Davhana
GEOTECH SOLUTIONS (PTY) LTD
Reg No: 2016/407139/07

DRAFT BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE PROPOSED PROSPECTNG RIGHT FOR ALLUVIAL DIAMOND AND KIMBERLITE DIAMOND ON PLAAS 144 RD AND PLAAS 145 RD SITUATED WITHI DIKGATLONGLOCAL LOCAL MUNICIPALITY, FRANCIS BAARD DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE.

PROPONENT: BAY TOWER PROPERTIES 19 CC

DATE: APRIL 2021

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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).

NAME OF APPLICANT: BAY TOWER PROPERTIES 19 CC

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This Basic Assessment Report (BAR) and Environmental Management Programme (EMPr) is being submitted to the Department of Mineral Resources (DMR) AND I&AP$_s$ in support of the Prospecting Right Application lodged by Bay Tower Properties 19 cc.

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 the these aspects to determine:

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

(ii) the degree to which these impacts—

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

(e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—

(i) identify and motivate a preferred site, activity and technology alternative;

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

(iii) identify residual risks that need to be managed and monitored.

ABBREVIATIONS	
BAR	Basic Assessment Report
BID	Background Information Document
CBA	Critical Biodiversity Area
DWS	Department of Water and Sanitation
DMRE	Department of Mineral Resources and Energy
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
FBDM	Francis Baard District Municipality
GDP	Gross Domestic Product
I&APs	Interested And Affected parties
IDP	Integrated Development Plan
NDP	National Development Plan
PPP	Public Participation Process
PWP	Prospecting Works Programme
SAHRA	South African Heritage Resource Agency
SANAS	South African National Accreditation System
SANS	South African National Standards
WMA	Water Management Area

Executive Summary

Bay Tower Properties 19 cc has applied for an Environmental Authorisation for the proposed prospecting activities for Alluvial Diamond and Kimberlite Diamond on Portion 1 of Plaas 144 and Portion 2 of Plaas 145 situated within Barkley West Municipality, Francis Baard District, Northern Cape

Prospecting is the first stage of geological analysis of a territory. It is the physical search for minerals, fossils, precious metals or mineral specimens. Prospecting is a small scale form of mineral exploration which is an organized effort undertaken by commercial mineral companies to find commercially viable ore deposits

Bay Tower Properties 19 cc lodged the application in terms of Regulation 16 of the National Environmental Management Act (Act 107 of 1998) (NEMA): Environmental Impact Assessment (EIA) Regulations, 2014, as amended in 2017 and Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002).In terms of the Environmental Impact Assessment 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.

Davhana Geotech Solutions (Pty) Ltd has been appointed by Bay Tower Properties 19 cc 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.

This document is the Final Basic Assessment Report (BAR) and the Environmental Management Programme (EMPr), which was compiled in terms of the EIA Regulations of 2014 (amended, April 2017) and will be submitted to the Department of Mineral Resources (DMR).

Table of Contents

List of Tables

Table of Figures

PART A: SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

1. Contact Person and correspondence address

1.1 Details of the EAP

Name of the Practitioner: Vhangani Mugeri

Cell No.: +27 (081)4640109

E-mail address: vmugeri17@gmail.com

1.2 Expertise of the EAP

1.2.1 The qualifications of the EAP

Vhangani Mugeri

Bachelor of Science Degree: Geology & Environmental Management,

Bachelor of Honours: Geology.

(Refer to Appendix A)

1.2.2 Summary of the EAP's past experience

(In carrying out the Environmental Impact Assessment Procedure)

EAP's past experience	
Name	**Background**
Vhangani Mugeri	Vhangani Mugeri Holds a Bachelor of Science degree majoring in Geology and Environmental Management from the University of Johannesburg (2009 – 2012) and Honours in Geology from the University of Limpopo (2013). Before Joining Davhana Geotech Solutions, Mr Mugeri worked for the Department of Environmental Affairs as a meteorological technician in Gough Island from July 2014 to October 2015, then Marion Island from January 2016 to May 2017. September 2017 Mr Mugeri Joined Tshikovha Green and Climate Change Advocates as an

	Environmental Geologist. Mr Mugeri interests vary from geotechnical studies, Geohydrological studies, Integrated Waste Water Management Plan and Water Use License Applications, Environmental Compliance Audits, Landfill Audits, and EIA. Since Joining Davhana Geotech Solutions (Pty) Ltd Mr Mugeri has been directly involved in conducting Geohydrological studies in Fortress Quarry for Corobrik, Geohydrological studies for Letwaba Petroleum's (Pty) Ltd in Greenside, and water monitoring analyses for Manngwe Mining. He has been also involved in several geotechnical projects as an assistant in Makhado and Greenside. Mr Mugeri has been involved in mine environmental audits, at Manngwe Mining, Construction environmental compliance audit in Graskop outdoor elevator and restaurant. Mr Mugeri has been working on Landfill audits in the City of Ekurhuleni landfills, Thulamela Local Municipality and Nkomazi Local Municipality. Mr Mugeri worked on compiling closure report for the borrow pit in Ga – Ntata within the Greater Letaba Municipality. Mr Mugeri is currently working on the Application of Water Use Licenses for Corobrik in the Fortress and Springs Operations and for Manngwe Mining for their mine in Brits area. In both projects he will also be compiling the Integrated Waste Water Management Plan. Recently Mr Mugeri has been involved more than 6 Prospecting right applications across South Africa, and HDPE recling plant licencing in Gauteng under the City of Ekurhuleni.

2. Location of the overall Activity

Farm Name:	Portion 0 of Plaas 144
Application area (Ha)	998,96
Magisterial district:	Francis Baard
Distance and direction from nearest town	Kimberley
21 digit Surveyor General Code for each farm portion	C00700000000014500000
Farm Name:	Portion 2 of Plaas 145
Application area (Ha)	1303,41 ha
Magisterial district:	Francis Baard
Distance and direction from nearest town	Kimberley
21 digit Surveyor General Code for each farm portion	C00700000000014500002

3. Locality map (Show nearest, town scale not smaller than 1: 250 000)

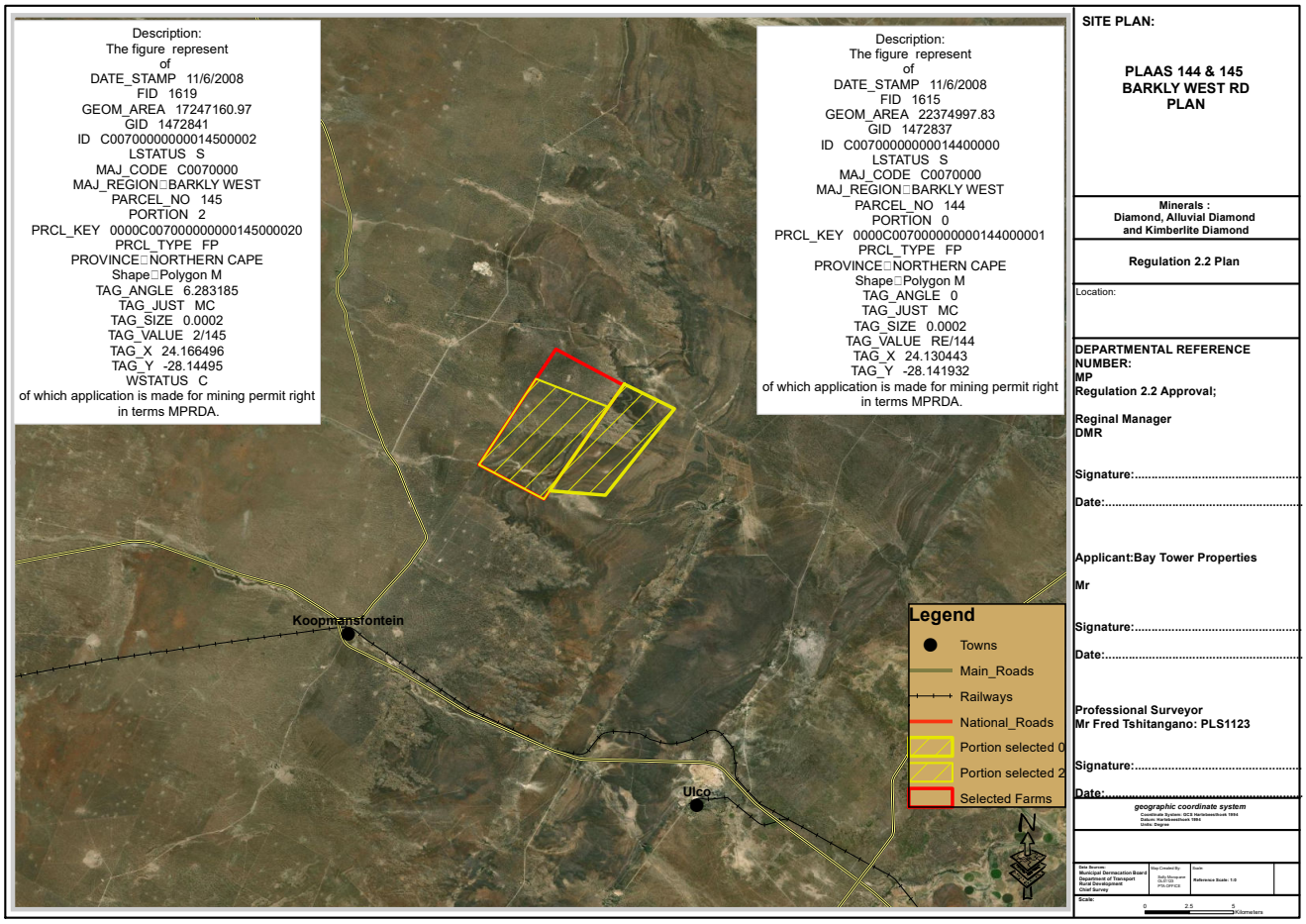

Figure 1: Map showing nearest towns

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

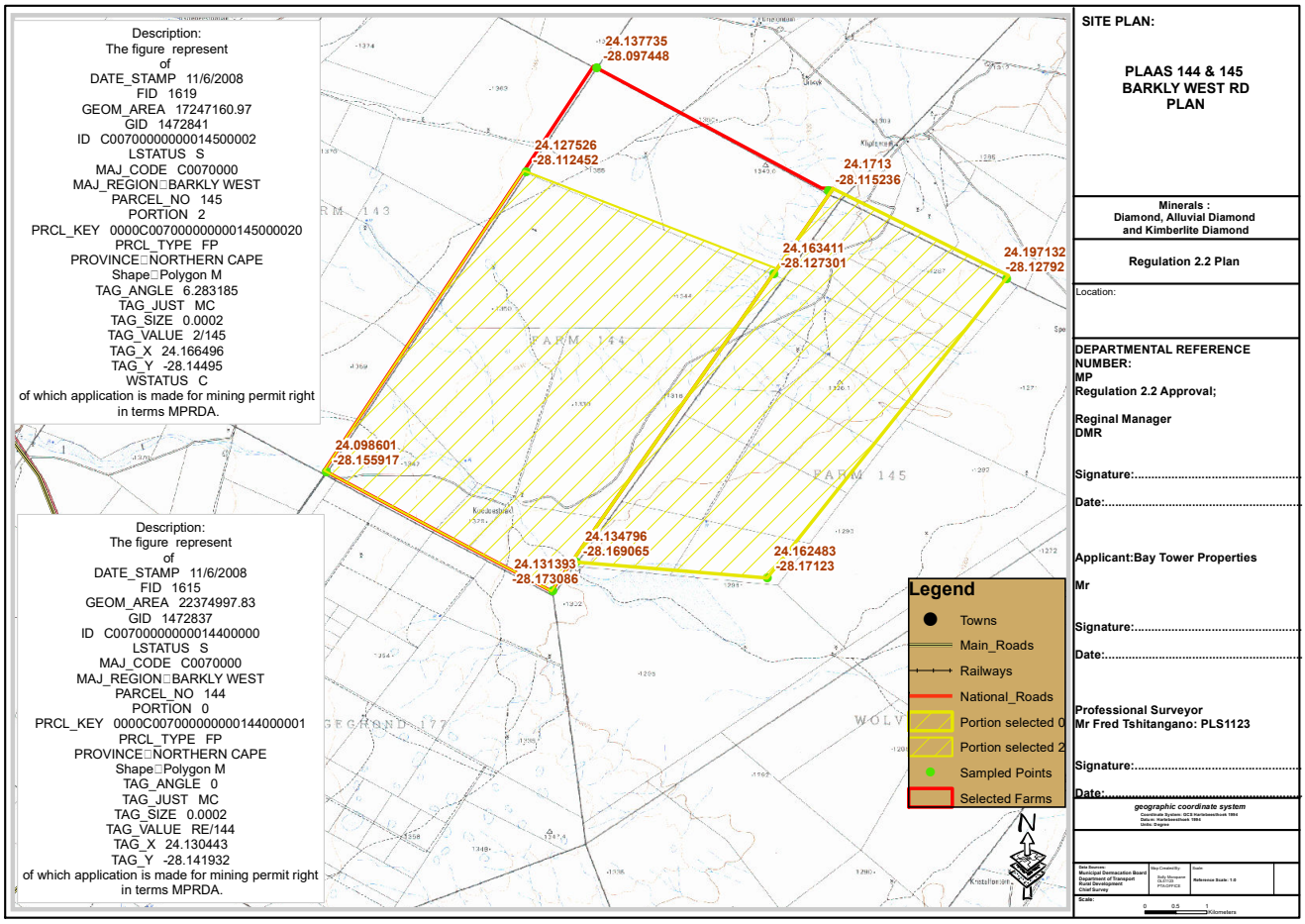

Figure 2: Regulation sketch plan for the proposed area

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 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	2301,46Ha	**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. **GNR 327, Notice 1, Activity 22** The decommissioning of any activity requiring (i) a closure certificate); or (ii) a prospecting right, where the throughput of the activity has reduced by 90% or more over a period of 5 years
Drill site 20 boreholes will be drilled 1 drill hole= 0.01 ha (100 m^2) Total 20 drilling site= 0.2 ha (2000m^2)	0.2 Ha (2000m^2)		
Site Establishment, clearance of top soil and vegetation	50m^2 per prospecting site		
Sampling and storage	10 m^2 for core trays		
Access road	500m^2		
Waste generated, stored and disposed	Less than 2m^3		
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	0.2562 ha (2562 m^2)		

4.2 Description of the activities to be undertaken

Bay Tower Properties 19 cc intends to undertake prospecting on Plaas 144 RD and Portion 2 of Plaas 145 RD situated within Barkley West, Francis Baard District Municipality in the Northern Cape Province. The commodities that will be prospected are Alluvial Diamonds and Kimberlite pipe Diamond and it is expected that a period of five (5) years will be needed to carry out this activity.

