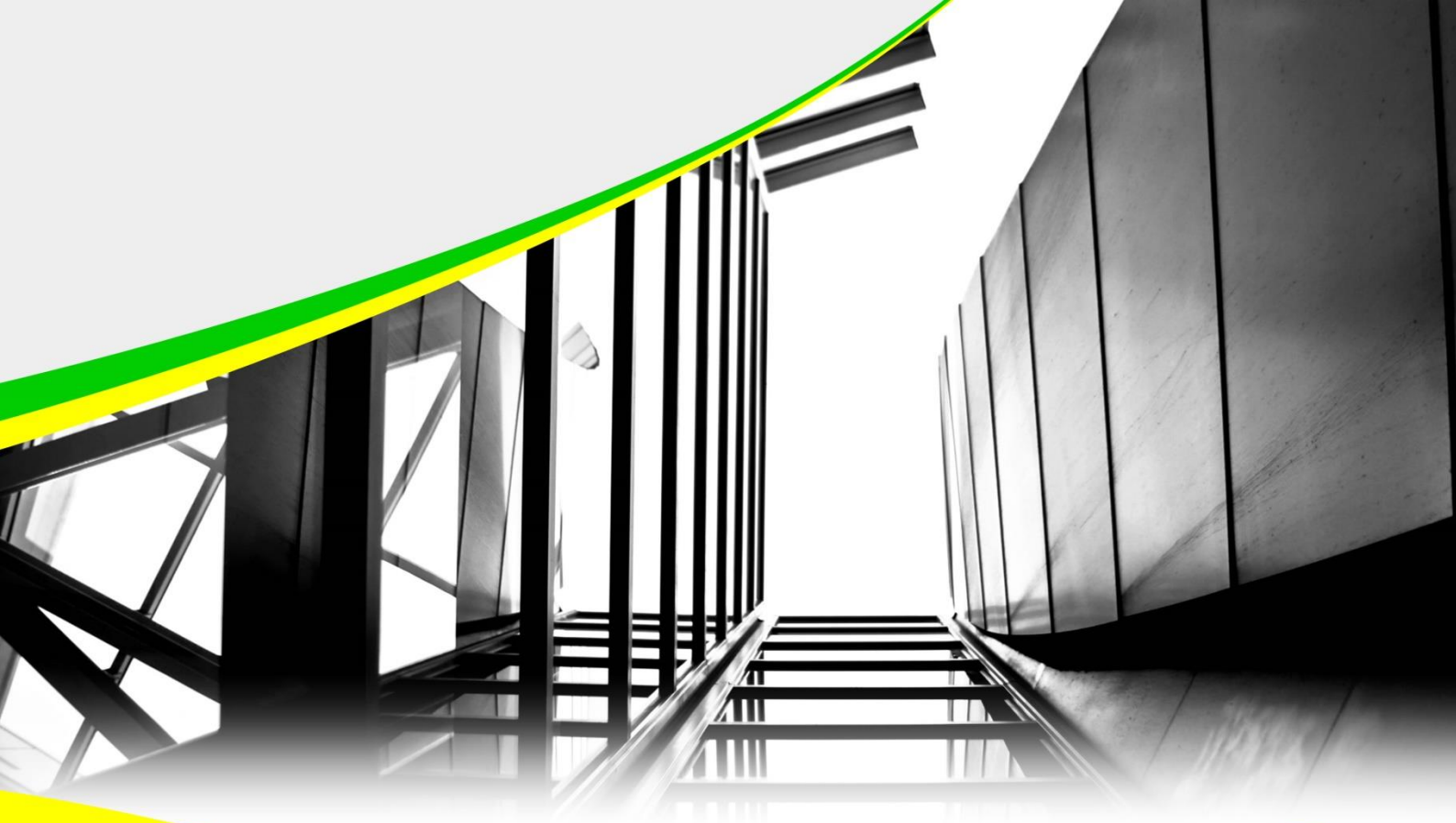

TSHIKOVHA
GREEN & CLIMATE CHANGE ADVOCATES (PTY) LTD

BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE PROPOSED PROSPECTING OF AN COAL ORE IN VARIOUS PORTIONS OF THE FARM DRIEFONTEIN 398 JS, KLIPPAN 452 JS, PAARDEKRAAL 422 JS AND PATTATTAFONTEIN 412 JS WITHIN THE NKANGALA AND GERT SIBANDE DISTRICT MUNICIPALITY, MPUMALANGA PROVINCE

PROJECT PROPONENT: DLAMININI FAMILY TRUST

REFERERNCE NUMBER: MP 305/1/1/2/14334PR

MAY 2017

Head Office: 747 Park Street, Arcadia, Pretoria, 0028 Tel: 012 343 9820, Fax:

