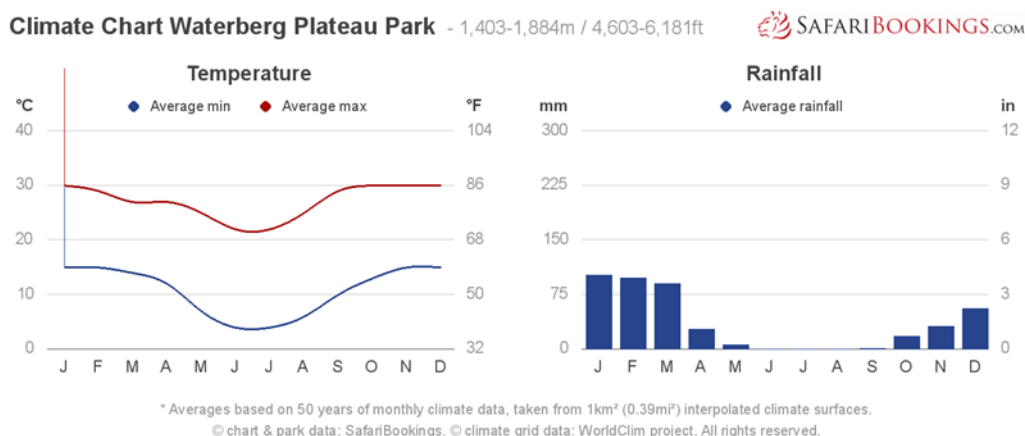


Figure 6: Annual monthly average temperature and rainfall at the site

9.3 Soil and Land capability

The soils of the district range from deep sandy soils from the flatlands, stretching from the west and north western parts along the western Limpopo valley, with sandy soils in the central area bisected with alluvial soils along the drainage lines and valleys. The soils along the rivers have the highest agricultural production potential

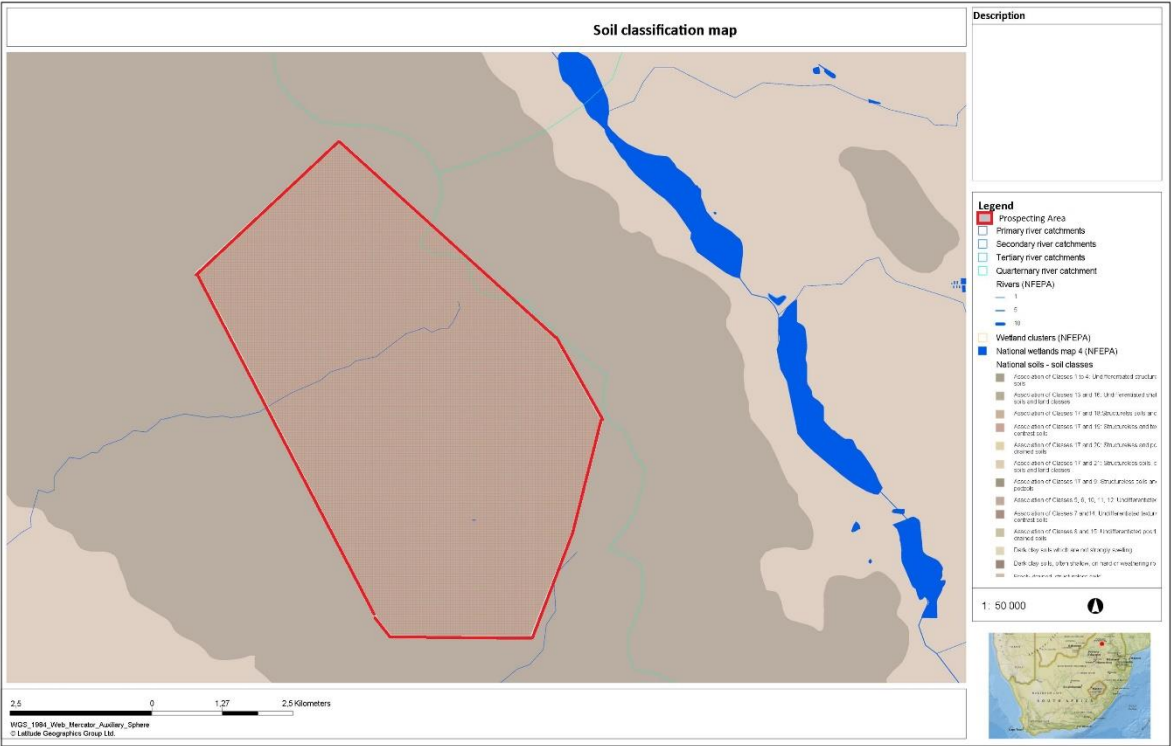


Figure 7: Soil type of the area

9.4. Topography

The Site is about 12km from nearest town of Mokopane. It is occupied by the Waterberg Mountain range. It is linked to the Sebetiela Mountains in the south-eastern part of the Waterberg District. The average elevation of the project area is 1 262 metres above mean sea level.

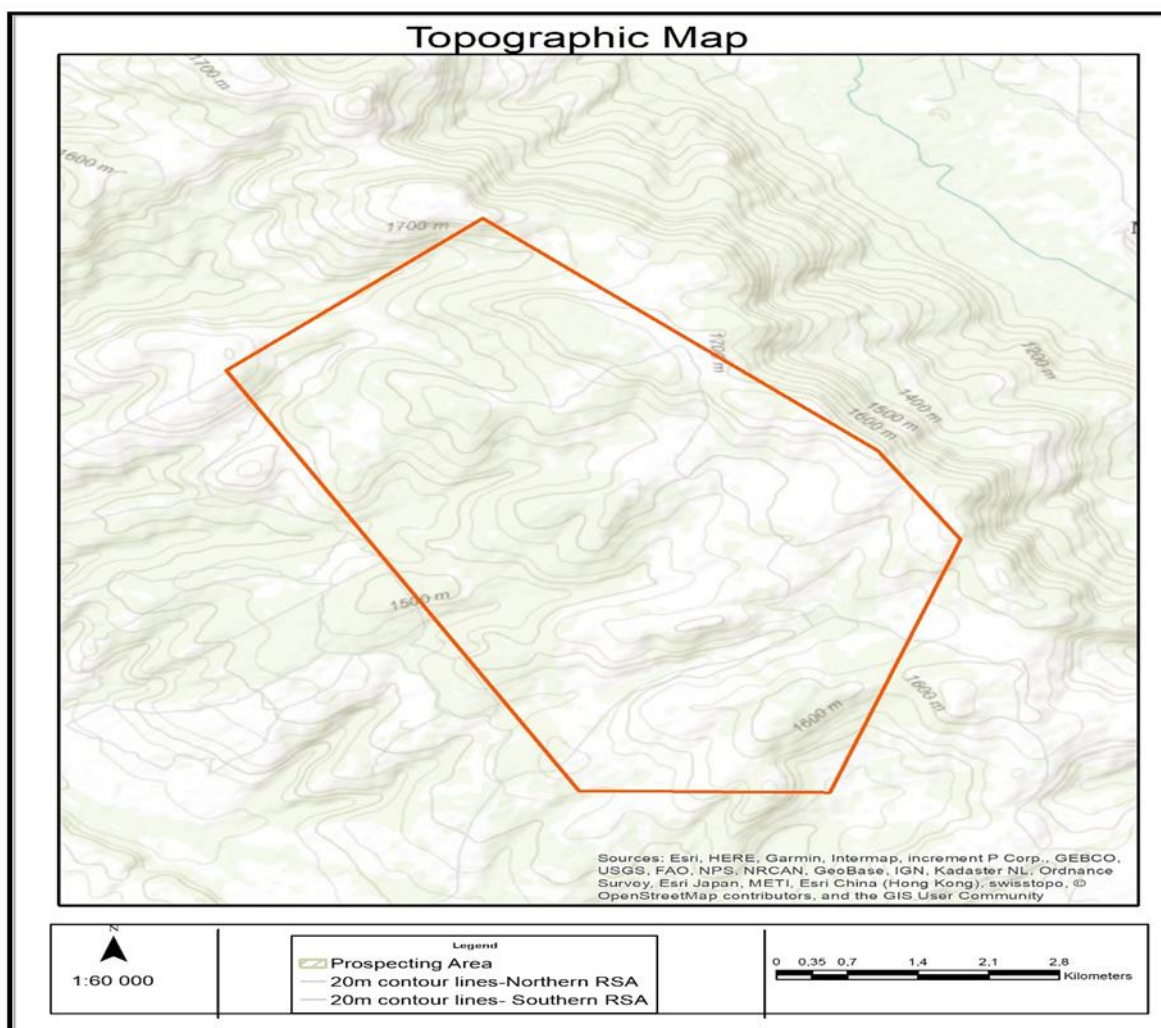


Figure 8: Topography and contours for the proposed prospecting activity

9.5. Hydrology

9.5.1. Surface Water

The Site is located in Mogalakwena River Catchment. Surface water resources of the area around the project site are derived from two significant dams, the Doorndraai and the Glen Alpine, as well as run of river. There are a number of other important rivers flowing within the study area, such as Sterkrivier. The Sterkrivier flows alongside the western border and flows into the Doorndraai Dam. The Pholotsi River flows past the Ga-Mapela, Pholotsi villages and is a tributary of the Mogalakwena River. It is a non-perennial river. Lastly the Thwathwe River flows past the Ga-Mabuela, Ga-Masoge villages and is a tributary of the Mogalakwena River. There are sponges and wetland in the catchment. The most prominent features include Nylsvlei floodplain, Ga-Tshokwe (Sterkwater), Telekishi, Blinkwater farm and Mamatlakala wetland.

9.5.2. Ground Water

Groundwater use is key within the area, with groundwater supplying approximately 55 million m³/a to the agricultural and the rural sector for irrigation and domestic purposes. A large percentage of the municipal area is supplied by under-ground water resources.