Access Roads

There are several roads that have been identified that lead to the proposed site. One of these roads will be used by the prospecting contractors to access the drilling site.

Temporary Facilities

The temporary office facilities include the use of a mobile office caravan.

Vehicles and Equipment to be use on site

A prospecting diamond drill machine,

A mobile ablution facility

A water bowser that will be bringing in water from the municipality for domestic uses

A site vehicle, (4x4) to travel in and around the site.

4.3 The prospecting method or methods to be implemented

4.3.1 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 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.

4.3.2 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. A total of 20 boreholes are intended to be drilled throughout all the prospecting phases. The results of Phase 1 and Phase 2 will be used to assist in the ideal location of boreholes to be drilled. Also only ten boreholes will be drilled initially which are planned for Phase 3 drilling. After Phase 3 drilling, the results will be used to design a systematic drilling programme aimed at delineating the Mineral Resources on the proposed project area. The final number of boreholes will depend greatly on the results of Phase 3 drilling. A further ten boreholes are planned for Phase 5 drilling.

Figure 3: Example of the drilling machinery

4.4 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.

4.5 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, Mining Engineer
7.	Mining Right Application	Geologist, Mining Engineer	Month 51-60 (10 months)	Mining Works Programme	Month 60	Geologist, Mining Engineer

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	Section 24 of the Constitution of the Republic of South Africa provides the overarching environmental legislative framework for environmental management. According to this section: "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

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 Number 20 is triggered.	Bay Tower Properties 19 cc has appointed Davhana Geotech Solutions (Pty) Ltd to conduct 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. Submission of Basic Assessment Report and Environmental Management Programme Report to the Competent Authority as required by NEMA
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 Site establishment and drilling phase, contractors and employees should adhere to the requirements of this legislation for a safe working environment.	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 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 have an impact on critical endangered species or species of ecological importance within the biodiversity area.	The proposed site is located within a Critical Biodiversity Area and within the buffer zone of Waterberg Biosphere 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)	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	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.

	and the detailed procedures to be followed in applying for exemption permits are described and discussed. 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. 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.	
Mine Health and Safety Act ,1996 (No. 29 of 1996	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	The applicant will be required to meet the requirements of the Mine Health and Safety Act during invasive and non-invasive prospecting phases.
National Water Act (Act No. 36 of 1998)	The proposed activities requires minimum use of water, however it will not consume enough water to trigger a water use license application.	No water use license is required for this application. Any water required for drilling activities will be brought in via a mobile water tanker.

National Environmental Management: Waste Act, Act 59 of 2008	Management measures environmental awareness plan	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.
Conservation of Agricultural Resources Act, 1983	The overall Prospecting Activities	The project should promote the conservation of soil, water and vegetation
National Veld and Forest Fire Act, 1998	The proposed prospecting activities may have an impact on veld fires which may begin or spread specially during the fire season within the prospecting site.	This legislation compels individuals in rural areas to enforce fire prevention measures to avoid the unnecessary initiation and/or spread of forest and veld fires.
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 years. Activities will align with some of objectives set out within the IDP
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 Diamonds.

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. Additionally the prospecting activities allow for effective environmental baseline data to be collected, which will assist in assessing fatal flaws and risk of any proposed mining operation.

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 the other hand promoting the regulated exploration of natural resources in an environmental sustainable manner.

According to Census 2011, of the 78 647 economically active (employed or unemployed but looking for work) people in the Francis Baard district, over 40% are unemployed. The unemployment rate of Francis Baard is almost double that of the other municipalities in the district. This could be attributed to lack of opportunities especially for low skilled people. The mineral prospecting activities may stimulate an income for the local minority that will be involved in the activity from the site establishment to the decommissioning. The results obtained from this prospecting project may provide a gateway for the stimulation of a sustainable income for the local community at the operational stages of the potential mine.

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

8. Details of the development footprint alternatives considered.

8.1 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.

8.2 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 make use any existing infrastructure like access roads for the explorers, and any infrastructures that exist on site.

8.3 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.

8.4 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.

8.5 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 Francis Baard region 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

  - No 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.

9. Details of the Public Participation Process Followed

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

1) Identification and recording of key Interested and Affected Parties (I&APs) and other stakeholders on to the Stakeholder Database. (Appendix C1)

2) Placement of site notices around the farm, and other accessible public areas.(Appendix C2)

3) Publication of a newspaper advert, in the local newspaper (Appendix C3)

4) Formal notification of the application to key Interested and Affected Parties and other stakeholders via distribution of Notification Letter and the Background Information Document ,(Appendix C4)

5) Compilation of Consultation Report with all comments and responses from I&APs and the EAP(Appendix C6)

9.1 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 and Notified:

9.2 Formal notification of the application to key Interested and Affected Parties

The project will be announced as follows:

- **Newspaper Advert Notice:**

  The project announcement advertisement will be published on **23rd of April 2021** in the local Newspaper. The newspaper advert will used to notify all interested and affected parties (I&APs) of the proposed project and for them register as stakeholders for the project.

- **Site notice placement: -**

  In order to inform surrounding communities and adjacent landowners of the proposed development, site notices will be erected on site and at visible locations close to the site on the **16th of April 2021.**

- **Written notification: -**

  A Background Information Document (BID) notifying I&AP's and other key stakeholders of the project will be sent on the **16th of November 2021**

- **Public Meeting: -**

  The public meeting will be organised with the community leadership and only when it is safe to do so and in line with COVID 19 regulations.

- **Distribution of Draft BAR and EMPr**

  All registered stakeholders and I&APs were informed of the availability of the Draft Basic Assessment Report and Environmental Management Programme for public review. The Draft Basic Assessment Report and Environmental Management Programme will be distributed to stakeholders and I&APs from the **15th of April 2021** for Commenting.

9.3 Summary of issues raised by I&Aps

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

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

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.

10. The Environmental attributes associated with the alternatives.

10.1 Geology

Francis Baard is covered by recent colluvial and alluvial sandy, gravelly, silty and clayey soils overlying residual soils and bedrock belonging to the Karoo, Transvaal and Ventersdorp Supergroups, numerous younger Post-Karoo dolerite dykes and sills are intruded into these formations.

The major portion (some 65% of the surface area) of the Francis Baard District Municipality is underlain by dolomite and Chert bedrock belonging to the Campbell Rand Formation, Ghaap Group, Transvaal Supergroup .

The most important economic contribution in the study area comes in the form of the production of high quality diamonds, occurring in the Kimberlite pipes in the Kimberley and Barkly West area or elsewhere, as alluvial deposits where extensive surface mining is being practiced. The other important economic deposit is the limestone deposits which are used in the cement production industry. Minor occurance of lead, gypsum and rock salt may occur in the Francis Baard.

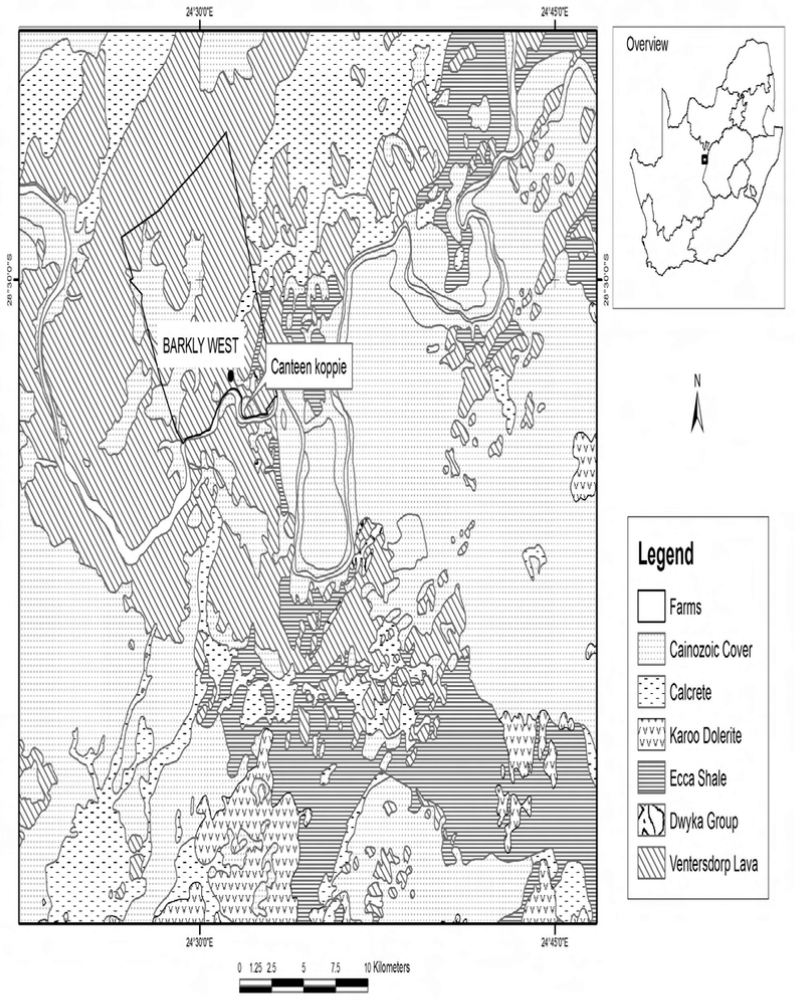

Figure 4: Geological Map.

10.2 Regional Climate

10.2.1 Rainfall

Northern Cape receives majority of the rainfall, during the month of November, December, January and December. Annual rainfall received in the Francis Baard is up to 75 mm. June and July are considered to be dry months, and the region may receive up to 10 mm per annum.

10.2.2 Temperature

Northern Cape climate is typical of desert and semi desert areas, it is mainly dry with high temperature and minimal rainfall. Occasionally there could be heavy rains influenced by global systems and natural disasters.

Climate Change is a phenomenon influencing the country as whole. Increased summer temperatures and a reduction in a rainfall during the rainy season are anticipated. This could result in extreme dry years becoming more frequent.

Francis Baard region temperatures usually reaches up to 40 degrees Celsius in summer and during winter temperatures may drop to 10 degrees Celsius. The highest temperatures are mostly recorded in January and the lowest temperatures are recorded in July. During the month of August wind gust are generally prevalent compared to other months and may reach up to 50 Knots.

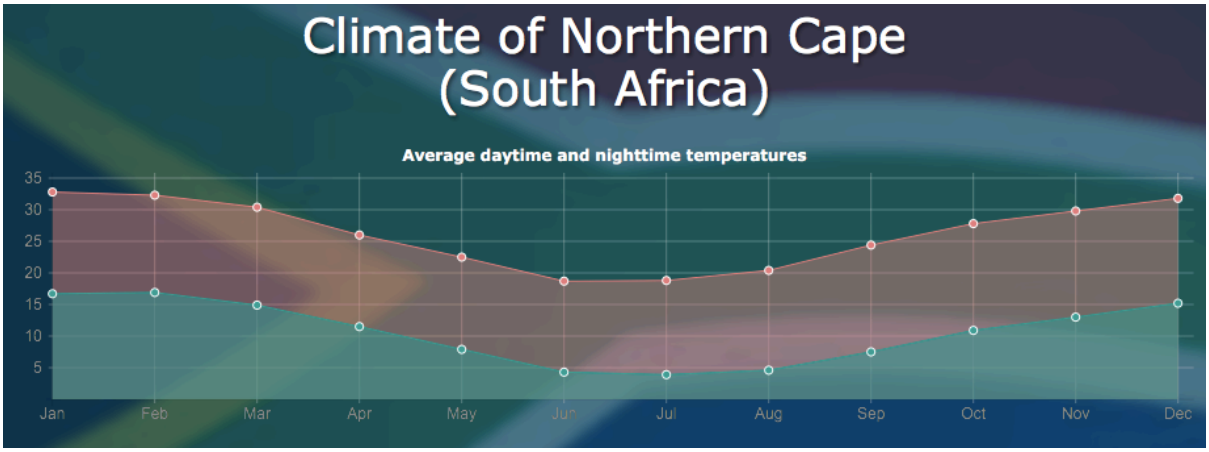

Figure 5: Average day and night-time Temperatures

10.3 Soil and Land capability

In the Southeast side of the Dikgatlong Local Municipality, The dominant soil are sandy shallow to moderately shallow red soils with regular occurrences of rock in all landscape positions with deep sandy soils dominating in low lying landscape position. The soils are predominantly eutrophic (high base status and low leaching intensity) with sporadic occurrences of free lime in the profile, especially in low lying positions. Lime containing soils occur more frequently in the west.