Emalahleni Office: Office 7, 18 Lowe Street (Mandela/President Street) Emalahleni, 1035 Tel: 013 656 5046 Fax: 013 656 5164

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mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

BASIC ASSESSMENT REPORT

And

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

Name of Applicant:	Dlamini Family Trust
Tell:	078 002 2721
Fax No:	086 207 1405
Postal Address	P O Box: 265, Diepkloof, Johannesburg, 1864
Physical Address	P O Box: 265, Diepkloof, Johannesburg, 1864
File Reference Number SAMRAD	MP 305/1/1/2/14334PR

1. IMPORTANT NOTICE

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

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

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

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

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

2. OBJECTIVE OF THE BASIC ASSESSMENT PROCESS

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

a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
b) identify the alternatives considered, including the activity, location, and technology alternatives;
c) describe the need and desirability of the proposed alternatives,
d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage , and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on the these aspects to determine:
    i. the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and
    ii. the degree to which these impacts—
        a. can be reversed;
        b. may cause irreplaceable loss of resources; and
        c. 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.

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PART A

SCOPE OF ASSSSMENT AND BASIC ASSESSMENT REPORT

3. CONTACT PERSON AND CORRESPONDENCE ADDRESS

a) Details of

i. Details of the Environmental Assessment Practitioner

Name of Company:	Tshikovha Green and Climate Change Advocates (Pty) Ltd	
Tell:	012 343 9820	
Fax:	086 600 1016	
Email Address	moudy.mudzielwana@tshikovha.co.za	
Team of Environmental Assessment Practitioners on project		
Name:	**Qualification**	**Responsibility**
Awelani Nefefe	Hons Environmental Sciences	Environmental Assessment Practitioner
Phathu Mudau	BSc Environmental Sciences	Environmental Assessment Practitioner
Niketiwe Dlamini	MSc Environment and Society	Technical Reviewer

ii. Expertise of the EAP.

Name	Description
Awelani Nefefe:	Awelani Nefefe is a Brilliant, Ambitious and Enthusiastic Environmental Assessment Practitioner at Tshikovha Green and Climate Change Advocates. She holds an Honours Degree in Environmental Sciences majoring in Hydrology and Water Resources from the University of Venda. Ms. Nefefe has more than 2 years solid experience in Natural Resources Management. As South Africa is faced with fast-paced exploitation of natural resources for developmental purposes, Ms. Nefefe devoured herself to be an environmental voice through assurance of preservation, conservation and sustainable utilisation of natural resources. Within the company, her responsibilities are as follows but not limited: • Assess the impact of the proposed Project in the environment (Basic Assessment Process and Environmental Impact Assessment) • Prepare and submit Licenses applications i.e. Water Use License, Emissions License • Ascertain whether Basic Assessment or Scoping process should be followed • Conduct Environmental Auditing • Develop Environmental Management Plan • Develop and Conduct Environmental Awareness Trainings and Environmental Education • Conduct Environmental Monitoring and Evaluation • Conduct Public Participation • Amend Environmental Authorization in terms of EIA regulations • Develop and implement environmental strategies and action plans that assure corporate sustainable development • Provide strategies to manage and dispose waste in an environmental friendly way Ms. Nefefe is currently engaged with these projects: An amendment of a mining right of the proposed extension of Mokolo Clay Mine project in Lephalale, Limpopo Province; Environmental Impact

	Assessment for the Proposed Development of Nkomazi Safari Hotel in the Nkomazi Local Municipality, Mpumalanga Province; The Realignment of road D3212 and re-construction of two bridges at Ga-Ntata on road D3212 and D3213 in greater Letaba Local Municipality, Limpopo Province; Environmental Impact Assessment for the Proposed Expansion of an Oil recycling Plant in Rand West Local Municipality, Gauteng Province; Environmental Impact Assessment for the Proposed Development of Commercial/Industrial, Business/Offices and Agro Processing in Ekurhuleni Municipality, Gauteng Province.
Phathu Mudau:	Phathu Mudau holds a B.Sc. Degree in Environmental Sciences, focussing on environmental Impact assessments and management. Phathu Mudau had also successfully completed the GIS certified course which is in-line with spatial mapping. Phathu has over 5 years significant experience in providing technical and strategic environmental advice for engineering/development-based projects, with practical and achievable environmental management solutions, guidelines and mitigation measures. Phathu has extensive working knowledge of environmental legislation and policy requirements. His areas of expertise includes Sustainable Land-use Planning and Guideline Development, Strategic Environmental Assessments, compliance monitoring and auditing (Environmental Control Officer services), applications for Environmental Authorisations, Water Use License applications, completing a number of Environmental Management Plans/Programmes, Solid Waste Management Plans, as well as providing support with the capturing, analysing, managing and displaying of spatial referenced data to facilitate decision making, with the use of Geographic Information Systems (GIS).
Niketiwe Dlamini:	Niketiwe Dlamini holds an MSc Degree in Msc Environment and Society from the University of Pretoria. For her undergraduate studies, she completed a diploma in Environmental Health Sciences as well as a BSc degree in the same field majoring in Environmental Management at the University of Swaziland. Niketiwe also completed the following short courses: • Environmental Management Inspection • Learning ArcGIS • Basics of raster data • Basis of map projections • Understanding map projections She has years of working experience. She worked for the Swaziland Standards Authority as a Quality Assurance Officer. She was responsible for: • Draft import-export inspection document • Coordinate awareness campaigns on substandard goods • Assist with the assurance of compliance of goods to Swaziland standards • Preparing locally made products for laboratory testing at the SABS • Inspection of goods • Assisting with the Occupational Health and Safety Standards Niketiwe has also worked for First Environmental Consulting, where she worked as a Compliance Officer on the following projects: • Environmental Impact Assessment Report for the Biotechnology Park • Environmental Impact Assessment Report for the International Convention Centre of Swaziland