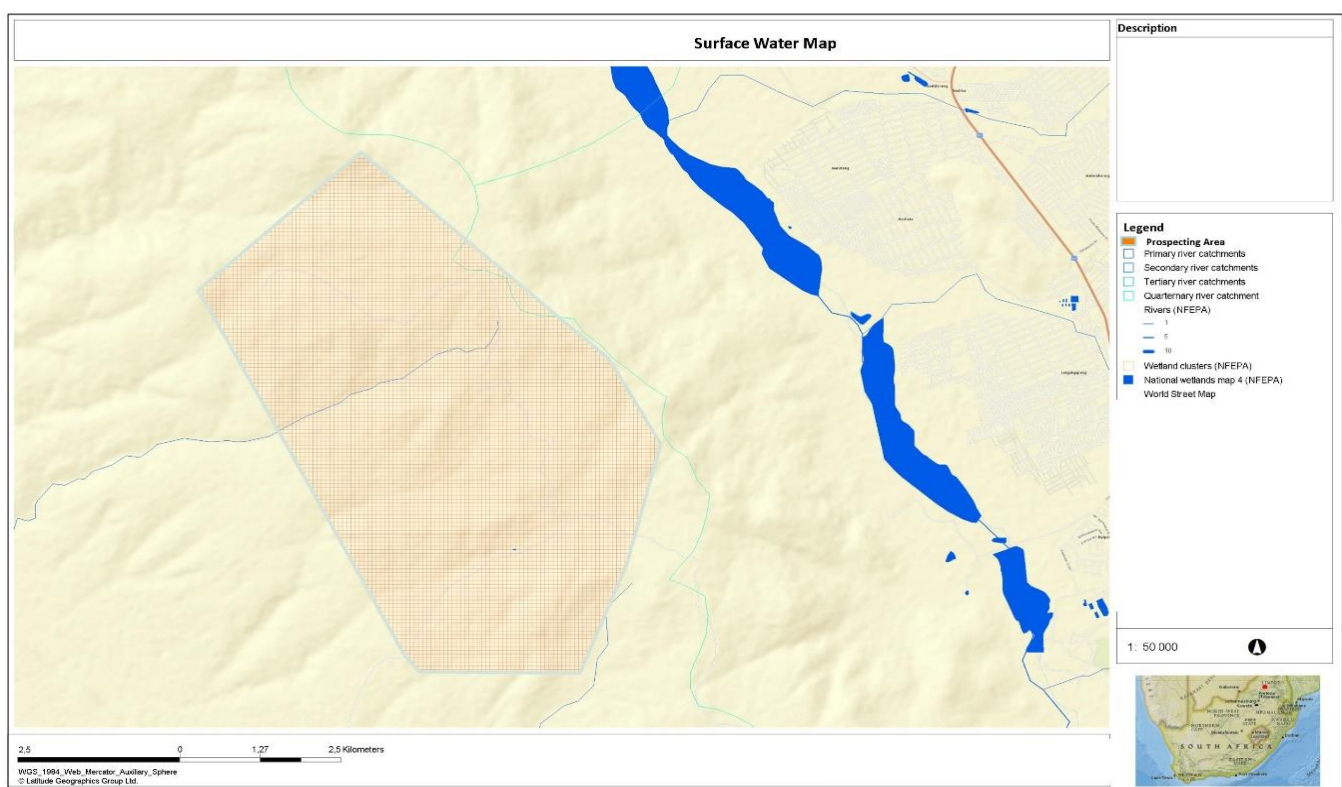


Figure 9: Surface hydrology Map

9.6. Biodiversity

The proposed site is situated within the Bushveld vegetation type. The areas where special vegetation communities mostly occur are in the mountain ranges and along drainage lines. The riparian vegetation along the banks of the perennial rivers and streams are an area of high sensitivity. There are Critical Biodiversity Areas (CBA's) in Bakenberg Mountains and other areas that contain species of concern and need to be maintained in good ecological condition.

Mogalakwena Local Municipality with its wide spectrum of physical environments and natural vegetation provides the habitat for most of the larger mammal species as well as smaller mammal species and one of the highest counts of bird life, reptiles, amphibians and insect life in South Africa. Historically, the area provided habitat to a wide spectrum of animal wild life.

Hippopotamus and crocodiles are still present natural habitat in most of the perennial rivers. Leopard and cheetah still occupy or roam over extensive areas in the Mogalakwena Local Municipality area. The diversity resulted from cattle farms being reverted to game farms. Landowners of game farms also formed conservancies to benefit from the biological diversity

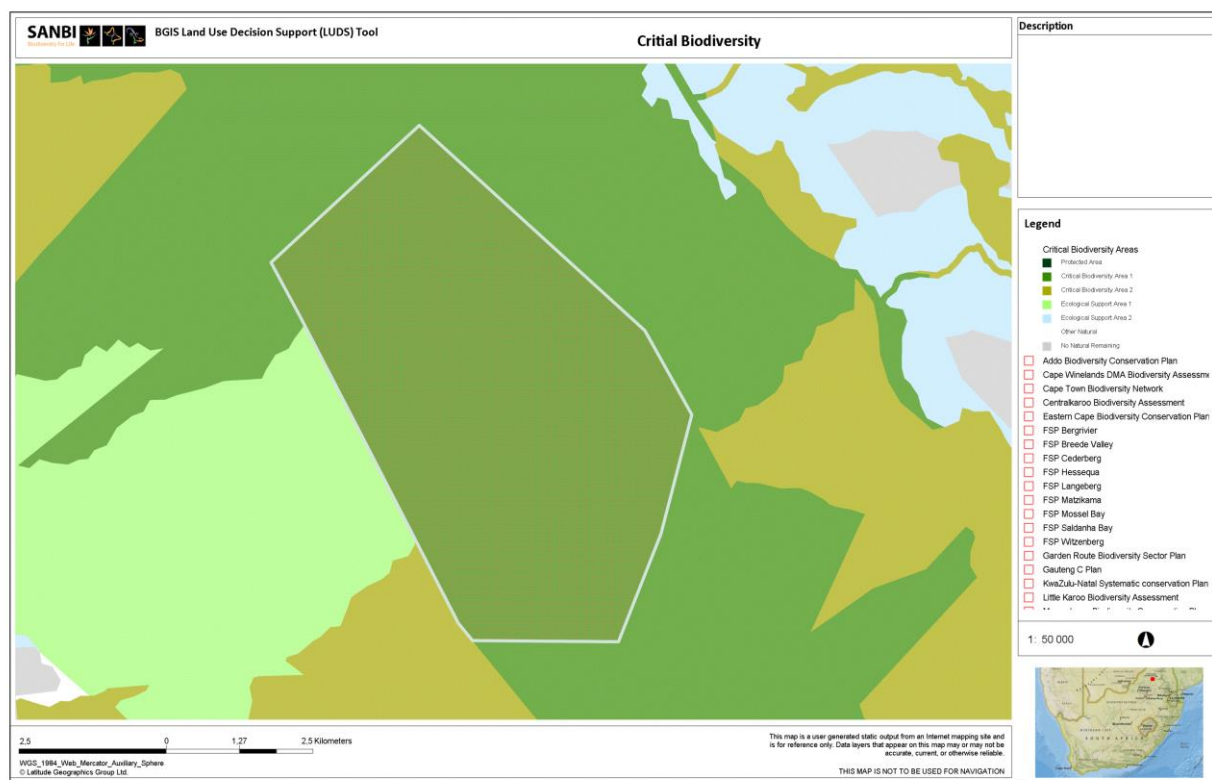


Figure 10: Vegetation and Biodiversity cover of Kromdraai 265 KR

9.7. Socio Economic Status

9.7.1. Demographics

According to Census 2011, Mogalakwena Municipality contains over 45% of the Waterberg district's population with a total population of 307 682 and 79 396 households. The Africans are in majority (295 796) and constitute approximately 96% of the total Mogalakwena municipality population. The white population is 9274, coloured population is 403 and the Indian/Asian population is 1646. Just over 53% of the population is females.

Of the 307 682 residents of Mogalakwena Local Municipality, 96,1% are black African, 3% are white, with the other population groups making up the remaining 0,9%.

9.7.2. Education Profile

According to Census 2011, over the years there has been a steady decline in the number of persons who have not received an education. Most of the individuals without schooling were females but even so their numbers have decreased from 18% to 11% in 2011. There is also a good trend of more females attaining higher education. Of those aged 20 years and above, 18,2% completed/have some primary education, 21,7% have completed matric, 8,5% have some form of higher education, and 16% have no form of schooling.

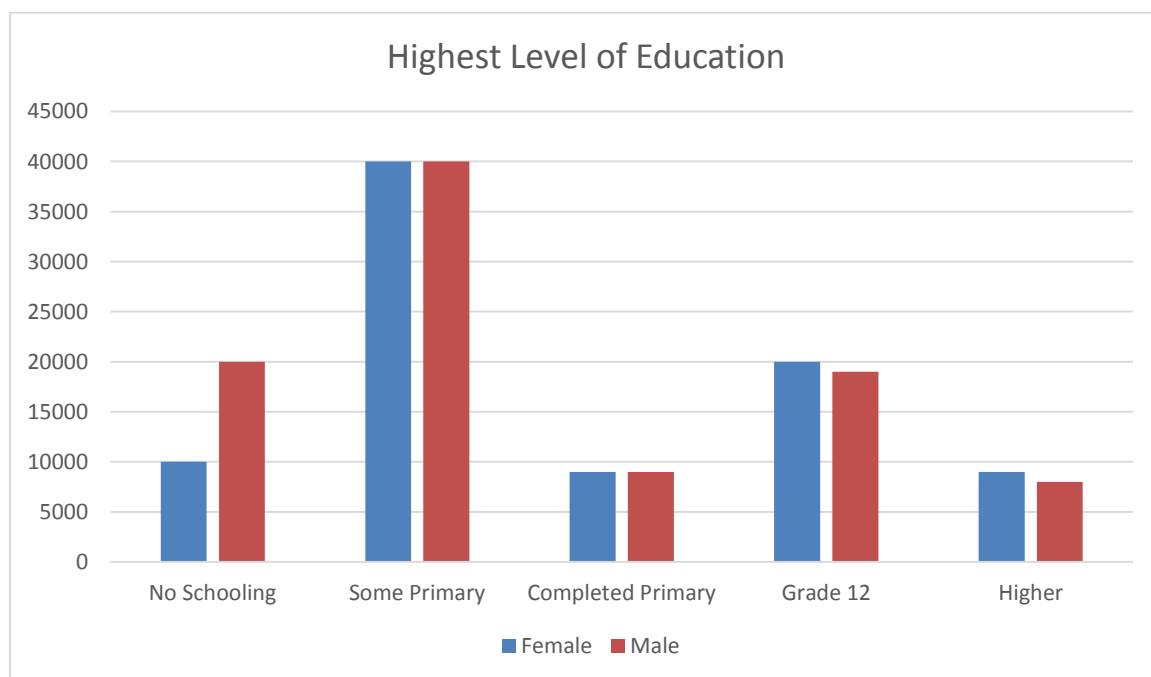


Figure 11: Graph indicating the highest level of education within the Mogalakwena Municipality

9.7.3. Employment Profile

According to Census 2011, of the 78 647 economically active (employed or unemployed but looking for work) people in the district, 40.2% are unemployed. The unemployment rate of Mogalakwena is almost double that of the other municipalities in the district.

This could be attributed to a reduction in mining activities in recent years. Of the 39 515 economically active youth (15–35 years) in the area, 51.7% are unemployed, which is also the highest in the district.

One of the key social problems facing the Mogalakwena Municipality is poverty. The unemployment estimates in the Municipality vary between 45% and 70% of the economically active population (people between the ages of 15 and 64 years). Women, and especially rural women, form the greatest number affected by the lack of job opportunities as well as other social problems

Table 4: Employment Status, 2001 vs. 2011

GENDER	EMPLOYMENT		UNEMPLOYMENT		NOT ECONOMICALLY ACTIVE	
	2001	2011	2001	2011	2001	2011
FEMALE	16 345	21 358	19 172	17 833	56 353	59 600
MALE	20 744	25 679	14 526	13 777	37 919	51 396
Source: Statistics South Africa (Stats SA), Census 2011						

9.8. Description of the current land uses

The current land use that is dominant near the proposed site is cultivated land and residential areas. During the site visit it was identified that there are wildlife farms surrounding the proposed site but none have been classified as protected areas.