In the North Central, Structured and high clay content soils in midslope positions with crests dominated by shallow soils and rock outcrops and lower lying positions dominated by shallow lime containing soils.

The soil in the Dikgatlong Municipality is mainly suited for grazing, due to rain constrains in the area. Some part of the area, (more towards the west) soil may be suitable for crop farming if water is available for irrigation.

The dominant land use is extensive grazing with limited crop production. Irrigation is practiced sporadically and it is usually associated with drainage depressions unless groundwater is available.

Figure 6: Soil Classification Map

10.4 Topography

The District consists of two very distinct, morphological regions divided by the Vaal / Harts river valley, the Kalahari and Ghaap Plateau to the west and the Kimberley Plains to the east. The Kimberley plains tend to be wetter, more fertile, have greater mineral resources and contain most of the district's settlement system (FBDM, 2007).

The majority (i.e. approximately two thirds) of the terrain in the FBDM consists of landforms associated with plains and hills. This landscape is broken in places by a series of ridges which cover about 5% of the area.

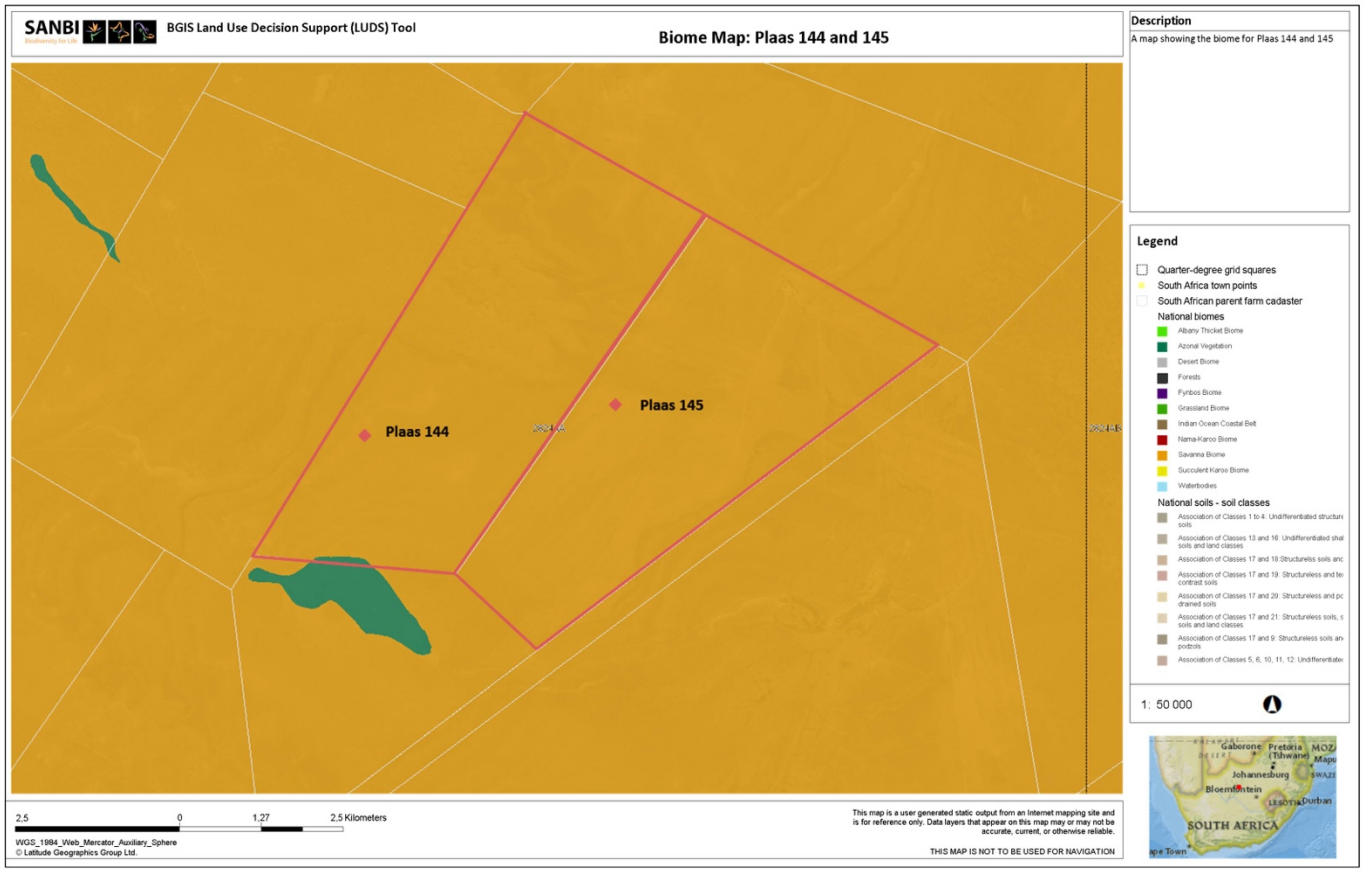

Figure 7: Biome Map

10.5 Vegetation Cover

Mucina & Rutherford (2006) describes the study area as Savanna and Nama-karoo biomes.

The following vegetation types, according to Mucina & Rutherford (2006) are found in the Dikgatlong Local Municipality but none of these vegetation types are protected or conserved in the district:

1. Kimberley Thornveld;
2. High Alluvial Vegetation
3. Schmidtsdrift Thornveld;

Kimberley Thornveld

This vegetation type, as described by Acocks (1988) is similar to Kalahari Thornveld. The summer rainfall is 400 to 500 mm per year. Temperature varies between -8°C and 41°C, with an average of 19°C (Mucina & Rutherford 2006). This is an open savanna, with Umbrella Thorn Acacia tortilis and Camel Thorn A. erioloba the dominant tree species, and scattered individuals of Shepherd's Tree Boscia albitruncha and Sweet Thorn Acacia karroo. The shrub layer is poorly to moderately developed in places and individuals of Camphor Tree Tarchonanthus camphoratus, Spike-flowered Black Thorn Acacia mellifera, Wild Raisin Grewia flava and Lycium

hirsutum occur widely scattered. The grass layer is fairly well developed and grasses such as Redgrass Themeda triandra, Common Nine-awn Grass Enneapogon cenchroides, Lehmann's Lovegrass Eragrostis lehmanniana, Elionurus muticus and Cymbopogon plurinodis are conspicuous (Mucina & Rutherford 2006).

High Alluvial Vegetation

This vegetation unit occurs on flat topography supporting riparian thickets riparian thickets mostly dominated by Acacia karroo, and accompanied by seasonally flooded grasslands and disturbed herblands often dominated by alien plants. Even though this vegetation unit is considered as Least Concern, it is conserved in the Barberspan, which is a Ramsar site, Bloemhof Dam, Christina, Faan Meintjies, Sandveld, Schoonspruit, Soetdoring and Wolwespruit Nature Reserves. This unit is threatened by agriculture and invasion of alien species such as Salix babylonica, Melia azedarch, Morus alba, Datura stramonium, Xanthium strumarium and Verbena bonariensis (Mucina & Rutherford 2006).

Schmidtsdrift Thornveld

This vegetation unit is mostly closed shrubby thornveld dominated by Acacia mellifera and A. tortilis, and apart from the grasses, bulbous and annual herbaceous plant species are prominent. This vegetation unit is sometime very disturbed due to overgrazing by goats and other browsers (Mucina & Rutherford 2006).

Biogeographically important species that occur in this vegetation type include Blepharis mrginata and Prepodesma orpenii (endemic genus). Some of the important taxa are Ziziphus mucronata, Hermannia affinis, Eragrostis lehmanniana, Amaranthus praetermissus and Seddera capensis (Mucina & Rutherford 2006).

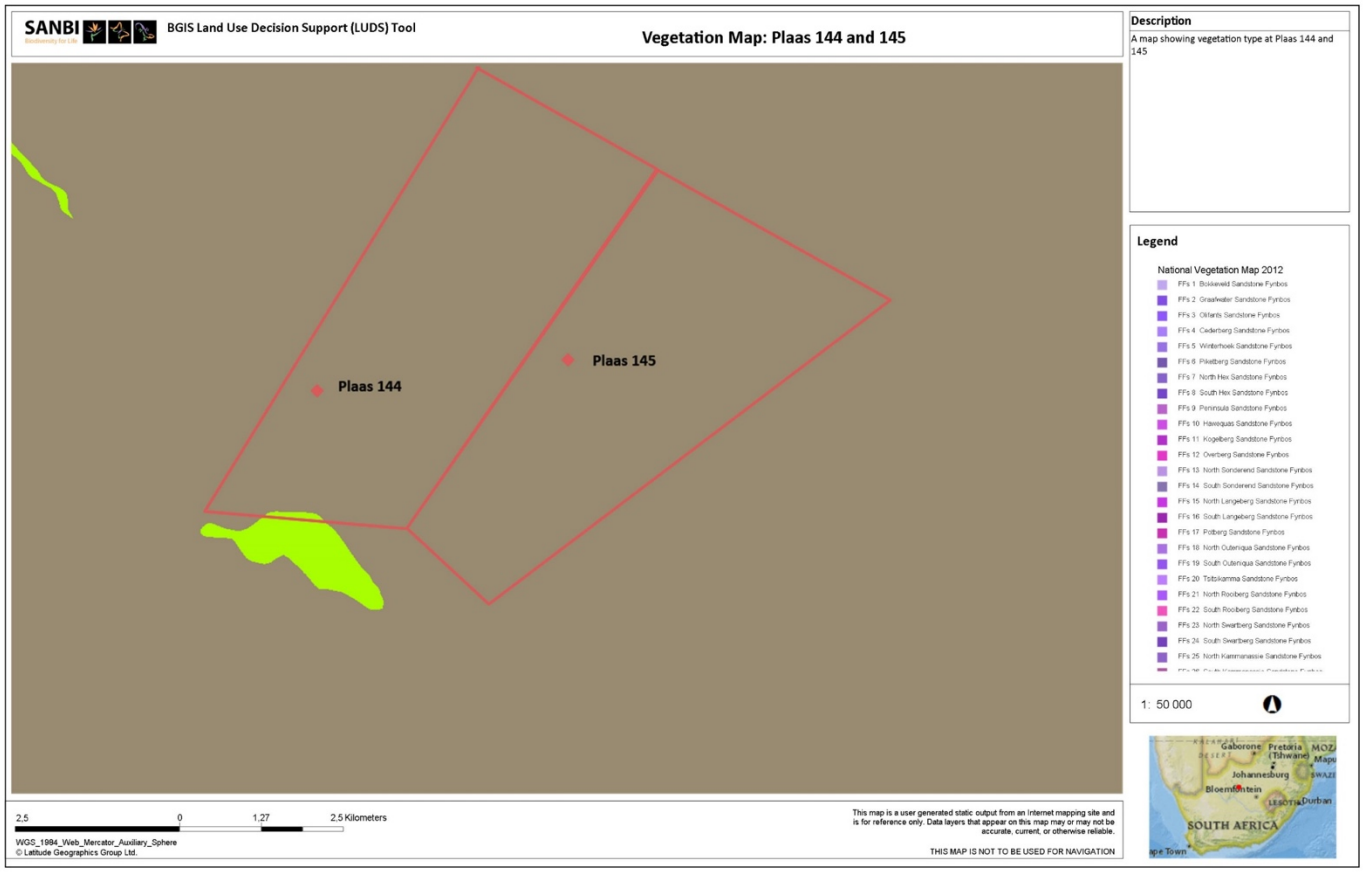

Figure 8: Vegetation Map

10.6 Fauna

The Francis Baard District Municipality is located in the transition zone between the Savanna and Nama Karoo Biomes and therefore suitable to domestic and game farming, game farming, game farms present less than 50% of the area. According to Prof Bothma of the Wildlife Management Centre at the University of Pretoria, the average size of an exempted game farm in the Northern Cape is 5000 ha, and generates 54% of their gross income from local hunters, 21% from live animal sales, 18% from foreign trophy hunters, 5% from ecotourism and 21% from meat production.

In terms of number of hunters per province the Northern Cape falls second only to the Limpopo Province, with the province at 23.4% and 24.9% respectively. The same scenario applies to the number for animals hunted per province, with Limpopo Province taking the lead at 33.9% and the Northern Cape following at 20%. Percentage live animals sold at all auctions per province are 22% for the Northern Cape, the second lowest for the country.