	• Environmental Impact Assessment Report for Nhlangano Waste Water Treatment Plant • Environmental Monitoring Plans • Biodiversity Reports • Social Impacts Reports • Ecology Reports • Ensuring that Clients follow the Environmental Management Plan She works on various waste management projects for the Gauteng Department of Agriculture and Rural Development, the Govan Mbeki Municipality and the Ngaka Modiri Molema District Municipality.

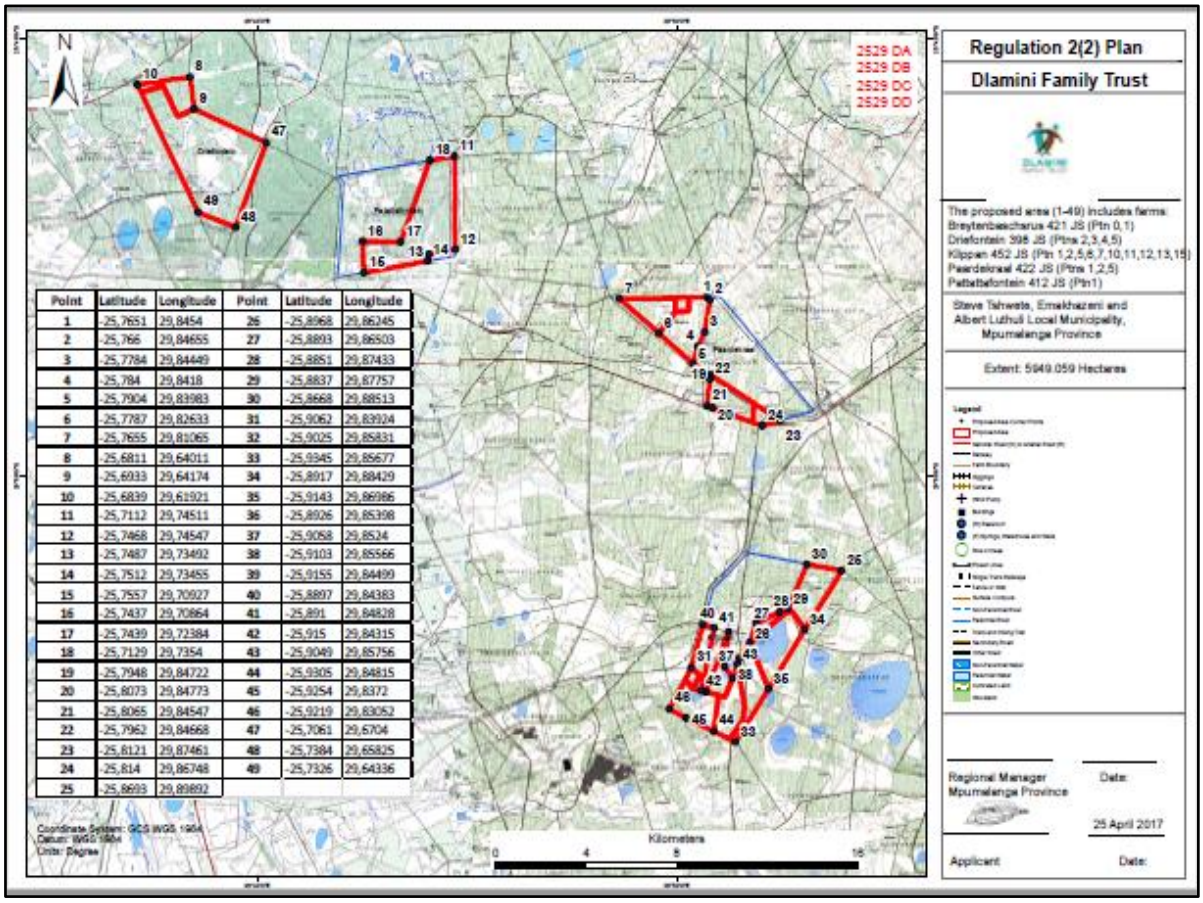
b) Location of the overall Activity.