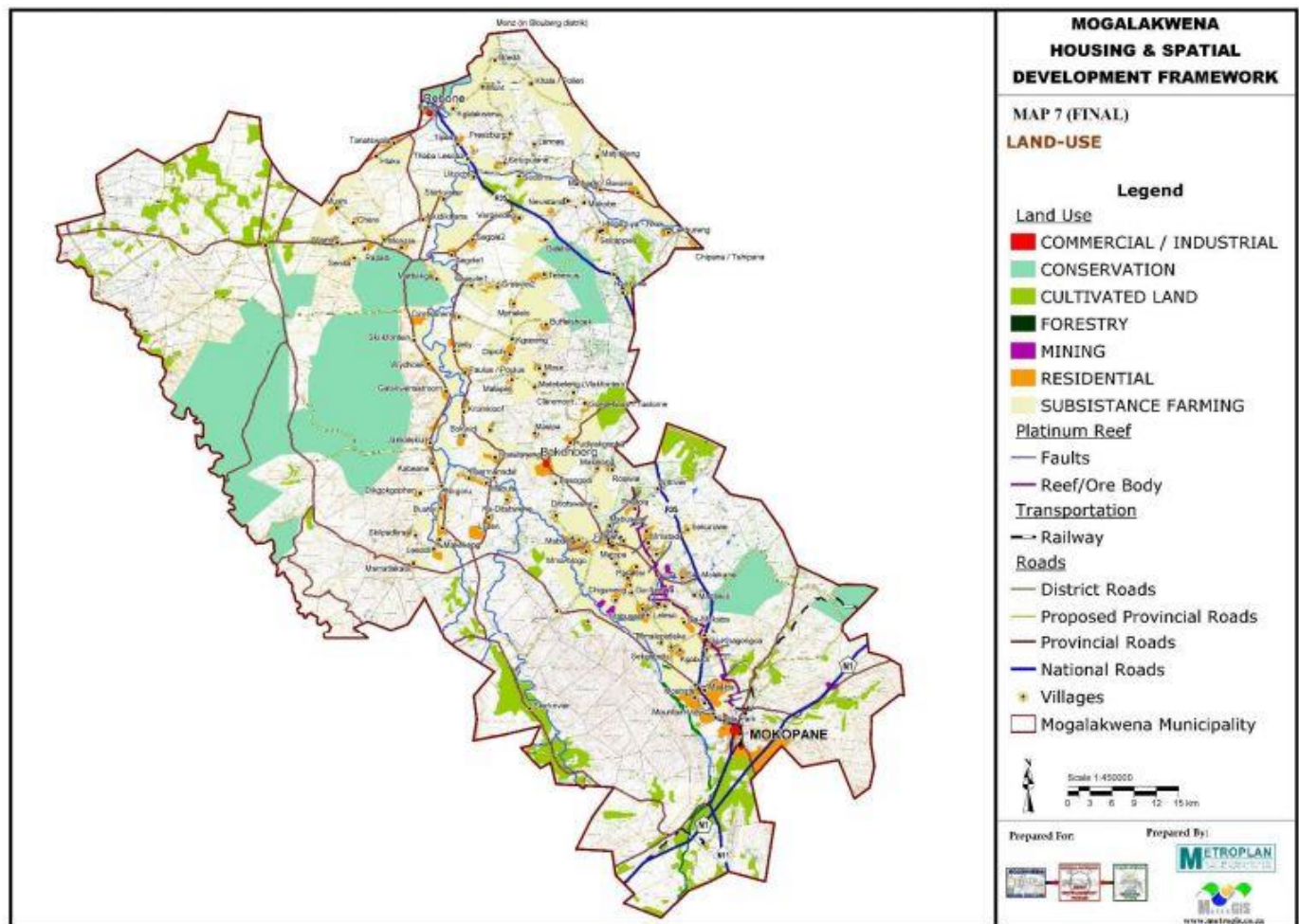


Figure 12: Mogalakwena Municipality land use map

10. Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts

Table 5: Impacts Identified, phases and description

Impacts	Phase	Description
Policy requirements	Planning	Identification of legislative requirements
Flora	Construction	Destruction / loss of indigenous natural vegetation due to site preparation activities.
Fauna	Construction, Operational	Disturbance of species habitats (i.e. snake holes, spiders, reptiles, etc.)
Groundwater	Construction and Operational	Spillage of fuels, lubricants and other chemicals
Geology	Operational	Removal of rocks and debris for analysis, disturbance of local geological formation.
Soils	Construction and operational	Disturbance of soils during site clearance and during drilling operations
Air Quality	Construction and Operational	Dust stemming from drilling and vehicles going to site
Traffic	Construction and decommissioning	Increase of traffic in the area as vehicles access and exit the site
Noise nuisance	Construction and Operational	Noise caused by moving vehicles and drill rigs

Economic	Operational	Project expenditure (incl. direct capital investment)
Socio-economic	Planning Phase	Potential friction with I&APs and Landowners, part time employment opportunities
Visual	Construction, Operational and Decommissioning	Visual disturbances with all the vehicles, signs and drilling rigs.
Cultural/Heritage historical	Construction and Operational	Disturbance of artefacts of cultural and heritage importance (i.e. unidentified grave sites).
Waste	Construction and Operational Phase	Generation of solid waste on site.

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

The potential environmental impacts associated with the project will be evaluated according to its nature, extent, duration, intensity, probability and significance of the impacts, whereby:

- **Nature:** A brief written statement of the environmental aspect being impacted upon by particular action or activity.
- **Extent:** The area over which the impact will be expressed. Typically, the severity and significance of an impact have different scales and as such bracketing ranges are often required. This is often useful during the detailed assessment phase of a project in terms of further defining the determined significance or intensity of an impact. For example, high at a local scale, but low at a regional scale;
- **Duration:** Indicates what the lifetime of the impact will be;
- **Intensity:** Describes whether an impact is destructive or benign;
- **Probability:** Describes the likelihood of an impact actually occurring; and
- **Cumulative:** In relation to an activity, means the impact of an activity that in itself may not be significant but may become significant when added to the existing and potential impacts eventuating from similar or diverse activities or undertakings in the area.

Table 6: Criteria for evaluating potential environmental impacts

CRITERIA	DESCRIPTION			
Extent	National (4) The whole of South Africa	Regional (3) Provincial and parts of neighbouring provinces	Local (2) Within a radius of 2 km of the construction site	Site (1) Within the construction site
Duration	Permanent (4) Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	Long-term (3) The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter. The only class of impact which will be non-transitory	Medium-term (2) The impact will last for the period of the construction phase, where after it will be entirely negated	Short-term (1) The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase

Intensity	Very High (4) Natural, cultural and social functions and processes are altered to extent that they permanently cease	High (3) Natural, cultural and social functions and processes are altered to extent that they temporarily cease	Moderate (2) Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	Low (1) Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected
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Probability of Occurrence	Definite (4) Impact will certainly occur	Highly Probable (3) Most likely that the impact will occur	Possible (2) The impact may occur	Improbable (1) Likelihood of the impact materialising is very low
Impact Reversal	Highly Impossible (4) Impact reversal will certainly be impossible	Moderate (3) Impact can be reversed to some extent with loss of natural resources	Possible (2) High possibility of impact reversal	Definite (1) Impact can be totally reversed
Loss of irreplaceable resources	Definite (4) Resources definitely be lost	Highly Probable (3) Most likely that resources will be lost	Possible (2) Resources may be lost	Improbable (1) Loss of resources is highly unlikely

Significance is determined through a synthesis of impact characteristics. Significance is also 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. The total number of points scored for each impact indicates the level of significance of the impact.

Significance=Extent+ Duration +Intensity x Probability

Table 7: Criteria for Rating of Classified Impacts

Low impact/ Minor (3 -10 points)	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
Medium impact/ Moderate (11 -20 points)	Mitigation is possible with additional design and construction inputs.
High impact	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the

(21 -30 points)	broader environment.
Very high impact/ Major (31 - 48 points)	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a “very high impact” is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact.
Negative (-)	Deleterious or adverse impact.
Neutral (/)	Impact is neither beneficial nor adverse.
It is important to note that the status of an impact is assigned based on the status quo – i.e. should the project not proceed. Therefore not all negative impacts are equally significant.	

The suitability and feasibility of all proposed mitigation measures is included in the assessment of significant impacts. This was achieved through the comparison of the significance of the impact before and after the proposed mitigation measure is implemented.

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

At this moment there is no alternative layout, should the comments from I&As and other relevant stakeholders warrants that we change the layout or have alternative, those comments will be addressed accordingly. The project will have minimal impacts on the environment, about 20 exploration holes will be drilled, this should be viewed in the context that the drilling sites are 0.2 Ha in comparison to the 3140.0959 Ha that is being applied; the impacts will be very minimal. The impacts associated with drilling can be mitigated and after drilling has been completed; the drill pads will be rehabilitated to predrilling status.

Table 8: Positive and Negative Impacts

Impacted Environment	Impact	Status of impact
CONSTRUCTION PHASE		
Fauna and Flora	Destruction / loss of indigenous natural vegetation and plant species during site preparation	Negative
	Impact on animal species	Negative
	Establishment and spread of declared weeds and alien invader plants	Negative
Groundwater	Damage/contamination of groundwater resulting in hydrological impacts	Negative
Air Quality	Dust emissions	Negative
Noise generation	Nuisance to surrounding landowners	Negative
	Disturbance of animals in surrounding game lodges	Negative
Soils	Physical disturbance of soils during land clearing	Negative
Socio Economic	Direct employment and skills development	Positive
Visual aspect	Visual Disturbance (vegetation clearance and temporary infrastructures including equipment on site)	Negative
Cultural/Heritage-historical resources	Potential impact on heritage and archaeological resources	Undetermined at this stage
Waste generation	Generation of solid waste (e.g. littering)	Negative
Traffic	Increase of traffic in the area as vehicles access the sites	Negative

Impacted Environment	Impact	Status of impact
OPERATIONAL PHASE		
Soils	Physical disturbance of soils during land clearing	Negative
Social	Disturbance of surrounding landowners and local businesses	Negative
	Direct employment and skills development	Positive
Water resource	Damage to groundwater resulting in hydrological impacts	Negative
Geology	Physical removal of rock material for logging and sampling purposes during drilling phase	Negative
Noise generation	Nuisance to surrounding landowners and local Businesses	Negative
	Disturbance of Animals	Negative
Cultural-historical resources	Potential impact on heritage resources and archaeological resources	Undetermined at this stage
DECOMMISSIONING		
Air quality	Dust emissions	Negative
Soil	Soil degradation	Negative
Noise generation	Nuisance to surrounding landowners	Negative
	Disturbance of wild animals on surrounding farms	Negative

Impacted Environment	Impact	Status of impact
Traffic	Increase of traffic in the area as vehicles exit the site	Negative

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

Possible mitigation measures to address issues and concerns raised by I&APs (if any) will be addressed following the 30 day public participation period of the Draft Basic Assessment Report

10.8. Motivation where no alternative sites were considered.

The nature of the proposed activity dictates the proposed site location. The applicant has done preliminary studies that indicated that the minerals to be prospected can only be found within the proposed area.