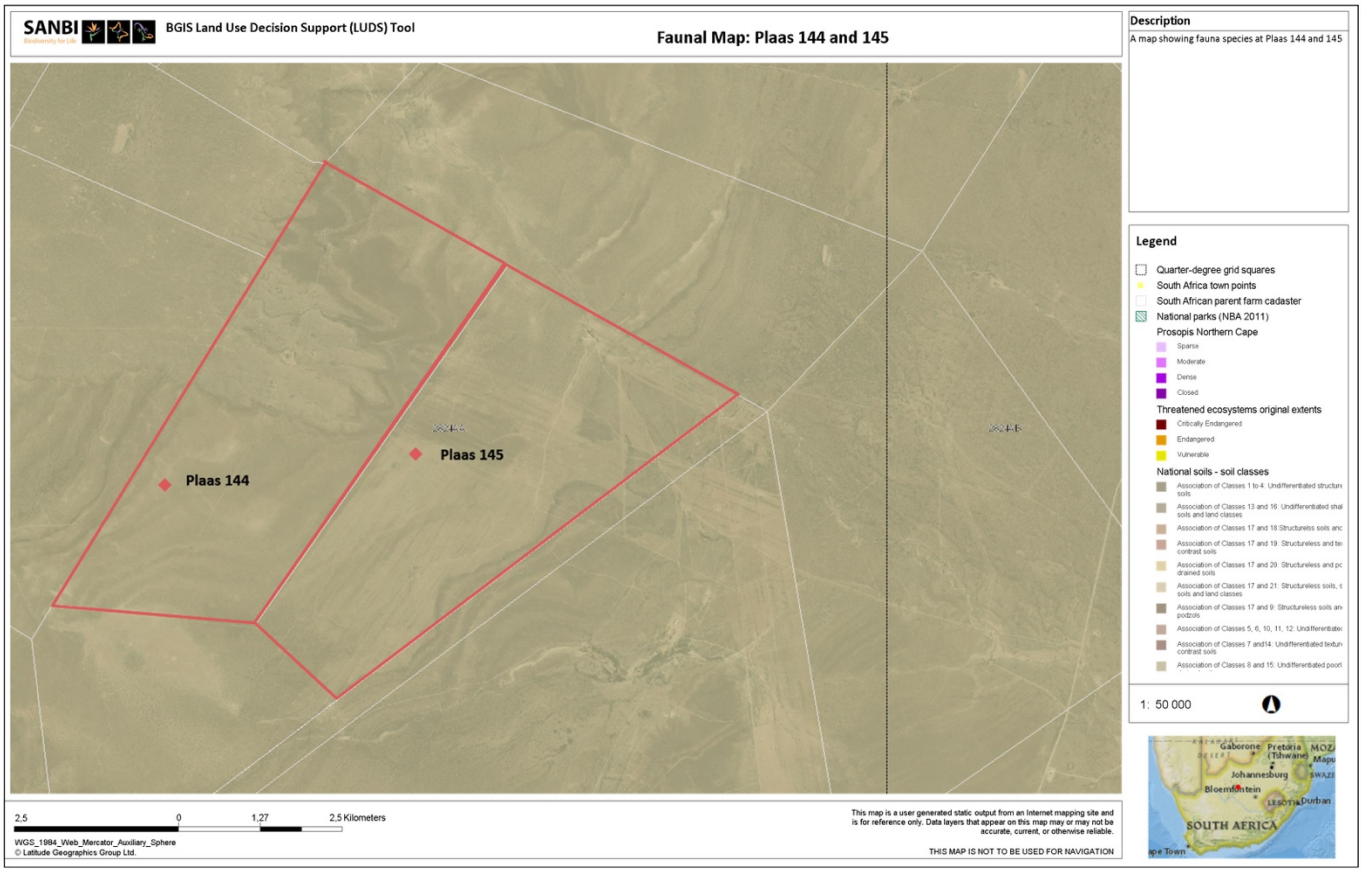

Figure 9: Fauna Map

10.7 Hydrology

10.7.1 Surface Water

The Lower Vaal Water Management Area (WMA) is situated in the north-western part of the country and forms part of the Orange River. It covers a catchment area of 133 354 km^2, and includes parts of the Northern Cape and North-West Provinces, and a small part of the Free State Province. The Vaal River is the only major river in the WMA, as it flows in a westerly direction from Bloemhof Dam to the confluence with the Orange River.

Within the FBDM the Lower Vaal WMA encompass the Harts River and Vaal River, with a combined catchment of 53 500km^2 for these two rivers

Most of the water within the Lower Vaal WMA is used for urban, agricultural and mining purposes. Agricultural land use within the Lower Vaal WMA is dominated by stock farming, as most of the area is too dry to support dry-land crops. Livestock farming includes beef and dairy cattle, goats, non-wooled sheep, pigs and ostriches.

10.7.2 Groundwater

Groundwater utilisation is of major importance in the Lower Vaal WMA and constitutes the only source of water over much of the WMA. Major users include:

- Mining
- Agriculture
- Domestic

The natural occurring water quality in the WMA is generally good in the dolomitic/karstic and fractured/crystalline aquifers.

According to DWAF (2004), agricultural activities are a source of diffuse water contamination. The contribution of each farm on a local scale is often fairly small but the contribution on a catchment scale needs to be included in assessing any pollution situation. Nitrates are the contaminant of most concern, since they are very soluble and do not bind to soils, nitrates have a high potential to migrate to groundwater. Generally on a local scale the areas of intense cultivation are the major contributors in terms of inorganic nitrates. The primary inorganic nitrates, which may contaminate drinking water, are potassium nitrate and ammonium nitrate both of which are widely used as fertilizers. Feedlots contribute to the organic nitrates in groundwater and can be far more problematic.

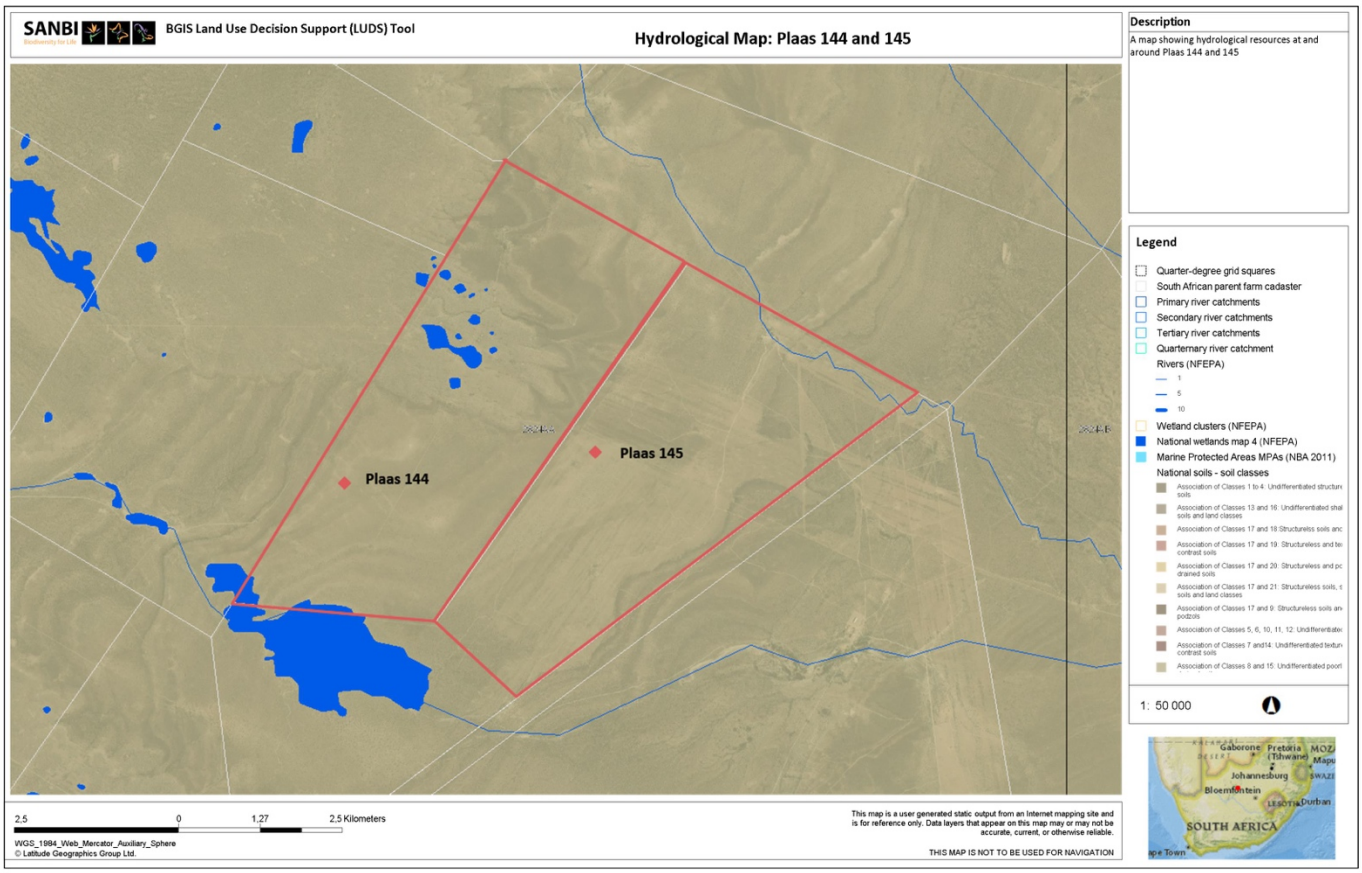

Figure 10: Surface Hydrology Map

10.8 Biodiversity

The Savanna biome is the largest biome in South Africa and makes up to one third of the country (Low & Rebelo 1996). A grass ground layer and a distinct upper layer of woody plants typify Savanna Tourism and big game hunting is the main economic activities

of the area. Environmental concerns within Savanna biome include unsound fire management, bush thickening, spread of alien and invasive plants, and cultivation of crop, overgrazing by livestock and poaching.

The Prickly Pear Opuntia aurantiaca and Mesquite Prosopis glandulosa are the major alien invader species. Urbanization and agriculture are minimal, and irrigation is confined to the Orange River valley and some pans. Most of the land is used for grazing, by sheep (for mutton, wool and pelts) and goats, which can be commensurate with conservation. However, under conditions of overgrazing, many indigenous species may proliferate, including three thorn Rhigozum trichotomum, Bitterbos Chrysocoma ciliata and Sweet Thorn Acacia karroo, and many grasses and other palatable species may be lost. There are very few rare or Red Data Book plant species in the Nama-Karoo Biome.

According to the State of Environment Report (2005), there are many threats to biodiversity in the area, most as a direct or indirect result of human interference, for example:

- Overexploitation of species of interest;
- Gathering of fuel wood;
- Uncontrollable fires;
- Overexploitation of wild animals and fuel wood;
- Soil erosion leading to desertification;
- Infrastructural developments such as expansion of hotels and tourism facilities;
- Illegal trade of plant and animal species;
- Illegal developments and
- Climate change.

The Integrated Environmental Management Plan for FBDM (African EPA, 2004) identifies the main environmental issues for the district as follows:

- Water is a scarce resource - the district receives 400mm of rain per annum.
- There are limited (5%) centres of biodiversity in the district.
- About a fifth (18%) of the FBDM region has either been degraded or affected by urbanization, mining or cultivation.

The following five alien invasive species are the most widely distributed within the Northern Cape Province:

- Atriplex lindleyi (Sponge-fruit saltbush);
- Nummularia sp (Old-man saltbush);

- Nicotiana glauca (Wild tobacco);
- Opuntia ficus-indica (Sweet prickly pear); and
- Prosopis glandulosa var. torreyana/velutina (Honey mesquite).

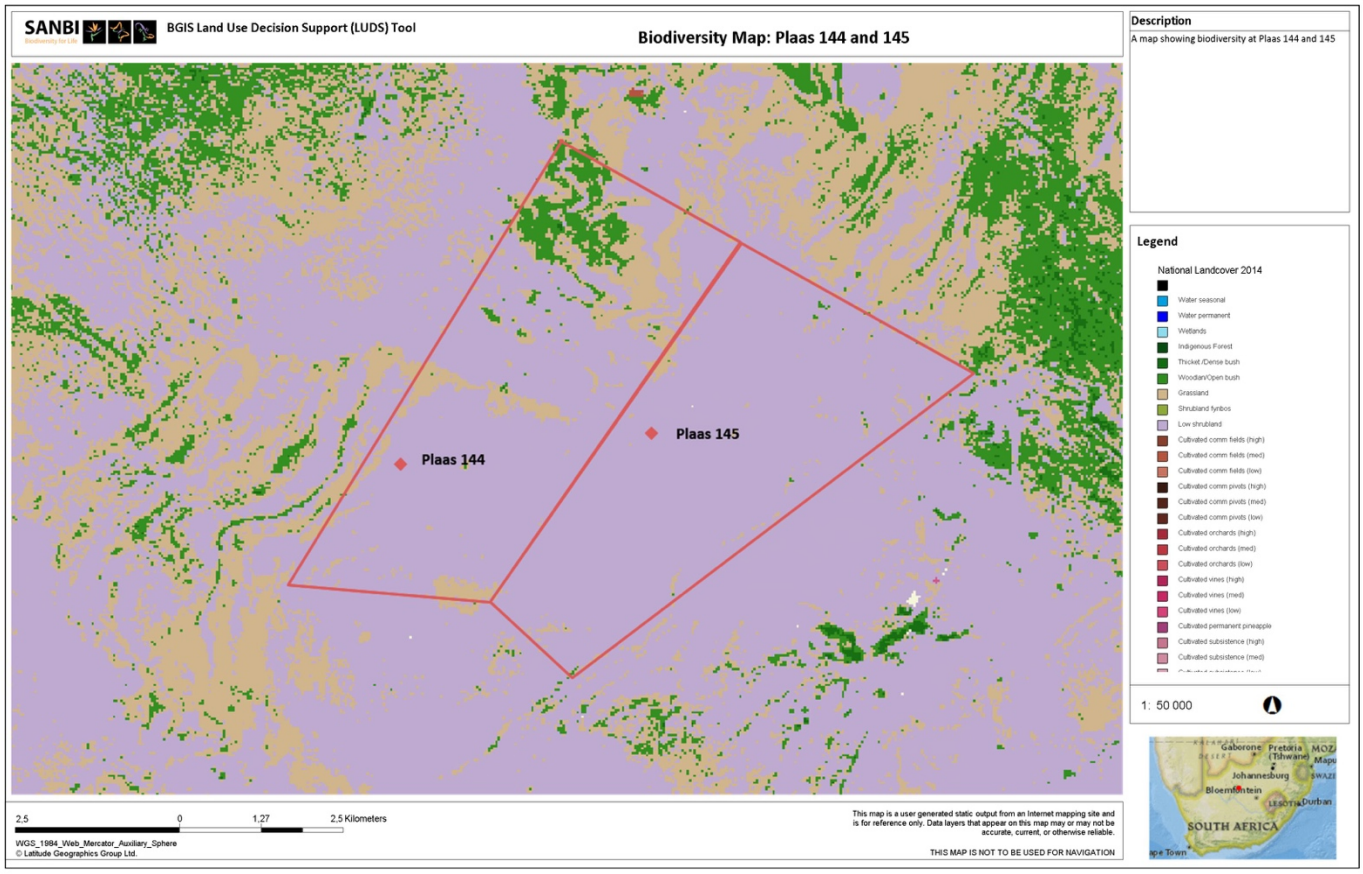

Figure 11: Biodiversity Map of Plaas 144 and 145

10.9 Socio Economic Status

10.9.1 Demographics

A demographic profile of the Francis Baard District Municipality is useful in understanding the composition of the areas under consideration and to gain insight into the economic potential of the study area.