10.9. Statement motivating the alternative development location within the overall site.

Since exploration is temporary in nature no permanent structures will be constructed, negotiations and agreements will be made with the farm owners to use any existing infrastructure like accommodation for the explorers, access roads and other things like Workshops. In addition to the information provided, each of the phases is dependent on the results and success of the preceding phase. The location and extent of soil sampling and possible drilling will be determined based on information derived from the geophysics surveys. Sampling and drill sites will be selected to avoid water courses where practicable.

11. Environmental Impact Assessment

Table 9: Environmental Impact Assessment

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of environment/ resource	Potential mitigation measures	After Mitigation				Ranking of impact/ risk
			E	D	I	P					E	D	I	P	
Non-compliance with legislative requirements	Non commencement/ delayed commencement of proposed project	Planning	3	4	3	2	(-20)	Yes	N/A	Comply with all legislative requirements as stipulated in the EIA 2017 regulations	1	1	1	2	(-6)
Destruction loss of indigenous natural vegetation	Habitat and loss of species	Construction and Operational	1	1	3	3	(-15)	Yes	Moderate	Appoint an Environmental Control Officer (ECO) prior to commencement of construction phase. Responsibilities should include, but not necessarily be limited to, ensuring adherence	1	1	2	2	(-8)
	Alien plant invasions in disturbed areas	Construction and Operational	1	1	2	2	(-8)	Yes	Low		1	1	1	2	(-6)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of environment/ resource	Potential mitigation measures	After Mitigation				Ranking of impact/ risk
			E	D	I	P					E	D	I	P	
Disturbance of soils	Exposed soils susceptible to erosion	Construction and Operational	1	1	2	2	(-8)	Yes	Low	to EMP guidelines, guidance of activities, planning, reporting to authorities. Conduct a search and rescue operation for all conservation important plants on the site. This operation should be conducted during the austral summer period when vegetative and reproductive	1	1	1	2	(-6)
Impacts on indigenous plant species	Plant species are especially vulnerable to infrastructure development due to the fact that they cannot move out of the path of the construction activities, but are also affected by overall loss of habitat.	Construction and Operational	1	2	2	2	(-10)	Yes	Low		1	2	1	1	(-4)
Fauna	Faunal mortality and displacement on site.	Construction and Operational	1	1	2	3	(-12)	Yes	Moderate		2	1	1	2	(-8)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment/resource	Potential mitigation measures	After Mitigation				Ranking of impact/risk
			E	D	I	P					E	D	I	P	
	Disturbance of Wildlife on neighbouring game farms.	Construction ,Operational and decommissioning	2	2	2	4	(-24)	Yes	Moderate	Vehicles using the site must use a route that is less likely to disturb the wildlife in the surrounding game farms. Engine silencers must be installed on all equipment and vehicles used on site.	1	2	1	2	(-8)
Geology	Permanent removal of rocks and geological formations	Operational	1	4	2	4	(-28)	No	High	Cap off and cement drill hole	1	3	1	3	(-15)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment/resource	Potential mitigation measures	After Mitigation				Ranking of impact/risk
			E	D	I	P					E	D	I	P	
Groundwater quality	<p>The prospecting operations will require the drilling of boreholes. The boreholes may result in the drawdown, which may affect the yield to the surrounding groundwater users.</p> <p>Material used for backfilling may leach pollutants that will result in the pollution of the surrounding groundwater regime.</p>	Operational	2	1	3	3	(-18)	Yes	Moderate	<p>Groundwater monitoring network (both quality and quantity) should be established. Any spillage should be cleaned using spillage kit</p> <p>Ensure that the land owners' borehole yield is observed during the drilling operation. Should it be proven that the operation is indeed affecting the quantity and quality of groundwater available to users and surrounding water resources, the affected parties</p>	2	1	2	2	(-10)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment/resource	Potential mitigation measures	After Mitigation				Ranking of impact/risk
			E	D	I	P					E	D	I	P	
										must be compensated					
Air quality	<p>Increase in traffic on unpaved roads and drilling activities will increase levels of dust generated on site.</p> <p>Greenhouse gases emitted from drilling machinery and vehicles used on site, could contribute to reduced levels of air quality.</p>	Construction, Operational and Decommissioning	2	1	2	3	(-15)	No	Moderate	<p>Use of water for dust spraying and wetting, proper grading of roads and keeping traffic to a reasonable level</p> <p>All equipment and vehicles must be serviced and be in good condition to reduce emissions.</p>	2	1	2	2	(-10)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment/resource	Potential mitigation measures	After Mitigation				Ranking of impact/risk
			E	D	I	P					E	D	I	P	
Project expenditure (incl. direct capital investment)	Investment and growth in local economy	Construction and Operational Phase and decommissioning	2	1	2	4	(20)	No	Moderate	None	2	1	2	4	(20)
Noise disturbance	Noise generated from prospecting operations activities may add to the current noise levels. This may have impacts on surrounding property owners and wildlife.	Construction and Operational	2	3	2	2	(-14)	No	High	Engine silencers must be installed on all equipment and vehicles used on site Working must be restricted to 8 hours during daytime, to minimise the ecological and social disturbance.	1	2	2	2	(-10)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment/resource	Potential mitigation measures	After Mitigation				Ranking of impact/risk
			E	D	I	P					E	D	I	P	
Visual Disturbance	The activities undertaken during the construction or and associated infrastructure will be visible from the nearby roads and properties. However, due to the undulating topography, visibility for the most part will most probably be restricted to short distances.	Construction, Operational and Decommissioning	1	2	2	2	(-10)	Yes	Low	Inform the land owner on the type of machinery and equipment to be used at the prospecting site. Ensure that lighting is conducted in manner that will reduce the impacts on visual aspects at night times.	1	1	2	2	(-8)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of environment/ resource	Potential mitigation measures	After Mitigation				Ranking of impact/ risk
			E	D	I	P					E	D	I	P	
Socio-economic	Potential friction with local business individuals who are running tourist attractions and breeding game life.	Planning, Construction, Operational, decommissioning	3	3	2	3	(-24)	Yes	N/A	Extensive public consultations which will increase public awareness record and address comments, concerns and questions.	1	2	1	1	(-4)
	Temporary employment opportunities	Operational and Decommissioning	2	1	2	3	(+15)	Yes	N/A	none	2	1	2	3	(+15)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment/resource	Potential mitigation measures	After Mitigation				Ranking of impact/risk
			E	D	I	P					E	D	I	P	
	Potential decline in local business due to prospecting activities.	Construction Operational and Decommissioning	3	2	3	2	(-16)	Yes	High	Prospecting should be conducted following best practices is to minimise negative economic impacts on local business	3	2	2	1	(-7)
Cultural/ Heritage historical impacts	Discovery of gravesites and historical artefacts in the proposed area	Construction and Operational	1	2	1	3	(-15)	Yes	Moderate	Should any paleontological or cultural artefacts be discovered work at the point of discovery must stop, the location be clearly demarcated and SAHRA contacted immediately. Work at the discovery site may only be recommenced on instruction from SAHRA.	1	1	1	2	(-6)

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment/resource	Potential mitigation measures	After Mitigation				Ranking of impact/risk
			E	D	I	P					E	D	I	P	
Traffic	Increase of traffic in the area as vehicles access the sites	Construction, and Decommissioning	2	3	2	3	(-21)	No	Low	Abnormal Vehicles must move in and out of the site during off peak hours, to avoid congestion that may occur on the main road.	2	2	1	2	(-10)

12. Assessment of each identified potentially significant impact and risk

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

Table 10: Potential impacts and risk

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
Desktop Study	None Identified	N/A	Planning Phase	N/A	No mitigation proposed	N/A
Identification of legislative requirements	Commencement of activities without all the required licenses and permits	Policy and legal Requirements	Planning Phase	High (-ve)	The applicant must ensure that all relevant legislations and regulations have been adhered to before commencement of the project.	Low (-ve)

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
Set-up of drilling Equipment	Clearing of Vegetation	Flora and Fauna	Operational Phase	Low (-ve)	Already cleared areas should be preferred over heavily dense areas	Low (-ve)
Set-up of drilling Equipment	Theft	Socio-Economic	Operational Phase	Low (-ve)	The site camp must be secured and entrance into the site must be controlled	Low (-ve)
Preparation of drilling sites and access roads	Loss of Vegetation	Flora and Fauna	Operational Phase	Medium (-ve)	Where possible existing access roads must be used	Low (-ve)
Drilling Activities	Ground & Surface Water contamination	Hydrology	Operational Phase	Medium (-ve)	The drill bits must be maintained in good condition to prevent leakages of oil when in the underground.	Low (-ve)
					Aquifer detection methods should	Low (-ve)

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
					be applied before drilling can be undertaken.	
					Streams must be diverted where alluvial activities are taking place.	Low (-ve)
	Mortality and displacement of fauna	Fauna	Operational Phase	Medium(-ve)	Search and rescue mission should be undertaken for species on drilling site	Low(-ve)
	Waste Generation	Waste Management	Operational Phase	High (-ve)	The mud generated from the drilling activities must be contained, and contaminated mud must be handled separately, treated or disposed of at an appropriate landfill. Skips and marked bins must be provided at the site for waste separation.	Medium (-ve)

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
Drilling Activities	Spillages of hazardous chemicals	Soil & geology; Hydrology	Operational Phase	Medium (-ve)	All substances required for vehicle maintenance and repair must be stored in sealed containers until they can be disposed of / removed from the site. All drill holes must be capped off and closed off with cement.	Low (-ve)
				Medium (-ve)	Hazardous substances / materials are to be transported in sealed containers or bags.	Low (-ve)
				Medium (-ve)	Spillages must be attended to as soon as they occur. Depending on the nature and extent of the spill, contaminated soil must be either excavated or treated on-	Low (-ve)

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
					site.	
	Destruction of Heritage Resources	Cultural and Heritage Social	Operational Phase	Medium (-ve)	Should any paleontological or cultural artefacts be discovered work at the point of discovery must stop, the location be clearly demarcated and SAHRA contacted immediately. Work at the discovery site may only be recommenced on instruction from SAHRA.	Low (-ve)
Decommissioning of Site Camp	Waste generation	Waste management	Decommissioning Phase	Medium (-ve)	The uncontaminated stockpiled materials must be used for backfilling	Low (-ve)
Decommissioning of Site Camp	Contamination of the	Soil and Hydrology	Decommissioning Phase	Medium (-ve)	The hazardous substances onsite must be stored in marked	Low (-ve)

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
	Soil and Water				<p>containers.</p> <p>All the equipment must be shipped out of the site</p> <p>The compacted soils must be loosened and the topsoil must be spread above it. The seed spreading of indigenous species must take place to ensure regrowth.</p>	

13. 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):-

Site investigations have indicated that no specialist studies will be required for the proposed project.

14. Environmental impact statement

14.5. Summary of the key findings of the environmental impact assessment;

In nature impacts associated with prospecting are will have very low impacts on the environment or socially. Usually the impacts caused during the prospecting activity can be reversed or rehabilitated. The invasive impacts that can be envisaged is the drilling of the 20 exploration holes which collectively amounts to 0.2 Ha which makes up to less than 1% of area that is being applied for which is 3140.095 Ha

The proposed prospecting operation may affect existing alternative land uses on adjacent property or non-adjacent properties as the area predominantly breeds wildlife and is saturated with game lodge. The following actions are subject to the proposed mitigation measures and require monitoring:

- The clearing of vegetation
- The storage of hydrocarbon-based materials on site
- On-site waste management
- The creation of roads/tracks
- The removal of storage and soil
- The traversing of vehicles through populated areas within the prospecting area
- Groundwater: Monitor the water quality of the boreholes
- Noise generation

Monitoring of the required mitigation measures is to take place on site daily by the site geologist. Annual monitoring audits are to take place by an appointed independent environmental assessment practitioner.

14.6. Final Site Map

The exact locations of the drilling holes are indicated within the map provided although the map will be subjected to changes depending on the results of the preliminary drilling and assaying. The prospecting activities are conducted in phases, and each phase depends on the success of the previous phase.

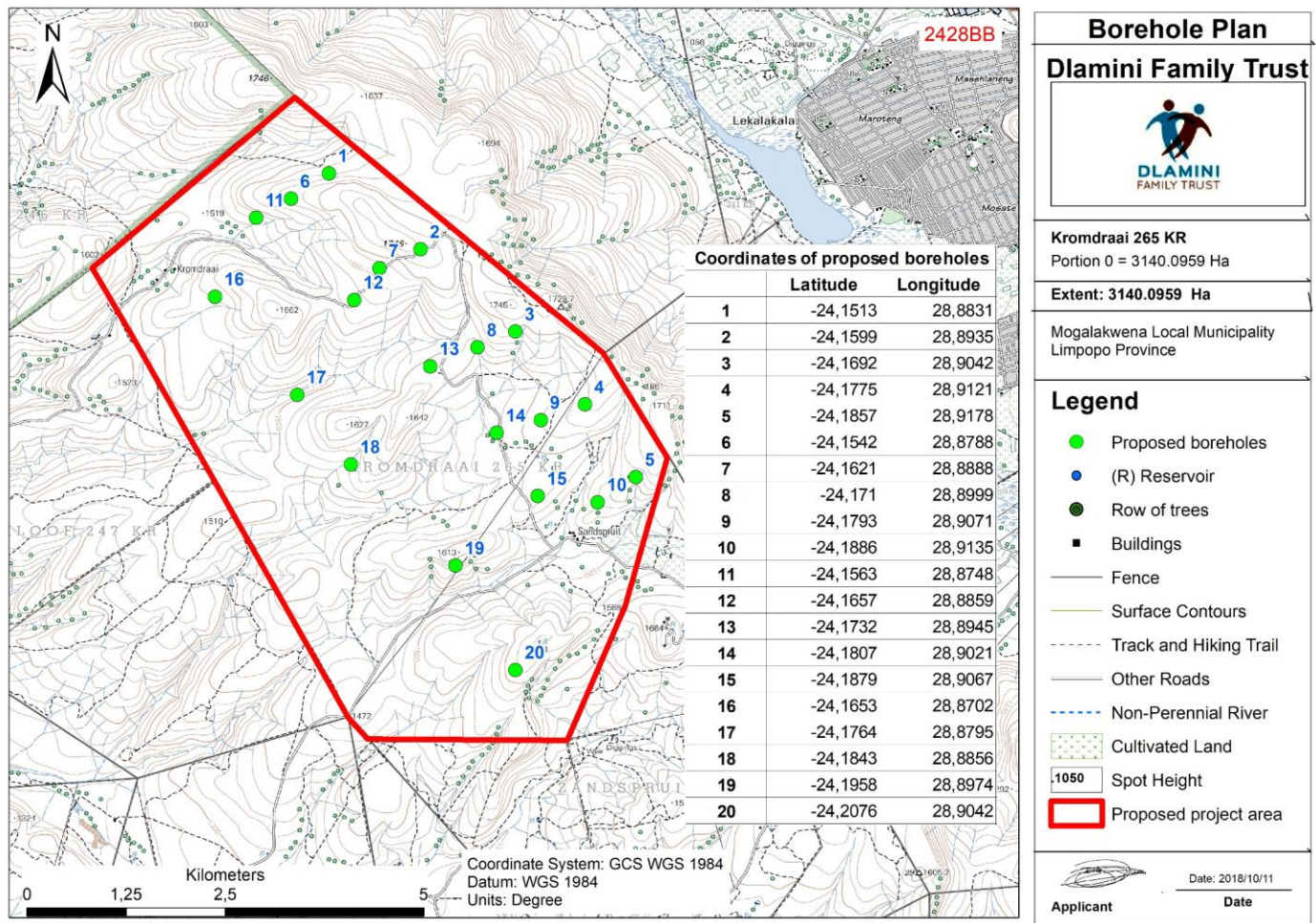


Figure 13: Final Site Map for Kromdraai 265 KR

14.7. Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives

Positive and negative impacts associated with the proposed prospecting activities include:

- Destruction / loss of indigenous natural vegetation during site preparation
- Impacts on plant species of concern during site preparation
- Impacts on fauna
- Establishment and spread of declared weeds and alien invader plants
- Physical disturbance of soils during land clearing
- Dust emissions
- Disturbance of the geological formation due to removal of rock material.

- Direct employment and skills development
- Impact on groundwater system during invasive phase of the proposed development.
- Impact on surface water
- Visual Disturbance
- Physical disturbance of soils during land clearing
- Disturbance of surrounding landowners activities and/or livelihoods
- Direct employment and skills development
- Potential impacts on heritage resources and archaeological resources

The proposed activities have low significance since these are short term activities, however socio-economic impacts such as employment has a medium significance. The probability of occurrence of an impact was determined and most of these activities can be controlled and impacts can be reduced or avoided. Generally prospecting activities have low impact on the environment. The planned activities negative impacts can be controlled and avoided or minimised therefore the layout does not require revision. Mitigation measures will be utilised to control, avoid and/or minimise all identified potential impacts.

15. Proposed impact management objectives and the impact management outcomes for inclusion in the EMPr;

The EMPr will seek to achieve a required end state and describe how activities could have an adverse impact on the environment will be mitigated, controlled and monitored. The EMPr will address the environmental impacts during the Pre-construction, Construction, Operational, and Decommissioning Phases of the proposed project. Due regard will be given to environmental protection during the entire project. A number of environmental recommendations will therefore be made to achieve environmental protection. The environmental and social objectives will be set to allow prospecting in an environmental and socially responsible manner while ensuring that sustainable closure can be achieved. To achieve closure, the correct decisions need to be taken during the planning phase of the project.

The overall goal for environmental management for the proposed is to construct and operate the project in a manner that:

- Minimises the ecological footprint of the project on the local environment;
- Facilitates harmonious co-existence between the project and other land uses in the area;
- Contributes to the environmental baseline and understanding of environmental impacts of Prospecting activities in a South African context.

The following environmental management objectives are recommended for the proposed mineral prospecting development and associated infrastructure:

- Monitor soils so as to avoid unnecessary erosion, and implement erosion control measures to preserve the quality of the soil for rehabilitation.
- Development planning must restrict the area of impact to minimum and designated areas only.
- Monitor and prevent contamination, and undertake appropriate remedial actions.
- Limit the visual and noise impact on receptors.
- Avoid impact on possible heritage and archaeological resources.
- Promote health and safety of workers.
- Limit dust and other emissions to within allowable limits

16. Aspects for inclusion as conditions of Authorisation

Dlamini Family Trust should comply with all Environmental legislations. Specific environmental legislation to be adhered to include; National Environmental Management Act, Act 107 of 1998 (NEMA) as amended in 2017 and Minerals and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA)

- Notice must be given to landowners and surrounding landowners 1 month prior to any prospecting activities.
- Landowners and land occupiers should be engaged (re-consulted) at least 1 month prior to any site activities being undertaken once drill sites are known;
- A map detailing the drilling locations should be provided to the landowners as well as the DMR prior to commencement of prospecting activities.
- A record must be kept of the implementation of the EMP measures and monitoring of the efficiency of the implemented measures; and
- A buffer of 50m from any water courses should be established during the construction and operational phase.

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

- The EAP does not accept any responsibility in an event that additional information comes to light at a later stage of the process
- All information provided by the EAP was correct at the time it was provided

- The data from unpublished researches is valid and accurate
- The scope of this investigation is limited to assessing the potential environmental impacts associated with the proposed project.

18. Reasoned opinion as to whether the proposed activity should or should not be authorised

Based on the site investigations and analysis of the EAP it is suggested that the proposed activity should be authorised due to the following:

- Monitoring of the required mitigation measures is to take place on site daily by the site Geologist, Annual monitoring audits are to take place by an appointed independent Environmental Assessment Practitioner (EAP) to compile the required annual environmental compliance report required by the DMR
- The environmental impacts associated with the limited drilling activities are minimal provided that the proposed mitigation measures are implemented
- The desktop studies have proven that the site is located on a mineralized zone, prospecting activities must be undertaken to confirm the ore reserves
- The option of not approving the activities will result in a significant loss to valuable information regarding the status of the ore bodies present on these properties.
- In addition to this, should economical reserves be present and the applicant does not have the opportunity to prospect, the opportunity to utilize these reserves for future phases will be lost as well.
- The spatial extent of the physical impact is 0.25 ha over a prospecting right license area of 20 drill sites and 500m² of an access road which will be established in total throughout the duration of the drilling programme, Therefore the actual footprint to be permanently disturbed is minimal in comparison to the total site area thus only 0.008% of the total farm area will be impacted.
- With appropriate care and consideration the impacts resulting from drilling can be suitably avoided, minimised or mitigated
- It has also been noted that mining sector is the pillar of South African economy and also provides employment opportunities for many.
- A buffer of 50 m from any water courses should be established during the operational phase

18.5. Conditions that must be included in the authorisation

- Maintain a minimum 500m buffer from any infrastructure or dwelling (schools, churches, homes);
- Landowners and land occupiers should be engaged (re-consulted) at least 1 month prior to any site activities being undertaken once drill sites are known;
- A map detailing the drilling locations should be provided to the landowners as well as the DMR prior to commencement of prospecting activities.
- Record must be kept of the implementation of the EMP measures and monitoring of the efficiency of the implemented measures; and
- A buffer of 50m from wetlands and water courses should be established during the operational phase.
- A suitable closure plan must be submitted to show sufficient provision for the avoidance, management and mitigation of environmental impacts associated with the decommissioning of the proposed activities.