Dikgatlong is the Setswana name referring to the convergence of two rivers namely the Orange and the Vaal Rivers. The administrative centre is Barkly West which lies south-east of Kimberley. The economy is based on two major capital and labour intensive sectors namely the Agriculture and Mining industries. Dikgatlong Municipality includes the urban areas of Barkly West, Windsorton, and Delportshoop as well as all areas previously part of the Vaal River Transitional Council, in the central region of the District Municipality.

According to the STATSSA 2016 community survey, FBDM 's population growth rate has increased by 1.5% since 2011 (382083 – 387741). A slight growth in Sol Plaatje Local Municipality (248037 – 255351); and Dikgatlong Local Municipality (46839 – 48164). Followed by a decline in Phokwane Local Municipality (63000 – 60168); and Magareng Local Municipality (24207 – 24059).

Table 4: Demographic profile; (Census, 2016)

	Northern Cape	FBDM	Sol Plaatje	Dikgatlong	Magareng	Phokwane	South Africa
Number of households	353 709	113 330	72 012	14 751	6 970	19 597	16 923 309
Population size	1 193 780	387 741	255 351	48 164	24 059	60 168	55 653 654

The population of the district is fairly young with 69% of the population aged 40 years and younger. Those between the ages of 41 and 65 years account for 23% and only 7% of the population is of retirement age, i.e. 66 years and older (Census 2016).

The dominant languages in the district are Setswana, Afrikaans, English and IsiXhosa and black Africans account for over 250 000 of population.

The household size was the largest in Sol Plaatje with 4.11 persons per household followed by Magareng 3.95, Dikgatlong 3.91 and Phokwane 3.59.

10.9.2 Education Profile

Dikgatlong Local Municipality has a large number of people with some secondary school followed by those with some primary levels. Those with Grade 12 constitute 12.83% while those higher that Grade 12 only constitute 1.64%. There are a limited number of skilled people from which the labour market can draw skills/expertise from. Compared to other Local Municipalities in the Francis Baard District Municipality, Dikgatlong Local Municipality has low education and literacy output, and Sol platatje has the highest in the district.

10.9.3 Employment Profile

The number of those who are not economically active is very high, which means a large portion of the population is highly dependent on social grants or on those that work. The number of employed people has increased from 5924 people (2001) to 7841 (2011). Thus the unemployment rate has decreased from 45.3% (2001) to 39.7% (2011).

The Stats SA 2011 indicates that more men are employed than their female counterparts. Furthermore women are the most discouraged work seekers. Additionally, the economical not active female population is also higher than their male counterparts. There is a need to have initiatives that make it easy for women to find employment. According to the strict definition for unemployment, the unemployment rate is 54% for the Francis Baard District Municipality. According to the Francis Baard District Municipality EMF, Dikgatlong has 65% unemployment rate, which is higher than the country and District average, furthermore majority of the unemployed people in the municipality are black female followed by black people in general.

10.10 Description of the current land uses

The current use, is for agricultural use, predominantly for livestock grazing.

11. 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

Aspects	Phase	Description of Environmental Impacts
Legislative	Planning Phase	Non-compliance with legislative requirements resulting in the Non commencement/ delayed commencement of proposed project
Flora	Site Establishment	Destruction / loss of indigenous vegetation and plants of ecological importance due to Site Establishment activities. Potential spread of alien invader plants/seeds
Fauna	Site Establishment, Drilling Phase	Disturbance of animal and Bird species in the proposed site Disturbance of Wildlife on neighbouring game farms.
Groundwater	Site Establishment, Drilling Phase	Potential Groundwater contamination due to spillage of fuels, lubricants and other chemicals. Potential occurrence of drawdown due to borehole drilling
Geology	Drilling Phase	Removal of rocks and debris for analysis, disturbance of local geological formation.
Soils	Site Establishment, Drilling Phase	Potential soil erosion during site clearance and during Drilling Phases. Potential soil contamination due to spillages.
Air Quality	Site Establishment, Drilling Phase	Nuisance stemming from smoke emissions generated from vehicles and machinery.

Traffic	Site Establishment, Drilling Phase	Increase of traffic in the area as vehicles access and exit the site
Noise and dust	Site Establishment, Drilling Phase	Nuisance to surrounding landowners caused by moving vehicles and drill rigs. Disturbance of animals in surrounding game farms.
Economic	Planning Phase	Project expenditure (incl. direct capital investment)
Socio-economic	Planning, Drilling Phase and Decommissioning phase	Potential friction with I&APs and Landowners due to disturbance of local businesses Potential employment and skills development opportunities. Potential increase of theft and poaching in the area.
Visual	Site Establishment, Drilling Phase and Decommissioning	Visual disturbances due to all the machinery vehicles, signs and drilling rigs.
Cultural/Heritage - historical	Site Establishment, Drilling Phase	Potential impact on heritage and archaeological resources
Waste generation	Site Establishment, Drilling Phase	Generation of solid waste and waste from the ablution facilities.
Veld Fire	Site Establishment, Drilling Phase and Decommissioning	Fire outbreaks during the winter fire season.
Health and Safety	Site Establishment, Drilling Phase and Decommissioning	Potential risk on the health and safety of all employees and neighbouring occupants

12. 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 prospecting site	**Site (1)** Within the prospecting 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 site establishment, 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 site establishment period

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
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 site establishment and drilling procedures.
Medium impact/ Moderate (11 -20 points)	Mitigation is possible with additional inputs.
High impact (21 -30 points)	The design of the site may be affected. Mitigation and possible remediation are needed during the site establishment and drilling phase. The effects of the impact may affect the 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 site establishment and drilling phase. 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.

13. 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&Aps 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 0.2652 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
Planning Phase		
Legislative	Non-compliance with legislative requirements resulting in the Non commencement/ delayed commencement of proposed project	Negative
Economic	Project expenditure (incl. direct capital investment)	Negative/Positive
Site Establishment		

Fauna and Flora	Destruction / loss of indigenous vegetation and plants of ecological importance due to Site Establishment activities	Negative
	Disturbance of animal and Bird species in the proposed site Disturbance of Wildlife on neighbouring game farms.	Negative
	Potential spread of alien invader plants/seeds	Negative
Groundwater	Potential Groundwater contamination due to spillage of fuels, lubricants and other chemicals.	Negative
Air Quality	Nuisance stemming smoke emissions from vehicles	Negative
Noise and dust generation	Nuisance to surrounding landowners caused by moving vehicles and drill rigs	Negative
	Disturbance of animals in surrounding game farms	Negative
Soils	Potential soil erosion during site establishment. Potential Soil contamination due to spillages.	Negative
Socio Economic	Potential employment and skills development opportunities.	Positive
Visual aspect	Visual disturbances due to all the machinery vehicles, signs and drilling rigs.	Negative
Cultural/Heritage-historical resources	Potential impact on heritage and archaeological resources	Positive/Negative
Waste generation	Generation of solid waste and waste from the ablution facilities.	Negative
Traffic	Increase of traffic in the area as vehicles access the sites	Negative
Socio-economic	Potential increase of theft and poaching in the area. Potential friction with I&APs and Landowners due to disturbance of local businesses.	Negative

Health and Safety	Potential risk on the health and safety of all employees and neighbouring occupants	Negative
Drilling Phase		
Fauna and Flora	Destruction / loss of indigenous vegetation and plants of ecological importance due to Site Establishment activities	Negative
	Disturbance of animal and Bird species in the proposed site Disturbance of Wildlife on neighbouring game farms.	Negative
	Potential spread of alien invader plants/seeds	Negative
Soils	Potential soil erosion during Drilling Phases. Potential soil contamination due to spillages.	Negative
Socio – Economic	Potential friction with I&Aps and Landowners due to disturbance of local businesses. Potential increase of theft and poaching in the area.	Negative
	Potential employment and skills development opportunities.	Positive
Groundwater	Potential Groundwater contamination due to spillage of fuels, lubricants and other chemicals.	Negative
	Potential occurrence of drawdown due to borehole drilling	Negative
Geology	Physical removal of rock material for logging and sampling purposes during drilling phase	Negative
Noise and dust generation	Nuisance to surrounding landowners caused by moving vehicles and drill rigs	Negative
	Disturbance of animals in surrounding game farms	Negative

Cultural-historical resources	Potential impact on heritage resources and archaeological resources	Positive/Negative
Air Quality	Nuisance stemming from smoke emissions generated by vehicles and machinery.	Negative
Socio-economic	Potential increase of theft and poaching in the area.	Negative
Health and Safety	Potential risk on the health and safety of all employees and neighbouring occupants	Negative
Decommissioning		
Visual		
Air Quality	Nuisance stemming from smoke emissions generated by vehicles and machinery.	Negative
Noise and dust generation	Nuisance to surrounding landowners caused by moving vehicles and drill rigs	Negative
	Disturbance of wild animals on surrounding game farms	Negative
Traffic	Increase of traffic in the area as vehicles exit the site	Negative
Socio-economic	Potential friction with I&APs and Landowners due to disturbance of local businesses Potential increase of theft and poaching in the area.	Negative
Health and Safety	Potential risk on the health and safety of all employees and neighbouring occupants	Negative

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

The possible mitigation measures to address issues related to the proposed project and those that were raised by I&APs are addressed in table 9.

15. 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.

16. 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.

17. 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 receiving environment/ resource	Potential mitigation measures	After Mitigation				Ranking of impact/ risk
			E	D	I	P					E	D	I	P	
Legislative	Non-compliance with legislative requirements resulting in the Non commencement/ delayed commencement of proposed project	Planning Phase	3	4	3	2	(-20)	Yes	N/A	Comply with all legislative requirements as stipulated in the NEMA and its EIA regulations,2014 as amended on 2017 and the MPRDA	1	1	1	2	(-6)
Destruction loss of indigenous natural vegetation	Habitat and loss of species	Site Establishment and Drilling Phase	1	2	4	4	(-28)	Yes	Moderate	Prior to the commencement of the project, a qualified person should identify, demarcate and keep a register of plants that are of ecological importance, so they remain protected. The site manager should monitor vegetation clearance and	1	1	2	3	(-12)

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 spread of alien plant species and/or seeds. Alien plants and areas with sparse vegetation should be the first preference when clearing vegetation compared to areas with plants of ecological importance and areas with dense vegetation. Avoid any damage to large individuals of any of the protected tree species on site Unnecessary driving within the site must be avoided and designated routes must be used at all times. Site manager's responsibilities should include, but not					

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	
										necessarily be limited to, ensuring adherence to EMPr guidelines, guidance of activities, planning, reporting to authorities. An annual audit of the activity and site, must be completed by an external environmental practitioner and the report must be submitted to the DMR					
	Alien plant invasions in disturbed areas	Site Establishment and Drilling Phase	1	1	2	2	(-8)	Yes	Low	Areas that have been extensively cleared and are not required for prospecting activities should be re-seeded with locally-sourced seed of suitable species. Bare areas can also be packed with brush removed from other parts of the site to encourage natural vegetation regeneration and limit erosion.	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	
Soil	Potential soil erosion during site establishment and Drilling Phases. Potential Soil contamination due to spillages.	Site Establishment and Drilling Phase	1	1	2	2	(-8)	Yes	Low	Prospecting on areas with sensitive soils, steep slopes, etc. must be avoided as far as possible Topsoil must be stockpiled immediately after clearing vegetation to prevent erosion of soil through surface runoff and wind Where applicable, construct berms in order to prevent rill erosion and donga formation. All cleared areas are to be monitored for erosion daily, any erosion forming is to be remediated with immediate effect. Vehicles and machinery used on site must be serviced before	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	
										entering the site and potential leaks must be monitored daily by the site manager. Spill kits must be available on site and used immediately after any spillages occur. If spillage is excessive the site manager must do an incident report and the incident must be reported to the authority.					
Fauna	Disturbance of animal and Bird species in the proposed site	Site Establishment and Drilling Phase	1	1	2	3	(-12)	Yes	Moderate	The prospecting activities must be carried out during the day, (07h00 – 17h00) and prospecting must be carried in phases to avoid bombarding the area with activity. To avoid habitat loss, alien plants and areas with minimal	2	1	1	2	(-8)
	Disturbance of Wildlife on neighbouring game farms.	Site Establishment and Drilling Phase and	2	2	2	4	(-24)	Yes	Moderate		1	2	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	
		Decommissioning Phase								vegetation should be the first preference when clearing vegetation compared to areas with plants of ecological importance and areas with dense vegetation. No animal or bird, within the site and in surrounding farms, may be hunted, trapped, snared or captured for any purpose whatsoever The prospecting site should be searched for raptors nests and must be avoided as far as possible. Prospecting activities should follow the operational plan and be kept to the minimum so that					

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	
										mammals can roam undisturbed in the farm area and around the areas that are being used for prospecting purposes.					
Geology	Permanent removal of rocks and geological formations	Drilling Phase	1	4	2	4	(-28)	No	High	The drilling activities should be limited to only designated areas only. Where there is a geological fault, the position of the drill borehole must be moved. Rocky ridges are part of wildlife corridors links. Prospecting at rocky ridges should be avoided as far as possible Cap off and cement drill holes after the removal of mineral cores. Only drill in areas form part of the operational plan and keep	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	
										to 20 drill boreholes to minimise the impact.					
Groundwater	Potential Groundwater contamination due to spillage of fuels, lubricants and other chemicals.	Drilling Phase	2	1	3	3	(-18)	Yes	Moderate	Groundwater monitoring network (both quality and quantity) should be established. Any spillage should be cleaned using spillage kit Ensure that the land owners' borehole yield is observed during the Drilling Phase. Should it be proven that the operation is indeed is affecting the quantity	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	
	Potential occurrence of drawdown due to borehole drilling									and quality of groundwater available to users and surrounding water resources; the affected parties must be compensated. The drilling machines should be monitored before and after the drilling for spillages and leaks. Equipment that is in good condition must be used					
Air quality	Nuisance stemming from smoke emissions generated from vehicles and machinery.	Site Establishments, Drilling Phases and Decommissioning	2	1	2	3	(-15)	No	Moderate	All equipment and vehicles must be serviced and be in good condition to reduce emissions.	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	
Economic	Project expenditure (incl. direct capital investment) resulting in the investment and growth in the local economy	Site Establishments, Drilling Phase and Decommissioning Phase	2	1	2	3	(+15)	No	Moderate	None	2	1	2	3	(+15)
Noise and Dust disturbance	Noise generated from prospecting operations activities may add to the current noise levels. This may have impacts on surrounding property owners and wildlife. Dust resulting from Drilling Phases, will cause nuisance to the surrounding game farms	Site Establishments and Drilling Phase	2	3	2	2	(-14)	No	High	Limit the maximum speed to 30 km/h or less on unpaved roads Vehicles and machinery must be equipped with engine silencers and the equipment must kept in good working condition to avoid excessive noise generation To avoid excessive dust generation, prospecting activities must be carried out in phases.	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	Visual disturbances due to all the machinery vehicles, signs and drilling rigs. However, due to the undulating topography, visibility for the most part will most probably be restricted to short distances	Site Establishments, Drilling Phase and Decommissioning Phase	1	2	2	2	(-10)	Yes	Low	Due to the undulating topography, visibility for the most part will most probably be restricted to short distances, however the prospecting area shall be enclosed to minimise visual disruption from machinery and equipment to be used, if necessary. Inform the surrounding land owners on the type of machinery and equipment to be used at the prospecting site, also inform the landowners of the activities that will be occurring during each phase.(e.g. Drilling, Surveying) To minimise visual impact to the surrounding landowners, the	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 receiving environment/ resource	Potential mitigation measures	After Mitigation				Ranking of impact/ risk
			E	D	I	P					E	D	I	P	
										activity should be carried out in phases					
Socio-economic	Potential friction with local business individuals who are running tourist attractions and breeding game life.	Site Establishments, Drilling Phase and Decommissioning	3	3	2	3	(-24)	Yes	N/A	Extensive public consultations must be conducted to increase public awareness and reduce potential friction. Record and address comments, concerns, and questions prior to commencement of the activity. Farm labourers will not employed unless agreed to with the farm owners.	1	2	1	1	(-4)

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	
										Ensure that all labourers are trained and adhere to all health and safety standards. Prior to commencement activity, Bay Tower Properties 19 cc must notify the adjacent landowners of the employees that will be working on site to avoid conflict.					
	Temporary employment opportunities	Site Establishments, Drilling Phase 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.	Site Establishments, Drilling Phase 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. Prospecting project should be conducted in the time frame provided in the plans to avoid prolonged disturbances to surrounding businesses	3	2	2	1	(-7)
	Potential increase in theft and poaching	Site Establishments, Drilling Phase and Decommissioning	3	1	3	2	(-14)	No	Low	Prior to the commencement of the activity, environmental awareness training must be provided to all employees to avoid poaching.	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	
										All employees must be registered as labourers and access to the site must be monitored. A Daily register for people visiting and working on the farm during prospecting Activities must be kept on site					
Cultural/ Heritage, historical resources	Potential impact on heritage resources and archaeological resources	Site Establishments, Drilling Phase and Decommissioning	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 , thus disturbing the surrounding game farms	Site Establishments, Drilling Phase and Decommissioning	2	2	2	3	(-18)	No	Low	Vehicles and machinery must move in and out of the site during off peak hours, to avoid congestion. Vehicles accessing and exiting the site must use designated routes, and only during off peak hours. The speed limit must be 30 km/h when driving on gravel road. Only authorised vehicles should be allowed to access the site.	2	2	1	2	(-10)
Veld Fires	The activity may increase the chances of veld fires starting, during the Winter fire season in the area.	Site Establishments, Drilling Phase and Decommissioning	3	2	3	3	(-24)	Yes	Low	Measures will be put in place during prospecting activities to avoid and mitigate potential fire outbreaks. These measures include the	2	2	1	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	
										a) The prohibition of starting fires on site b) Compulsory fire fighting training for all employees on site c) Ensuring that that all fire extinguishers are present and well maintained and strategically placed on site and prospecting machinery The National veld and fire act (no 11 of 1998) must be adhered, to avoid the potential spread of veld fires into neighbouring farms. Bay Tower Properties 19 cc should liaise with the landowner in terms of creating a fire break before prospecting activities can commence.					

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	
Waste	Extensive Generation of solid waste and waste from the ablution facilities that can impact various aspects of the environment.	Site Establishment, and Drilling Phase	1	2	3	2	(-12)	Yes	Moderate	Minimise littering on site and ensure that all labourers are trained in environmental awareness. Bins (sufficient number and capacity) to store general and hazardous produced on a daily basis shall be provided at each drilling site. The waste bins must be sealed to avoid, leakage of leachate material and must be waterproof so that rain water cannot enter into them. Bins shall be emptied on a weekly basis.	1	2	2	1	(-5)

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	
										An integrated waste management approach shall be used, based on the principles of waste minimisation, reduction, re-use and recycling of materials. Temporary ablution facilities on site should be emptied on regular basis.					
Health and Safety	Potential risk on the health and safety of all employees and neighbouring occupants	Site Establishment, Drilling and Decommissioning Phase	1	2	2	3	(-15)	No	Moderate	Neighbouring occupants should be warned about any disruptions prior the commencement of the prospecting activity and the potential impacts it may have on their personal health. Ensure that health and safety measures are put in place to	1	2	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	
										protect employees and neighbouring occupants Environmental awareness training must be provided to all employees to avoid injuries caused by natural factors(e.g. snake bites) First aid kit and a first aid administrator must be present on site throughout the projects lifespan. Provide employees with adequate personal protective Equipment (PPE)					

18. 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 and adherence to legislative requirements	Non-compliance with legislative requirements resulting in the Non commencement/ delayed commencement of proposed project	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
Site establishment and the set-up of drilling equipment	Clearing of Vegetation	Flora and Fauna	Site Establishment	Low (-ve)	Already cleared areas should be preferred over heavily dense areas	Low (-ve)
Set-up of drilling Equipment	Theft	Socio-Economic	Site Establishment	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 indigenous vegetation	Flora and Fauna	Site Establishment	High (-ve)	The use of exiting access roads which lead to the proposed site	Medium (-ve)
Drilling Activities	Ground & Surface Water contamination	Hydrology	Drilling Phase	Medium (-ve)	The drill bits must be maintained in good condition to prevent leakages of oil when in the underground.	Low (-ve)

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
					Aquifer detection methods should be applied before drilling can be undertaken.	Low (-ve)
	Mortality and displacement of fauna	Fauna	Drilling Phase	Medium(-ve)	Search and rescue mission should be undertaken for species on drilling site	Low(-ve)
	Waste Generation	Waste	Drilling 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)
Drilling Activities		Soil & geology;	Drilling Phase	Medium (-ve)	All substances required for vehicle maintenance and repair must be stored in sealed containers until	Low (-ve)

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
	Spillages of hazardous chemicals	Hydrology			they can be disposed of / removed from the site. All drill holes must be capped off and closed off with cement.	
				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-site.	Low (-ve)
	Destruction of Heritage Resources	Cultural and Heritage Social	Drilling 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	Low (-ve)

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
					contacted immediately. Work at the discovery site may only be recommenced on instruction from SAHRA.	
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 Water	Soil and Hydrology	Decommissioning Phase	Medium (-ve)	The hazardous substances onsite must be stored in marked containers. All the equipment must be shipped out of the site The compacted soils must be loosened and the topsoil must be spread above it. The seed spreading of indigenous species	Low (-ve)

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE
					must take place to ensure regrowth.	

19. 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.

20. Environmental impact statement

20.1 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 0.2562 Ha which makes up to less than 1% of area that is being applied for which is 2301,46 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 surrounded by game farms. 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 soil and groundwater contamination
- Monitor traffic in the area
- Monitor vehicles and equipment used for drilling
- Noise generation
- Impact on species which are of ecological importance
- Monitor potential fire outbreaks

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.

21. Final Site Map

The final site map will be provided after the phase 1 of the prospecting phase.

22. 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:

Positive

- The area will be rehabilitated
- Direct employment and skills development

Negative

- Destruction / loss of indigenous natural vegetation and plants of ecological importance due to Site Establishment activities
- Disturbance of animal species in and around the proposed site
- Potential spread of declared weeds and alien invader plants
- Potential Groundwater contamination due to spillage of fuels, lubricants and other chemicals.
- Nuisance stemming smoke emissions from vehicles
- Nuisance to surrounding landowners caused by moving vehicles and drill rigs
- Disturbance of animals in surrounding game farms
- Potential soil erosion during site clearance and Drilling Phases. Potential Soil contamination due to spillages.
- Visual Disturbance (vegetation clearance and temporary infrastructures including equipment on site)
- Potential impact on heritage and archaeological resources
- Generation of solid waste. Waste from the ablution facilities.
- Increase of traffic in the area as vehicles access the sites
- Potential friction with I&Aps and Landowners. Disturbance of local businesses
- Physical removal of rock material for logging and sampling purposes during drilling phase
- Disturbance of animals on surrounding game farms

The proposed activities have low significance impacts since these are short term activities, however socio-economic impacts such as employment has a medium significance due to the impacts on the surrounding community. 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.

23. 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 Site Establishment, Drilling Phases, 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 project is to prepare the site 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 topsoil for rehabilitation.
- Project planning must restrict the area of impact to 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 allowable limits

24. Aspects for inclusion as conditions of Authorisation

Bay Tower Properties 19 cc 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 EMPr measures and monitoring of the efficiency of the implemented measures; and
- A buffer of 100 m from any water courses should be established during the Site – Preparation phase and Drilling Phases phase.

25. 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 accessing the potential environmental impacts associated with the proposed project.

26. 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 0.2562 ha over a prospecting right license area of drill sites and 500m^2 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 100 m from any water courses should be established during the operational phase

27. Conditions that must be included in the authorisation

- Maintain a minimum 100 m 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 EMPr measures and monitoring of the efficiency of the implemented measures; and
- A buffer of 100 m from wetlands and water courses should be established during the planning phase.
- A suitable closure plan must be submitted to show sufficiently providence for the avoidance, management and mitigation of environmental impacts associated with the decommissioning of the proposed activities.

28. 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

29. Undertaking

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

30. Financial Provision

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

A total of R 56 577.00 is required to manage and rehabilitate the environment in respect of rehabilitation.

30.2 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.

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

Should an Environmental Authorisation be granted to the Bay Tower Properties 19 cc, provision will be made for the estimated closure cost by means of a Bank Guarantee or any other means available and accepted by the Competent Authority.

31. Specific Information required by the competent Authority

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

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

The surrounding area of the proposed site is used for game farming and accommodation purposes. The proposed project may directly affect the surrounding businesses if prospecting is done not following best practices.

31.1.2 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.