19. Period for which the Environmental Authorisation is required.

The Prospecting Right has been applied for a period of five (5) years. The Environmental Authorisation should therefore allow for the five years of prospecting and one year for decommissioning and rehabilitation

20. Undertaking

Confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMP and is applicable to both the Basic assessment report and the Environmental Management Programme report. The undertaking provided at the end of the EMP is applicable to both, this Basic Assessment Report and the EMP in Part B, below

21. Financial Provision

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

A total of R 56 066 is required to both manage and rehabilitate the environment in respect of rehabilitation.

21.5. Explain how the aforesaid amount was derived.

The aforesaid amount was derived using the Department of Mineral Resource guideline document for the evaluation of the quantum of closure-related financial provision provided by the applicant.

21.6. Confirm that this amount can be provided for from operating expenditure.

Should a Prospecting Right be granted to the Dlamini Family Trust will make provision for the estimated closure cost by means of a Bank Guarantee or any other means available and accepted by the Competent Authority.

22. Specific Information required by the competent Authority

22.5. 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:-

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

Current land uses on the prospecting area, such as grazing, may be temporarily impacted through the presence of closed off areas that drill rigs will operate within. These are however, small areas. These areas will be rehabilitated post drilling activities and the areas will once again become available for grazing and other agricultural activities.

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

Mitigation measures proposed in this report include that no drill site will be located within 100 m of any identified heritage site (which may occur during the prospecting programme) based on the desktop work undertaken. Should any paleontological or cultural artefacts be discovered work at the point of discovery must stop, the location be clearly demarcated and SAHRA contacted immediately. Work at the discovery site may only be recommenced on instruction from SAHRA.

22.7. Other matters required in terms of sections 24(4) (a) and (b) of the Act.

This BAR and EMP has been compiled in accordance with the NEMA (1998), EIA Regulations (2014, amended April 2017) and MPRDA (2002). The EAP managing the application confirms that this BAR and EMP is being submitted for Environmental Authorisation in terms of the National Environmental Management Act, 1998 in respect of listed activities that have been triggered by application in terms of the Mineral and Petroleum Resources Development Act, 2002 (MPRDA) (as amended). Should the DMR require any additional information, this will be provided upon request. No reasonable or feasible alternatives exist for this Prospecting Right Application and as such, motivation for no alternatives has been provided in the relevant sections above.

PART B: ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

1. Draft environmental management programme.

1.1. Details of EAP

The details of the EAP are provided in section 1.1 of part A of this document

2. Description of the Aspects of the Activity

The requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A

3. Composite Map

No composite map can be presented at this stage

3.1. Description of Impact Management objectives including management statements

Determination of closure objectives.

- Rehabilitation of areas disturbed as a consequence of prospecting to a land capability that will support and sustain a predetermined post-closure land uses;
- Removal of all infrastructure/equipment that cannot be beneficially re-used, as per agreements established, and returning the associated disturbed land to the planned final land use;
- Removal of existing contaminated material from affected areas;
- Establishment of final landforms that are stable and safe in the long run;
- Establishment and implementation of measures that meet specific closure related performance objectives;

Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option

3.1.1. Volumes and rate of water use required for the operation

Volumes of water cannot be determined at this point

3.1.2. Has a water use licence has been applied for?

No water use license application has been lodged as there are no water resources that will be affected by the proposed project. No groundwater will be used or abstracted during the prospecting operations. Moreover, a buffer of 50m from wetlands and water courses shall be established during the operational phase.

3.2. Impacts to be mitigated in their respective phases, Impact Management Outcomes and Impact Management Actions

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

Table 11: Impacts to be mitigated

POTENTIAL IMPACT	ASPECTS AFFECTED	MITIGATION MEASURES	COMPLIANCE WITH STANDARDS	TIME PERIOD FOR IMPLEMENTATION	MITIGATION TYPE	STANDARD TO BE ACHIEVED
CONSTRUCTION PHASE						
Site Establishment- access roads, to prospecting sites, establishment of the campsite, physical surveying of the site and pegging of drilling boreholes (0.25 Ha)						
Loss of top soils and soil erosion	Soils, Land Use and Land Capability	Topsoil must be stockpiled immediately after clearing vegetation to prevent erosion of soil through surface runoff and wind. No topsoil or fertile soil (dark soil) may be stored within 32 m of a drainage line, watercourse or wetland	Rehabilitation in terms of MPRDA and NEMA principles. Applicable guidelines from NEM:BA and Department of Agriculture,	During Construction Phase	Control	Return as close as possible to pre-prospecting environment

		<p>Where applicable, construct berms in order to prevent rill erosion and donga formation.</p> <p>All cleared areas and sumps are to be monitored for erosion daily, any erosion forming is to be remediated with immediate effect.</p>	<p>Forestry and Fisheries (DAFF) and Conservation of Agricultural Resources Act (CARA) regarding removal of species</p> <p>General implementation of activities</p> <p>taking Mining and Biodiversity Guidelines into account</p>			
Loss of natural vegetation in the affected areas.	Flora.	<p>Site clearance will be limited to only areas where invasive prospecting activities will be undertaken</p> <p>Ensure minimal disturbance of vegetation when conducting geophysical surveys and geological mapping.</p> <p>No vegetation clearance or tree removal should take place prior to a suitable qualified</p>	<p>Rehabilitation in terms of MPRDA and NEMA principles.</p> <p>Permits to (DAFF) and CARA for removal of species in terms of NEM:BA</p>	During Construction phase	Control through visual monitoring and inspection	Adhere to rehabilitation standards and Biodiversity Guidelines

		<p>specialist have identified the species and the necessary permits and licenses have been obtained for removal of protected or endangered species.</p> <p>No crops may be harvested from the farms where work is being undertaken by any member of DFT or contractors of DFT.</p>	<p>General implementation of activities taking Mining and Biodiversity Guidelines into account</p>			
Migration of animal life due to disturbance caused proposed project	Fauna	<p>Use sites with most degraded environment for the site development.</p> <p>Trapping and killing of fauna will be prohibited at the prospecting site.</p>	<p>General implementation of activities taking Biodiversity Act and its guidelines into account.</p>	During Construction phase	Control through visual monitoring and inspection	Minimise impact on fauna
<p>Deterioration of water quality in the nearby</p> <p>Water courses and within the groundwater regime.</p>	Surface and Ground Water.	<p>Site establishment should not be undertaken within sensitive landscapes, these areas will be avoided.</p> <p>A distance of 32 meters should be kept between stockpiles and water courses</p> <p>Avoid stripping of areas within the construction sites.</p>	<p>Water management measures in compliance with NWA, 1998 and DWS guidelines</p>	During Construction Phase	Avoid	Minimise the impacts on sensitive areas such as wetlands and streams.

		<p>Rehabilitate areas that may have been mistakenly stripped.</p> <p>Storm water upslope of the campsite and drill sites should be diverted around these areas.</p>				
Air pollution through emissions from the vehicles and equipment used on the construction site.	Air quality.	<p>Dust suppression will be conducted in areas with excessive dust emissions.</p> <p>Traffic will be restricted to demarcated areas.</p> <p>Traffic volumes and speeds within the construction site will be controlled.</p> <p>The construction will be undertaken such that the ambient air quality does not exceed the National Air Quality Standards</p>	National Environmental Management Air Quality Act.	Throughout Construction Phase	Minimise impact	The dust emissions are not to exceed the ambient air quality standards for rural areas
Increased noise levels.	Noise aspects	<p>Limit the maximum speed to 30 km/h or less, subject to risk assessment.</p> <p>Less noisy equipment will be used, the equipment will be kept in good working order and the equipment will be fitted with correct and appropriate noise abatement measures.</p>	National Noise Control Regulations, SANS10103:2008 guidelines.	Throughout the construction phase	Minimise impacts	The noise levels from the construction sites will be managed and levels will be within the regulated noise levels as set by the

						regulations
Visual impacts on the surrounding communities and road users from the construction.	Visual aspects. Neighbouring occupants	<p>Temporary stockpiling of excavated material shall take place in demarcated areas.</p> <p>Stockpiles shall be positioned and sloped to create the least visual impact</p> <p>The prospecting area shall be enclosed to minimise visual disruption from machinery and equipment to be used</p> <p>Lighting will be conducted in a way that will decrease the impacts on visual aspects at night times.</p>	Measures will be undertaken to ensure that the visual aspects from the site comply with the relevant visual standards and objectives including Municipal By Laws.	Throughout the duration of the construction phase	Minimise impact	<p>Ensure that all operations during the construction phase do not result in detrimental visual impacts on surrounding properties, communities and road</p>
Impact from the influx of job seekers and employment of farm labourers.	Socio-Economic Aspect	<p>Recruitment will not be undertaken on site. Farm labourers will not be employed unless agreed to with the farm owners.</p> <p>Ensure that all labourers are trained and adhere to all health and safety standards</p>	<p>Measures taken will be in line with the company's recruitment policies.</p> <p>Occupational Health and Safety Act</p>	Throughout Construction Phase	Control	Comply with all national health and safety standards as well as adhere to the company's recruitment policies.