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

This BAR and EMPr 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 EMPr 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. 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 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

The water that will be used for this activity will be purchased from the Dikgatlong Local Municipality and transported to the site using a 1000 litre water bowser. For the entire project approximately 3 cubic meters of water may be required

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 100 m from wetlands and water bodies shall be established during the planning and throughout the Drilling Phases 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	MITIGATION TYPE	STANDARD TO BE ACHIEVED
SITE –ESTABLISHMENT PHASE					
Site Establishment- access roads, to prospecting sites, establishment of the campsite, physical surveying of the site and pegging of drilling boreholes (0.2562 Ha)					
Potential soil erosion during site clearance and potential soil contamination due to spillages	Soil	Site establishment on areas with sensitive soils, steep slopes, etc. must be avoided as far as possible Topsoil must be stockpiled immediately after clearing vegetation to prevent erosion of soil through surface runoff and wind. Where applicable, construct berms in order to prevent rill erosion and donga formation.	Rehabilitation in terms of MPRDA and NEMA principles. Applicable guidelines from NEM:BA and	Avoid and Control	Avoid Soil erosion and contamination, and control potential occurrences

(oil, fuel and other chemicals)		All cleared areas are to be monitored for erosion daily; any erosion forming is to be remediated with immediate effect. Vehicles and machinery used on site must be serviced before entering the site and potential leaks must be monitored daily by the site manager. Spill kits must be available on site and used immediately after any spillages occur. If spillage is excessive the site manager must do an incident report and the incident must be reported to the authority. No topsoil or fertile soil (dark soil) may be stored within 32 m of a drainage line, watercourse or wetland	Department of Agriculture, Forestry and Fisheries (DAFF) and Conservation of Agricultural Resources Act (CARA) regarding removal of species Mining and Biodiversity Guidelines		
Destruction/Loss of indigenous vegetation and plants of ecological importance	Flora.	Prior to the commencement of the project, a qualified person should identify, demarcate and keep a register of plants that are of ecological importance, so they remain protected. The site manager should monitor vegetation clearance and potential spread of alien plant species and/or seeds. Alien plants and areas with sparse vegetation should be the first preference when clearing vegetation compared to areas with plants of ecological importance and areas with dense vegetation.	Rehabilitation in terms of MPRDA and NEMA principles. Adherence to CARA for removal	Avoid and Control	To protect plant species of ecological importance in the area and prevent the

Potential spread alien of invader plants/seeds		Avoid any damage to large individuals of any of the protected tree species on site Unnecessary driving within the site must be avoided and designated routes must be used at all times. Site manager's responsibilities should include, but not necessarily be limited to, ensuring adherence to EMPr guidelines, guidance of activities, planning, reporting to authorities. An annual audit of the activity and site, must be completed by an external environmental practitioner and the report must be submitted to the DMR Areas that have been extensively cleared and are not required for prospecting activities should be re-seeded with locally-sourced seed of suitable species. Bare areas can also be packed with brush removed from other parts of the site to encourage natural vegetation regeneration and limit erosion.	of species in terms of NEM:BA Mining and Biodiversity Guidelines Identification of potentially threatened and or endangered species in terms of NEM:BA		spread of alien species/seeds
Disturbance of animal and Bird species in the proposed site	Fauna	The establishment activities must be carried out during the day, (07h00 – 17h00) and prospecting project must be carried in phases to avoid bombarding the area with activity. To avoid habitat loss, alien plants and areas with minimal vegetation should be the first preference when clearing vegetation compared to areas with plants of ecological importance and areas with dense vegetation.	General implementation of activities taking Biodiversity Act and its guidelines into account.	Avoid and control	Avoid and control impact on fauna

Disturbance of Wildlife on neighbouring game farms		No animal or bird, within the site and in surrounding farms, may be hunted, trapped, snared or captured for any purpose whatsoever The establishment site should be searched for raptors nests and must be avoided as far as possible. Establishment activities should follow the operational plan and be kept to the minimum so that mammals can roam undisturbed in the farm area and around the areas that are being used for prospecting purposes.			
Potential Groundwater contamination due to spillages of fuels, lubricants and other chemicals	Groundwater.	Groundwater monitoring network (both quality and quantity) should be established Vehicles and machinery used on site must be serviced before entering the site and potential leaks must be monitored daily by the site manager. Spill kits must be available on site and used immediately after any spillages occur. If spillage is excessive the site manager must do an incident report and the incident must be reported to the authority.	Water management measures in compliance with NWA, 1998 and DWS guidelines	Avoid and minimise	Avoid groundwater contamination and minimise the waste of water
Nuisance stemming from smoke emission generated by	Air quality.	All equipment and vehicles must be serviced and be in good condition to reduce emissions.	Standards set out in the NEM:AQA	Minimise impact	Minimize smoke emissions in

vehicles and machinery.					and around the site.
Noise generated from prospecting operations activities may add to the current noise levels. This may have impacts on surrounding property owners and wildlife.	Noise and Dust Nuisance	Limit the maximum speed to 30 km/h or less on unpaved roads Vehicles and machinery must be equipped with engine silencers and the equipment must kept in good working condition to avoid excessive noise generation To avoid excessive dust generation, prospecting activities must be carried out in phases.	National Noise Control Regulations, SANS10103:2008 guidelines.	Minimise impacts	To minimise excessive dust and noise generation.
Visual disturbances due to all the machinery vehicles, signs and drilling rigs.	Visual	Due to the undulating topography, visibility for the most part will most probably be restricted to short distances, however the prospecting area shall be enclosed to minimise visual disruption from machinery and equipment to be used, if necessary. Inform the surrounding land owners on the type of machinery and equipment to be used at the prospecting site, also inform the landowners of the activities that will be occurring during each phase.(e.g. Drilling, Surveying)	Measures will be undertaken to ensure that the visual aspects from the site comply with the relevant visual standards and	Minimise impact	Minimise visual impact to surrounding landowners

		To minimise visual impact to the surrounding landowners, the activity should be carried out in phases	objectives including Municipal By Laws.		
Potential friction with local business individuals who are running tourist attractions and breeding game life. Temporary employment opportunities	Socio-Economic	Extensive public consultations must be conducted to increase public awareness and to reduce potential friction Record and address comments, concerns, and questions prior to commencement of the activity. Farm labourers will not employed unless agreed to with the farm owners. Ensure that all labourers are trained and adhere to all health and safety standards. Prior to commencement activity, Bay Tower Properties 19 cc must notify the adjacent landowners of the employees that will be working on site to avoid conflict. Prospecting should be conducted following best practices is to minimise negative economic impacts on local business.	Measures taken will be in line with the company's recruitment policies. Follow public participation legislation according to NEMA. Follow anti-poaching	Control and avoid	Control relations between stakeholder and avoid poaching and theft.

Potential decline in local business due to prospecting activities. Potential increase in theft and poaching		Prospecting project should be conducted in the time frame provided in the plans to avoid prolonged disturbances to surrounding businesses Prior to the commencement of the activity, environmental awareness training must be provided to all employees to avoid poaching. All employees must be registered as labourers and access to the site must be monitored. A Daily register for people visiting and working on the farm during prospecting Activities must be kept on site.	legislation NEMBA and CARA		
Generation of solid waste and waste from ablution facilities that can have an impact on environmental aspects.	Waste	Minimise littering on site and ensure that all labourers are trained in environmental awareness. Bins (sufficient number and capacity) to store general and hazardous produced on a daily basis shall be provided at each drilling site. The waste bins must be sealed to avoid, leakage of leachate material and must be waterproof so that rain water cannot enter into them. Bins shall be emptied on a weekly basis. An integrated waste management approach shall be used, based on the principles of waste minimisation, reduction, re-use and recycling of materials.	Align all operations with the NEM:WA	Avoid	Avoid the excessive generation of general waste.

		Temporary ablution facilities on site should be emptied on regular basis.			
Increase of traffic in the area as vehicles access and exit the site	Traffic	Vehicles and machinery must move in and out of the site during off peak hours, to avoid congestion. Vehicles accessing and exiting the site must use designated routes, and only during off peak hours. The speed limit must be 30 km/h when driving on gravel road. Only authorised vehicles should be allowed to access the site.	National traffic Act 93 of 1996. EMPr guidelines in relation to traffic and speed limit	Minimise	Minimise impact of traffic
Health and safety of all employees and neighbouring occupants	Health and Safety	Neighbouring occupants should be warned about any disruptions prior the commencement of the prospecting activity and the potential impacts it may have on their personal health. Ensure that health and safety measures are put in place to protect employees and neighbouring occupants Environmental awareness training must be provided to all employees to avoid injuries caused by natural factors(e.g. snake bites) First aid kit and a first aid administrator must be present on site throughout the projects lifespan. Provide employees with adequate personal protective Equipment (PPE)	Occupational Health and Safety Act	Avoid	Avoid health risks and injury incidents

Potential impact on heritage resources and archaeological resources	Cultural/Heritage ,historical resources	Should any paleontological or cultural artefacts be discovered work at the point of discovery must stop, the location be clearly demarcated and LIHRA contacted immediately. Work at the discovery site may only be recommenced on instruction from LIHRA	Adherence to the National Heritage Resource Act, and its accompanying regulations Limpopo Heritage Resource Agency	Avoid	Avoid disturbance and destruction of Heritage, Cultural and or historical resources
Potential fire outbreaks during the winter fire season	Veld Fires	Measures will be put in place during prospecting activities to avoid and mitigate potential fire outbreaks. These measures include the • The prohibition of starting fires on site • Compulsory fire fighting training for all employees on site • Ensuring that that all fire extinguishers are present and well maintained and strategically placed on site and prospecting machinery The National veld and fire act (no 11 of 1998) must be adhered, to avoid the potential spread of veld fires into neighbouring farms. Bay Tower Properties 19 cc should liaise with the landowner in terms of creating a fire break before prospecting activities can commence.	National Veld and Fire act (No 11 of 1998	Avoid	Avoid man caused fires in the farm

POTENTIAL IMPACT	ASPECTS AFFECTED	MITIGATION MEASURES	COMPLIANCE WITH STANDARDS	MITIGATION TYPE	STANDARD TO BE ACHIEVED
DRILLING PHASE					
The drilling of prospecting boreholes on the proposed site.(0.2 Ha)					
Potential soil erosion during Drilling Phases..	Soil	Drilling on areas with sensitive soils, steep slopes, etc. must be avoided as far as possible Topsoil must be stockpiled immediately after clearing vegetation to prevent erosion of soil through surface runoff and wind. Where applicable, construct berms in order to prevent rill erosion and donga formation. All cleared areas are to be monitored for erosion daily; any erosion forming is to be remediated with immediate effect. Vehicles and machinery used on site must be serviced before entering the site and potential leaks must be monitored daily by the site manager. Spill kits must be available on site and used immediately after	Rehabilitation in terms of MPRDA and NEMA principles. Operational control procedures (e.g. spill / leak handling). Incident Reporting System;	Control and avoid	Control soil erosion and avoid contamination

Potential Soil contamination due to spillages.		any spillages occur. If spillage is excessive the site manager must do an incident report and the incident must be reported to the authority.	Environmental Inspections; Planned Maintenance System; water quantity (abstraction) monitoring; continued communication with surrounding landowners.		
Destruction/Loss of indigenous vegetation and plants of ecological importance	Flora	Identified plants that are of ecological importance that have been demarcated must be avoided and registered, so they remain protected. The site manager should monitor vegetation clearance and potential spread of alien plant species and/or seeds. Alien plants and areas with sparse vegetation should be the first preference when drilling areas are selected vegetation compared to areas with plants of ecological importance and areas with dense vegetation. Avoid any damage to large individuals of any of the protected tree species on site	Rehabilitation in terms of MPRDA and NEMA principles. Applicable guidelines from NEM:BA and	Avoid and Control	Avoid Soil erosion and contamination, and control potential occurrences

Potential spread alien of invader plants/seeds		Unnecessary driving within the site must be avoided and designated routes must be used at all times. Site manager's responsibilities should include, but not necessarily be limited to, ensuring adherence to EMPr guidelines, guidance of activities, planning, reporting to authorities. An annual audit of the activity and site, must be completed by an external environmental practitioner and the report must be submitted to the DMR Areas that have been extensively cleared and are not required for prospecting activities should be re-seeded with locally-sourced seed of suitable species. Bare areas can also be packed with brush removed from other parts of the site to encourage natural vegetation regeneration and limit erosion.	Department of Agriculture, Forestry and Fisheries (DAFF) and Conservation of Agricultural Resources Act (CARA) regarding removal of species Mining and Biodiversity Guidelines		
Disturbance of animal and Bird species in the proposed site Disturbance of Wildlife on	Fauna	The drilling activities must be carried out during the day, (07h00 – 17h00) and the prospecting project must be carried in phases to avoid bombarding the area with activity. To avoid habitat loss, alien plants and areas with minimal vegetation should be the first preference when allocating a drill site compared to areas with plants of ecological importance and areas with dense vegetation. No animal or bird, within the site and in surrounding farms, may be hunted, trapped, snared or captured for any purpose whatsoever	General implementation of activities taking Biodiversity Act and its guidelines into account.	Control through visual monitoring and inspection	Minimise impact on fauna

neighbouring game farms		The drilling site must be searched for raptors nests and must be avoided as far as possible. Drilling activities should follow the operational plan and be kept to the minimum so that mammals can roam undisturbed in the farm area and around the areas that are being used for prospecting purposes.			
Nuisance stemming from smoke emission generated by vehicles and machinery.	Air Quality	The vehicles and equipment must be serviced before entering the site, to avoid excessive emissions to the atmosphere.	National Environmental Management Air Quality Act	Control and minimise	Maintain air quality
Potential Groundwater contamination due to spillages of fuels, lubricants and other chemicals	Groundwater	Groundwater monitoring network (both quality and quantity) should be established. Vehicles and machinery used on site must be serviced before entering the site and potential leaks must be monitored daily by the site manager. Spill kits must be available on site and used immediately after any spillages occur. If spillage is excessive the site manager must do an incident report and the incident must be reported to the authority.	Water management measures in compliance with NWA, 1998 and DWS guidelines	Avoid	Avoid Groundwater contamination as far as possible.