Excessive generation	Waste	Soil and Visual impacts	<p>Minimise littering on site and ensure that all labourers are trained in environmental awareness.</p> <p>Bins (sufficient number and capacity) to store general and hazardous produced on a daily basis shall be provided at each drilling site.</p> <p>The waste bins must be sealed to avoid, leakage of leachate material and must be waterproof so that rain water cannot enter into them.</p> <p>Bins shall be emptied on a weekly basis or if there is a nauseous smell coming from them or vectors are breeding within them.</p> <p>An integrated waste management approach shall be used, based on the principles of waste minimisation, reduction, re-use and recycling of materials.</p>	Waste Management Act	Throughout the construction phase	Avoid	Avoid the excessive generation of general waste during this phase
POTENTIAL IMPACT	ASPECTS	MITIGATION MEASURES	COMPLIANCE WITH	TIME PERIOD FOR	MITIGATION	STANDARD TO BE	

	AFFECTED		STANDARDS	IMPLEMENTATION	TYPE	ACHIEVED
OPERATION PHASE						
Exploration :Diamond Core drilling of the exploration boreholes, stockpiling, Drilling, use of campsite and rehabilitation of the drilling sites (0.2ha)						
Soils contamination, disruption of the Soil profile Disturbance of ecological systems through destruction of natural vegetation. Loss of Land use	Soils, Land Use, Land Capability and natural vegetation	<p>Ensure that drilling machinery construction vehicles should be well maintain to avoid spillage of hydrocarbons, to avoid soil and ground water contamination</p> <p>All oil spills will be remedied using approved methodologies</p> <p>Sumps and boreholes should be returned to pre-drilling conditions.</p> <p>All waste generated during drilling ties should be collected and disposed of at a suitable registered waste facility</p> <p>Retain all vegetation cover around drilling sites; the grass is to be mowed as part of site establishment.</p>	<p>Rehabilitation in terms of MPRDA and NEMA principles.</p> <p>Operational control procedures (e.g. spill / leak handling).</p> <p>Incident Reporting System; Environmental Inspections;</p> <p>Planned Maintenance System; water quantity (abstraction) monitoring; continued communication with surrounding landowners.</p>	Throughout operational phase	Control	Return as close as possible to pre-prospecting environment

		<p>No waste material or litter shall be burnt or buried on site.</p> <p>Post operational phase, the land will be returned to its previous state in as much as possible.</p>				
Establishment of campsite and drilling operation may result in contamination of surface water run-off by hydrocarbon fluids and sedimentation	Surface and water	<p>A buffer of 50m from watercourse and wetlands should be maintained during the all prospecting activities</p> <p>Excess water and mud from drilling sites should be stored in sumps that are sizeable enough to contain them</p> <p>Storm water generated around drilling sites should be diverted away from natural water courses</p> <p>Ensure that prospecting activities do not impact negatively on the quality and quantity of groundwater used by surrounding occupants</p>	<p>Water management measures in compliance with NWA,(National Water Act)</p> <p>1998 and GN 704, 1999.</p>	Throughout operational phase	Minimise	Maintain groundwater quality

Air pollution caused by vehicle emissions and dust	Air Quality	<p>Dust suppression should be practiced during the operational phase</p> <p>Construction vehicles should be regularly maintained in order to minimize greenhouse gas emission</p>	National Environmental Management Air Quality Act	Throughout the operational phase	Control and minimise	Maintain air quality
Wetland--destruction and loss of aquatic habitat	Aquatic and terrestrial components	<p>A buffer of 50m from wetlands and watercourses should be established during the operational phase.</p> <p>Remove or eradicate all alien invasive vegetation growing on stockpiles or in any area of the drilling site footprint.</p>	<p>National Environmental Management Act</p> <p>National Environmental Management Waste t Act</p> <p>National Water Act (NWA)</p> <p>National Environmental Management: Biodiversity Act (NEMBA)</p>	Throughout the operational phase	Avoid	Protect aquatic and terrestrial ecosystems in as far as possible.
Noise impacts	Fauna and Adjacent landowners/ occupants	<p>Provide employees with ear plugs</p> <p>Use equipment that produces minimal noise as far as possible</p> <p>Avoid working outside normal working hours</p>	<p>National Noise Control Regulations</p> <p>SANS 10103:2008</p>	Throughout the operational phase	Minimise	Minimal noise

		<p>(i.e. 08:00 to 17:00) and during weekends</p> <p>All machinery and equipment must be maintained in good working order, and fitted with approved and specified muffler systems.</p> <p>Compliance with local by-laws and regulations regarding the noise and hours of operation</p>				
Visual impacts	Neighbouring occupants	<p>Visual screening methods could be used on site to reduce visual impacts.</p> <p>Lighting will be conducted in a manner that will reduce the visual impact at night times.</p>	National Road Traffic Act	Throughout the operational phase	Control	Minimise visual impacts
Impacts on heritage features	Heritage features on-site	<p>No heritage features must be destroyed or removed without a permit in terms of SAHRA.</p> <p>Should any heritage features or remains be discovered, work is to stop, the area is to be demarcated and a qualified Archaeologist is to be contacted and contracted to evaluate</p>	South African Heritage Resources Agency	Throughout the operational phase	Stop and avoid	Protect heritage features

		the site and apply for the appropriate permit if needed. Once the permit has been obtained from SAHRA the archaeologist is then to supervise the removal or destruction of the item. Once it has been moved or destroyed works can continue.				
Health and safety impacts	Socio economic Employees and land occupants	Neighbouring occupants should be warned about any disruptions prior the commencement of the activity Ensure that health and safety measures are put in place to protect employees and neighbouring occupants Provide employees with personal protective Equipment (PPE)	Occupational Health and Safety Act	Throughout the operational phase	Avoid	Avoid health risks and injury incidents
Traffic impacts	Traffic movement	Vehicles that are moving to the site should only move during the day when there is less traffic in the road	National Traffic Act	Throughout the operational phase	Avoid	Avoid traffic congestion
Introduction of weeds and alien invasive	Flora	All sites disturbed by construction activities must be monitored for exotic or invasive	NEM:BA	Throughout the	Control and	Control in order to avoid alien plants

plants		<p>plant species and weeds.</p> <p>Site clearance will encourage the introduction of alien invasive plant species; The DFT Contractor should train the labourers on the removal and disposal of alien vegetation (Mechanical and Chemical).</p> <p>Chemical (herbicides) or mechanical removal may be used. If chemical methods are used the method of use is to be undertaken in accordance with manufacturer's specification for the weeds and this method and management is to be approved by the ECO</p> <p>Any eradicated exotic/invasive plant or weed vegetation must be removed from site and disposed of at an approved waste disposal facility or an alternative eradication method approved by the competent authority</p>	CARA	operational phase	avoid	invasion
Soil erosion	Soil	Erosion protection measures are to be undertaken. Daily erosion protection	Rehabilitation in terms of	Throughout the	Control and	Ensure that soil

		<p>monitoring is to take place at each drilling site prior to commencement of the daily works. If any erosion is identified it is to be remediated prior to the commencement of works.</p> <p>Daily erosion checks are to be undertaken on the sump area. If cracks or erosion is identified the side walls are to be battered back to ensure a safe environment for all.</p> <p>Drainage channels must be kept free draining at all times.</p> <p>No pooling of water will be allowed, drainage diversions must be provided to prevent scour of the site, and this is also to direct water away from the impacted area to prevent erosion.</p>	<p>MPRDA and NEMA principles.</p> <p>General implementation of activities taking Biodiversity Act and its guidelines into account</p>	operational phase	Remedy	erosion is minimised
Waste generation	Soil and Visual impacts	<p>Minimise littering on site and ensure that all labourers are trained in environmental awareness.</p> <p>Bins (sufficient number and capacity) to</p>	National Environmental Management: Waste Management Act	Throughout the operational phase	Avoid	Avoid the excessive generation of general waste during this phase

		<p>store general and hazardous produced on a daily basis shall be provided at each drilling site.</p> <p>The bins are to be vandal proof; sealed bins that cannot leak leachate material and waterproof that rain water cannot enter into them.</p> <p>Bins shall be emptied on a weekly basis or if there is a nauseous smell coming from them or vectors are breeding within them.</p> <p>An integrated waste management approach shall be used, based on the principles of waste minimisation, reduction, re-use and recycling of materials.</p>				
POTENTIAL IMPACT	ASPECTS AFFECTED	MITIGATION MEASURES	COMPLIANCE WITH STANDARDS	TIME PERIOD FOR IMPLEMENTATION	MITIGATION TYPE	STANDARD TO BE ACHIEVED
DECOMMISSIONING PHASE						

Removal of temporary infrastructure and final rehabilitation of disturbed areas(0.25Ha)

Compaction and contamination of soils within the rehabilitation site.	Soil	<p>All vehicles and machinery used at the rehabilitation site must be kept in good working order.</p> <p>No repairs of vehicles or machinery will be conducted at the rehabilitation site unless it is emergency repairs, which will be conducted on protected ground.</p> <p>Movement of vehicles and machinery should be limited to demarcated routes, which will be rehabilitated when no longer in use</p>	<p>Rehabilitation in terms of MPRDA and NEMA principles.</p> <p>General implementation of activities taking Biodiversity Act and its guidelines into account.</p>	Throughout the Decommissioning Phase	Avoid	Rehabilitation of drilling sites shall be undertaken in line with closure objectives and in consultation with landowners.
Re-instatement of soil productivity, land capability, land use and topographical patterns.	Soil	<p>Ensure that the soil in the vicinity of the rehabilitation site is not detrimentally impacted.</p> <p>All the waste from demolition must be collected from site for disposal.</p> <p>Once the area is shaped correctly the compacted areas are to be ripped at 300mm</p>	<p>Rehabilitation in terms of MPRDA and NEMA principles</p> <p>General implementation of activities taking Biodiversity Act and its guidelines into</p>	Throughout the Decommissioning Phase	Avoid	Rehabilitation of drilling sites shall be undertaken in line with closure objectives and in consultation with landowners.

		<p>and topsoil is to be replaced.</p> <p>Areas that have not had topsoil striped are to be monitored for alien plant growth and vegetation recovery. If after a year the vegetation has not recovered the area is to be hand seeded with a Highveld indigenous grass</p>	account.			
Pollution of surface water environment	Surface water	Ensure that the rehabilitation of the site does not have detrimental impacts on the surface water environment.	The surface water leaving the rehabilitation site will comply with the Department of Water and Sanitation target of water quality parameters.	Throughout the Decommissioning Phase	Avoid	Rehabilitation of drilling sites shall be undertaken in line with closure objectives and in consultation with landowners.
Potential injuries to fauna and residents due to Geological instability.	Geology and social	Ensure that all drill holes have been refilled with rocks and or cement to avoid potential injuries to fauna and residents.	Rehabilitation in terms of MPRDA and NEMA principles Health and safety Act	Decommissioning Phase	Avoid	Rehabilitation of drilling sites shall be undertaken in line with closure objective
Air pollution from	Air Quality	Where necessary, wet suppression will be	National Environmental	Throughout the	Avoid	Rehabilitation of

rehabilitation site.		<p>conducted at areas with excessive dust emissions. Vehicles and machinery will be well maintained.</p> <p>The traffic volumes and speed within the rehabilitation site will be controlled</p>	Management Air Quality Act	Decommissioning Phase		drilling sites shall be undertaken in line with closure objectives and in consultation with landowners.
Migration of animal life due to disturbance caused proposed project	Fauna	<p>Use sites with most degraded environment for the site development.</p> <p>Trapping and killing of fauna will be prohibited at the prospecting site.</p>	General implementation of activities taking Biodiversity Act and its guidelines into account.	During Construction phase	Control through visual monitoring and inspection	Minimise impact on fauna
Generated noise from the rehabilitation site	Noise	<p>Smaller or less disruptive equipment should, where possible, be used when working near receptors.</p> <p>Equipment will be well maintained and fitted with the correct and appropriate noise abatement measures.</p>	<p>National Noise Control Regulations,</p> <p>SANS10103:2008 guidelines.</p>	Throughout the Decommissioning Phase	Avoid	<p>Rehabilitation of drilling sites shall be undertaken in line with closure objectives and in consultation with landowners.</p> <p>Ensure that the rehabilitation activities do not have detrimental impacts on</p>

						people.
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4. Financial Provision

4.1. Determination of the amount of Financial Provision.

A total of R 56 066.00 is required to both manage and rehabilitate the environment in respect of rehabilitation. Dlamini Family Trust must update and review the quantum of the financial provision annually.