Potential occurrence of drawdown due to borehole drilling		Ensure that the land owners' borehole yield is observed during the Drilling Phase. Should it be proven that the operation is indeed is affecting the quantity and quality of groundwater available to users and surrounding water resources; the affected parties must be compensated. The drilling machines should be monitored before and after the drilling for spillages and leaks. Equipment that is in good condition must be used.			
Dust resulting from Drilling Phases, will cause nuisance to the surrounding game farms	Dust and Noise	Limit the maximum speed to 30 km/h or less, subject to risk assessment. Vehicles and machinery must be equipped with engine silencers and the equipment must be kept in good working condition to avoid excessive noise generation. To avoid excessive dust generation, prospecting activities must be carried out in phases	National Noise Control Regulations, SANS10103:2008 guidelines.	Minimise	Minimal noise levels
Possible visual disturbance to surrounding game farms from vehicles and drill rigs	Visual	Due to the undulating topography, visibility for the most part will most probably be restricted to short distances, however the prospecting area shall be enclosed to minimise visual disruption from machinery and equipment to be used, if necessary. Inform the surrounding land owners on the type of machinery and equipment to be used at the prospecting site, also inform the landowners of the activities that will be occurring during each phase.(e.g. Drilling, Surveying)	Measures will be undertaken to ensure that the visual aspects from the site comply with the relevant visual	Minimise	Minimise visual impacts to the surrounding landowners

		To minimise visual impact to the surrounding landowners, the activity should be carried out in phases.	standards and objectives including Municipal By Laws.		
Potential impact on heritage resources and archaeological resources	Cultural/Heritage ,historical resources	Should any paleontological or cultural artefacts be discovered drilling activities at the point of discovery must stop, the location be clearly demarcated and Northern Cape Heritage Resource Agency (NCHRA) contacted immediately. Any Drilling activities at the discovery site may only be recommenced on instruction from NCHRA	Adherence to the National Heritage Resource Act, and its accompanying regulations Northern Cape Heritage Resource Agency	Avoid	Avoid disturbance and destruction of Heritage, Cultural and or historical resources
Health and safety of all employees and neighbouring occupants	Health and Safety	Neighbouring occupants should be warned about any disruptions prior the commencement of the prospecting activity and the potential impacts it may have on their personal health. A Safe distance must be kept from the drilling machinery and vehicles by employees to avoid injuries Ensure that health and safety measures are put in place to protect employees and neighbouring occupants	Occupational Health and Safety Act	Avoid	Avoid health risks and injury incidents

		Environmental awareness training must be provided to all employees to avoid injuries caused by natural factors(e.g. snake bites) First aid kit and a first aid administrator must be present on site throughout the projects lifespan. Provide employees with adequate personal protective Equipment (PPE)			
Increase of traffic in the area as vehicles access and exit the site	Traffic	Vehicles and machinery must move in and out of the site during off peak hours, to avoid congestion. Vehicles accessing and exiting the site must use designated routes, and only during off peak hours. The speed limit must be 30 km/h when driving on gravel road. Only authorised vehicles should be allowed to access the site.	National traffic Act 93 of 1996. EMPr guidelines in relation to traffic and speed limit	Minimise	Minimise impact of traffic
Generation of solid waste and waste from ablution facilities that can have an impact on environmental aspects.	Waste	Minimise littering on site and ensure that all labourers are trained in environmental awareness. Bins (sufficient number and capacity) to store general and hazardous produced on a daily basis shall be provided at each drilling site. The waste bins must be sealed to avoid, leakage of leachate material and must be waterproof so that rain water cannot enter into them. Bins must be emptied on a weekly basis.	Align all operations with the NEM:WA	Avoid	Avoid the excessive generation of general waste.

		An integrated waste management approach shall be used, based on the principles of waste minimisation, reduction, re-use and recycling of materials. Temporary ablution facilities on site should be emptied on regular basis.			
Potential friction with local business individuals who are running tourist attractions and breeding game life. Temporary employment opportunities Potential decline in local business due to	Socio-Economic	Extensive public consultations must be conducted to increase public awareness and to reduce potential friction Record and address comments, concerns, and questions prior to commencement of the activity. Farm labourers will not employed unless agreed to with the farm owners. Ensure that all labourers are trained and adhere to all health and safety standards. Prior to commencement drilling activities Bay Tower Properties 19 cc must notify the adjacent landowners of the employees that will be working on site to avoid conflict. Drilling activities should be conducted following best practices is to minimise negative economic impacts on local business. Drilling should be conducted in the time frame provided in the plans to avoid prolonged disturbances to surrounding businesses Prior to the commencement of the activity, environmental awareness training must be provided to all employees to avoid poaching.	Measures taken will be in line with the company's recruitment policies. Follow public participation legislation according to NEMA. Follow anti-poaching legislation NEMBA and CARA	Control and avoid	Control relations between stakeholder and avoid poaching and theft.

prospecting activities. Potential increase in theft and poaching		All employees must be registered as labourers and access to the site must be monitored. A daily register for people visiting and working on the farm during prospecting Activities must be kept on site.			
Potential fire outbreaks during the winter fire season	Veld Fires	Measures will be put in place during prospecting activities to avoid and mitigate potential fire outbreaks. These measures include the • The prohibition of starting fires on site • Compulsory fire fighting training for all employees on site • Ensuring that that all fire extinguishers are present and well maintained and strategically placed on site and prospecting machinery Sparks and flares which may occur due to friction between the drill rig and the rocks must be monitored to avoid accidental fires. The National Veld and Fire act (No 11 of 1998ust be adhered, to avoid the potential spread of veld fires into neighbouring farms.	National Veld and Fire act (No 11 of 1998	Avoid	Avoid man caused fires in the farm
Removal of rocks, debris	Geology	The drilling activities should be limited to only designated areas only. Where there is a geological fault, the position of the drill borehole must be moved.	EMPr guidelines	Minimise and avoid	Avoid unnecessary

and altering geological features and formations.		Rocky ridges are part of wildlife corridors links. Prospecting at rocky ridges should be avoided as far as possible Cap off and cement drill holes after the removal of mineral cores. Only drill in areas form part of the operational plan and keep to 20 drill boreholes to minimise the impact.			drilling on geological feature
POTENTIAL IMPACT	**ASPECTS AFFECTED**	**MITIGATION MEASURES**	**COMPLIANCE WITH STANDARDS**	**MITIGATION TYPE**	**STANDARD TO BE ACHIEVED**
DECOMMISSIONING PHASE					
Removal of temporary vehicles and machinery on site, rehabilitation of cleared areas(0.2562 Ha)					
Rehabilitation of the prospecting site	Soil, Fauna and Flora, Geology	All temporary facilities, vehicles and machinery must be removed off site when the prospecting period has come to an end. Rehabilitation of drilling sites shall be undertaken in line with closure objectives and in consultation with landowners. All vehicles and machinery used at the rehabilitation site must be kept in good working order. 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.	Rehabilitation in terms of MPRDA and NEMA principles. General implementation of activities taking Biodiversity Act	Control	Ensure that adequate measures are being undertaken to rehabilitate the site.

		Movement of vehicles and machinery should be limited to demarcated routes, which will be rehabilitated when no longer in use Ensure that the soil in the vicinity of the rehabilitation site is not detrimentally impacted. All the waste from drilling activities must collected from site for disposal. 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 indigenous grass Ensure that all drill holes have been refilled with rocks and or cement to avoid potential injuries to fauna , employees and potential occupants Trapping and killing of fauna will be prohibited at the prospecting site.	and its guidelines into account.		
Nuisance stemming from smoke emission generated by vehicles and machinery.	Air quality.	All equipment and vehicles must be serviced and be in good condition to reduce emissions when rehabilitation is being carried out.	Standards set out in the NEM:AQA	Minimise impact	Minimize smoke emissions in and around the site.

Increase of traffic in the area as vehicles access and exit the site	Traffic	Vehicles and machinery must move in and out of the site during off peak hours, to avoid congestion. Vehicles accessing and exiting the site must use designated routes The speed limit must be 30 km/h when driving on gravel road. Only authorised vehicles should be allowed to access the site.	National traffic Act 93 of 1996. EMPr guidelines in relation to traffic and speed limit	Minimise	Minimise impact of traffic
Health and safety of all employees and neighbouring occupants	Health and Safety	Neighbouring occupants should be warned about any disruptions prior the commencement of the decommissioning and the potential impacts it may have on their personal health. Ensure that health and safety measures are put in place to protect employees and neighbouring occupants Environmental awareness training must be provided to all employees to avoid injuries caused by natural factors(e.g. snake bites) First aid kit and a first aid administrator must be present on site throughout the projects lifespan.	Occupational Health and Safety Act	Avoid	Avoid health risks and injury incidents
Possible visual disturbance to surrounding game farms from	Visual	All temporary facilities, vehicles and machinery must be removed off site when the prospecting period has come to an end Inform the surrounding land owners on the decommissioning of the project also inform the landowners of the activities that will be occurring during this phase.	Measures will be undertaken to ensure that the visual aspects from the site comply with the	Minimise	Minimise visual impacts to the surrounding landowners

vehicles and drill rigs			relevant visual standards and objectives including Municipal By Laws.		
Dust resulting from Drilling Phases, will cause nuisance to the surrounding game farms	Dust and Noise	Limit the maximum speed to 30 km/h or less, subject to risk assessment. Vehicles and machinery must be equipped with engine silencers and the equipment must be kept in good working condition to avoid excessive noise generation.	National Noise Control Regulations, SANS10103:2008 guidelines.	Minimise	Ensure that the rehabilitation activities minimize detrimental impacts on people.

4. Financial Provision

4.1. Determination of the amount of Financial Provision.

A total of R 56 577.00 is required to both manage and rehabilitate the environment in respect of rehabilitation. Bay Tower Properties 19 cc 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 Temporary structures	• Clear and completely remove from site all prospecting equipment, storage containers, signage, temporary ablution facilities, fixtures and any other temporary works; and • Ensure that all access roads utilised during Site Establishments (which are not earmarked for closure and rehabilitation) are returned (as far as possible) to their state prior to prospecting.	Once-off; Bay Tower Properties 19 cc.

Aspect/ Impact	Rehabilitation Measure	Monitoring Frequency & Responsibility
Vegetation clearing/Replanting	• 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; Bay Tower Properties 19 cc. or sub-contractor appointed
Topsoil replacement	• 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 prospecting activities). • 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; Bay Tower Properties 19 cc.
Waste and Rubble Removal	• Remove from site all domestic waste and dispose of in the approved manner at a registered waste disposal site.	Once-Off; Bay Tower Properties 19 cc.
Solid and Hazardous Waste	• 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, or into the surrounding natural environment.	Once-off; Bay Tower Properties 19 cc.

Aspect/ Impact	Rehabilitation Measure	Monitoring Frequency & Responsibility
	• Dispose of all visible remains of excess cores that were drilled after the completion of tasks. Dispose of in the approved manner	
Erosion protection	• Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the proposed site. • Retain shrubbery and grass species wherever possible. • Perform regular monitoring and maintenance of erosion control measures.	After rainfall events; Bay Tower Properties 19 cc. or sub-contractor appointed

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

Bay Tower Properties 19 cc is required to make the prescribed financial provision for the rehabilitation or management of negative environmental impacts. If the Bay Tower Properties 19 cc fails to rehabilitate or manage any negative impact on the environment, the DMRE 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. Bay Tower Properties 19 cc 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: Bay Tower Properties 19 cc — Ref No.: GP 30/5/1/1/2/12767 PR
EAPs: Davhana Geotech Solutions Pty Ltd — Date: Apr-21

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D g 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)	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 (15%)		7377,05
					Grand Total		56557

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

Bay Tower Properties 19 cc 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

a) Monitoring of Impact Management Actions
b) Monitoring and reporting frequency

c) Responsible persons

d) 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	• Dust • Noise • removal of vegetation • disruption of animal life • habitat destruction • loss of geology	• Daily dust and noise monitoring. • Daily monitoring of plant species of ecological Importance	Geologist and Project Manager	Daily and monthly
Traffic management	• animal life disruption • Traffic Congestion • Disruption of surrounding businesses.	• Monitor traffic access to the site and the frequency thereof, and notify surrounding business owners	Geologist and Project Manager	Monthly and when necessary
Ablution Facility	• Land contamination • Water contamination • health hazard	• service the toilet facility monitor water quality	Geologist and Project Manager	When necessary and monthly
Existing/Access routes	Animal life disruption	Monitor traffic access to the site and the frequency thereof, and	Geologist and Project Manager	Monthly and when necessary

	Disruption of surrounding businesses Traffic Control	notify surrounding business owners Monitor speed limits on the road		

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 Bay Tower Properties 19 cc in order to ensure that the provisions of this EMPr 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 Bay Tower Properties 19 cc 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	• 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	• Risks to groundwater, e.g. fuel and chemical handling and further risks of erosion or damage to riparian vegetation. • How incidents should be reported, and emergency requirements.

	• The importance to reuse water and to prevent spillages.
Cultural Heritage	• To respect all cultures and believes. • How to report any sightings of heritage importance as identified during operation activities (e.g. fossils)
Fauna	• 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	• 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 site establishment and operational plans.
Waste management	• Measures to avoid waste generation and to participate in waste minimisation/reduction.
Traffic strategies.	• 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	• How to report any emergency or incident. • Incident and emergency reporting requirements
General rules and conduct	• Respect for the sensitive environment. • Do not litter. • 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 to 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:

Davhana Geotech Solutions (Pty) Ltd

Name of company:

April 2021

Date:

-END-