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

For a prospecting operation such as this, the primary closure and environmental objectives are to:

- Minimise the area to be disturbed and to ensure that the areas disturbed during the prospecting activities are rehabilitated and stable, as per the commitments made in this EMP.
- Sustain the pre-prospecting land use.
- To record and communicate the results of the monitoring programme during decommissioning to the participating stakeholders.

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

The environmental objectives in relation to closure will be consulted with the farmers and affected parties. It will be explained that should the prospecting yield negative results, then the end use for area will revert to its pre-prospecting land use (minutes to be incorporated on the final report). The end-use of the area will therefore not be changed by the prospecting operations.

4.3.1. 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.

Table 12: Rehabilitation Plan

Aspect/ Impact	Rehabilitation Measure	Monitoring Frequency & Responsibility
Removal of construction structures	<ul style="list-style-type: none"> • Clear and completely remove from site all construction plant equipment, storage containers, signage, temporary services, fixtures and any other temporary works; and • Ensure that all access roads utilised during construction 	Once-off; DFT.

Aspect/ Impact	Rehabilitation Measure	Monitoring Frequency & Responsibility
	(which are not earmarked for closure and rehabilitation) are returned (as far as possible) to their state prior to construction.	
Vegetation clearing/Replanting	<ul style="list-style-type: none"> Remove any emerging alien and invasive vegetation to prevent further establishment; All planting work is to be undertaken by suitably qualified personnel making use of the appropriate equipment; Transplant during the winter (between April and September); and Plant indigenous plants to minimise the spread of alien and invasive vegetation. 	When re-vegetation is done and in blooming season; DFT. or sub-contractor appointed
Topsoil replacement	<ul style="list-style-type: none"> Replace and redistribute stockpiled topsoil together with herbaceous vegetation, overlying grass and other fine organic matter in all disturbed areas of the prospecting site, including temporary access routes and roads. Replace topsoil to the original depth (i.e. as much as was removed prior to construction). Prohibiting the use of topsoil suspected to be contaminated with the seed of alien vegetation. Alternatively, the soil is to be sprayed with specified herbicides. Where local soil has poor drainage, broken rock (Approx. 75 mm in diameter) must be placed to a depth of 150mm at the bottom of the planting hole prior to planting and backfilling with approved plant medium mixture. 	Once-off; DFT.
Waste and Rubble Removal	<ul style="list-style-type: none"> Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site. 	Once-Off; DFT
Solid and Hazardous Waste	<ul style="list-style-type: none"> Dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site. Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps. Dispose of hazardous waste in the approved manner. Do not hose oil or fuel spills into a storm water drain or sewer, 	Once-off; DFT

Aspect/ Impact	Rehabilitation Measure	Monitoring Frequency & Responsibility
	<p>or into the surrounding natural environment.</p> <ul style="list-style-type: none"> Dispose of all visible remains of excess cement and concrete after the completion of tasks. Dispose of in the approved manner (solid waste concrete may be treated as inert construction rubble, but wet cement and liquid slurry, as well as cement powder must be treated as hazardous waste). 	
Erosion protection	<ul style="list-style-type: none"> Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction site. Retain shrubbery and grass species wherever possible. Perform regular monitoring and maintenance of erosion control measures. 	After rainfall events; DFT. or sub-contractor appointed

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

Dlamini Family Trust is required to make the prescribed financial provision for the rehabilitation or management of negative environmental impacts. If the Dlamini Family Trust fails to rehabilitate or manage any negative impact on the environment, the DMR may, upon written notice to the company, use all or part of the financial provision to rehabilitate or manage the negative environmental impact in question. Dlamini Family Trust will specify that the appointed contractor is required to comply with all the environmental measures specified in the EMP. This will include avoiding unnecessary disturbance of natural vegetation and the rehabilitation of each drill site, immediately after drilling has been completed. All tracks to the drill sites must be rehabilitated at the end of the prospecting programme. The financial provision provides for the final checking of all sites before site clearance

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

Table 13: Quantum of the financial provision

CALCULATION OF THE QUANTUM							
Applicant: EAPs:		Dlamini Family Trust Tshikovha Green & Climate Change Advocates		Ref No.: Date:		LP30/5/1/1/2/13277 Nov-18	
No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	14.45	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	201.35	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	296.72	1	1	0
3	Rehabilitation of access roads	m2	500	36.03	1	1	18015
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	349.71	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	190.75	0.52	2	0
5	Demolition of housing and/or administration facilities	m2	0	402.7	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	204951.85	1	1	0
7	Sealing of shafts adits and inclines	m3	0	108.09	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	140732.19	1	1	0
8 (B)	evaporation ponds (non-polluting potential)	ha	0	175279.4	1	1	0
8 (C)	evaporation ponds (polluting potential)	ha	0	509094.45	1	1	0
9	Rehabilitation of subsided areas	ha	0	117842.01	1	1	0
10	General surface rehabilitation	ha	0.2	111483.63	1	1	22296.726
11	River diversions	ha	0	111483.63	1	1	0
12	Fencing	m	0	127.17	1	1	0
13	Water management	ha	0	42389.21	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	14836.22	1	1	0
15 (A)	Specialist study	Sum	0	65000	1	1	0
15 (B)	Specialist study	Sum	0	0	1	1	0
					Sub Total 1		40311.726
1	Preliminary and General	4837.40712		weighting factor 2 1		4837.40712	
2	Contingencies	4031.1726				4031.1726	
					Subtotal 2		49180.31
					VAT (14%)		6885.24
					Grand Total		56066

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

Dlamini Family Trust undertakes to provide financial provision for the implementation of the rehabilitation plan.

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

- Monitoring of Impact Management Actions
- Monitoring and reporting frequency
- Responsible persons
- Time period for implementing impact management actions

Table 14: Mechanism for monitoring compliance

SOURCE ACTIVITY MONITORING AND REPORTING	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES	FREQUENCY AND TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Site Establishment /construction.	<ul style="list-style-type: none"> Dust Noise removal of vegetation disruption of animal life habitat destruction loss of geology change in topography 	<ul style="list-style-type: none"> Daily dust suppression Monthly dust bucket monitoring 	Geologist and Project Manager	Daily and monthly
Traffic management	<ul style="list-style-type: none"> Dust noise animal life disruption Traffic Congestion 	<ul style="list-style-type: none"> Monitor dust fallout levels monthly and Noise level Monitor the time frames in which heavy vehicles travel on main roads and national roads. 	Geologist and Project Manager	Monthly and when necessary

Ablution Facility	<ul style="list-style-type: none"> Land contamination Water contamination health hazard 	<ul style="list-style-type: none"> service the toilet facility monitor water quality 	Geologist and Project Manager	When necessary and monthly
Existing/Access routes	<ul style="list-style-type: none"> dust animal life disruption Monitor dust. 	<ul style="list-style-type: none"> Monitor dust fall out levels Monitor speed on the road 	Geologist and Project Manager	Monthly and when necessary

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

Regular monitoring of all the environmental management procedures and mitigation measures shall be carried out by DFT in order to ensure that the provisions of this EMP are adhered to. Formal monitoring and performance assessment of the EMP will be undertaken on a monthly basis

6. Environmental Awareness Plan

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

The following Environmental Awareness Training will be implemented by DFT in order to inform employees and contractors of the environmental risk that may result from their work, or the risk of their interaction with the sensitive environment. The training will be conducted as part of the induction process for all new employees (including contractors) that will perform work in terms of the proposed activities. Proof of all training provided must be kept on-site. The Environmental Awareness Training will, as a minimum cover the following topics within Table 15.

Table 15: Environmental Awareness Plan

Air Quality	<ul style="list-style-type: none"> Activities that may result or mitigate impact on air quality; speeding on roads, the requirements for dust suppression, etc. Negative impacts on the receiving environment if mitigation measures are not implemented.
Surface and groundwater	<ul style="list-style-type: none"> Risks to surface and groundwater, e.g. fuel and chemical handling and further risks of erosion or

	<p>damage to riparian vegetation.</p> <ul style="list-style-type: none"> • How incidents should be reported, and emergency requirements. • The importance to reuse water and to prevent spillages.
Cultural Heritage	<ul style="list-style-type: none"> • To respect all cultures and beliefs. • How to report any sightings of heritage importance as identified during operation activities (e.g. fossils)
Fauna	<ul style="list-style-type: none"> • Overview of the fauna found on/around site and the uniqueness thereof. • Mitigation measures that all contractors and employees need to abide by. • No contractor or personnel allowed to catch or kill any species, and how any sightings should be reported if further actions are required (e.g. to catch and release).
Flora	<ul style="list-style-type: none"> • Overview of the flora diversity on site, and the rare and endangered nature thereof. • Measures taken by the company to protect species. • No contractor or personnel allowed to remove, harvest or destroy any flora species unless clearly instructed based on the construction and operational plans.
Waste management	<ul style="list-style-type: none"> • Measures to avoid waste generation and to participate in waste minimisation/reduction.
Traffic strategies.	<ul style="list-style-type: none"> • To stay on designated roads and not create new roads on areas that will not be used for prospecting purposes. • To be aware of the fauna species and to be on the lookout and avoid collisions.
Emergency Preparedness and Response	<ul style="list-style-type: none"> • How to report any emergency or incident. • Incident and emergency reporting requirements
General rules and conduct	<ul style="list-style-type: none"> • Respect for the sensitive environment. • Do not litter.

- | | |
|--|---|
| | <ul style="list-style-type: none">• Respect for each other and for different cultures.• Safety and health requirements |
|--|---|

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

All employees must be provided with environmental awareness training to inform them of any environmental risks which may result from their work and the manner in which the risks must be dealt with in order to avoid pollution or the degradation of the environment. Employees should be provided with environmental awareness training before prospecting operations start. All new employees should be provided with environmental awareness training. Induction courses will be provided to all employees by a reputable trainer.

7. Specific information required by the Competent Authority

No risks have been identified other than those that have been identified within this document, these are to be communicated to all contractors and all contractors are to be provided with a copy of the approved EMP. Environmental training needs for each section should be identified and addressed to ensure environmental management is part of day to day operations. The environmental risk responsibilities guide the training requirements of each individual. The responsibility for each level of management according to the Integrated Risk Management and ISO14001 role descriptions are. Environmental training recommended for the different levels of management guide the training needs identification process. This is a minimum guideline and any additional training can be added where section specific issues or high-risk items require training and awareness. It is the responsibility of the line manager to ensure environmental training needs for individual staff members are identified, agreed to, facilitated and tracked.

8. UNDERTAKING

The EAP herewith confirms

- i. the correctness of the information provided in the reports ☒
- ii. the inclusion of comments and inputs from stakeholders and I&APs ; ☒
- iii. the inclusion of inputs and recommendations from the specialist reports where relevant; ☒ and
- iv. that the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties are correctly reflected herein. ☒

Signature of the environmental assessment practitioner:

Tshikovha Green and Climate Change Advocates

Name of company:

November 2018

Date:

-END-