Table 1: Activity Location

Farm Names	**Portion Number**
Klippan, Farm No 452 JS	Portion No: 1,2,5,6,7,10,11,12,13 and 15
Paardekraal, Farm No 422 JS	Portion No: 1,2 and 5
Pattattafontein, Farm No 412 JS	Portion No: 1
Driefontein, Farm No 398 JS	Portion No: 2,3,4, and 5.
Application area (Ha)	5949.059 Ha
	Magisterial district:
Klippan, Farm No 452 JS	Albert Luthuli Local Municipality within the Gert Sibande District Municipality
Paardekraal, Farm No 422 JS	Emakhazeni Local Municipality within the Nkangala District Municipality
Pattattafontein, Farm No 412 JS	Steve Tshwete Local Municipality within the Nkangala District Municipality
Driefontein, Farm No 398 JS	Steve Tshwete Local Municipality within the Nkangala District Municipality
	21 digit Surveyor General Code for each farm portion
Klippan, Farm No 452 JS	ID T0JS00000000045200000
Paardekraal, Farm No 422 JS	ID T0JS00000000042200000
Pattattafontein, Farm No 412 JS	ID T0JS00000000041200000
Driefontein, Farm No 398 JS	ID T0JS00000000039800000

c) Locality map

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



Point	Latitude	Longitude	Point	Latitude	Longitude
1	-25,7651	29,8454	26	-25,8968	29,86245
2	-25,766	29,84655	27	-25,8893	29,86503
3	-25,7784	29,84449	28	-25,8851	29,87433
4	-25,784	29,8418	29	-25,8837	29,87757
5	-25,7904	29,83983	30	-25,8668	29,88513
6	-25,7787	29,82633	31	-25,9062	29,83924
7	-25,7655	29,81065	32	-25,9025	29,85831
8	-25,6811	29,64011	33	-25,9345	29,85677
9	-25,6933	29,64174	34	-25,8917	29,88429
10	-25,6839	29,61921	35	-25,9143	29,86986
11	-25,7112	29,74511	36	-25,8926	29,85398
12	-25,7468	29,74547	37	-25,9058	29,8524
13	-25,7487	29,73492	38	-25,9103	29,85566
14	-25,7512	29,73455	39	-25,9155	29,84499
15	-25,7557	29,70927	40	-25,8807	29,84383
16	-25,7437	29,70864	41	-25,891	29,84828
17	-25,7439	29,72384	42	-25,915	29,84315
18	-25,7129	29,7354	43	-25,9049	29,85756
19	-25,7948	29,84722	44	-25,9305	29,84815
20	-25,8073	29,84773	45	-25,9254	29,8372
21	-25,8065	29,84547	46	-25,9219	29,83052
22	-25,7962	29,84668	47	-25,7061	29,6704
23	-25,8121	29,87461	48	-25,7384	29,65825
24	-25,814	29,86748	49	-25,7326	29,64336
25	-25,8693	29,89892			

Figure 1: Project Locality Map

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

(Provide a plan drawn to a scale acceptable to the competent authority but not less than 1: 10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on site)

In Phase 1 (Desktop study) there will be no activity on site apart from a few site visits. However Phases 2 to 4 will require work on site. Phase 2 (Soil geochemistry, geophysics and trenching) will require access to the farm to be able to carry out a farm wide soil geochemistry and geophysical survey where existing farm access roads will need to be used. Phases 3 and 4 will be limited to specific delineated areas. When drilling is carried out access roads will need to be created.

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.

i. Listed and specified activities

Table 2: Listed and specified activities

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**AERIAL EXTENT OF THE ACTIVITY** Ha or m²	**LISTED ACTIVITY** Mark with an X where applicable or affected.	**APPLICABLE LISTING NOTICE** (*GNR 544, GNR 545 or GNR 546)*
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; or (b) the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing.	5939.059 Ha	**X**	GNR 326
Desk top study	N/A	-	-
Ground geophysics		-	-
Soil sampling	N/A	-	-
Trenching	0.5 Ha	-	-
Drilling (drill site 10x10m per hole. 50 holes planned	0.8Ha	-	-
Sample processing	N/A	-	-
Site Camp	0.3Ha	-	-
Access Routes	1,5 Ha	-	-

ii. Description of the activities to be undertaken

(Describe Methodology or technology to be employed, including the type of commodity to be prospected/mined and for a linear activity, a description of the route of the activity)

The Dlamini Family Trust (the Proponent, hereafter referred to as DFT) proposes to conduct prospecting activities in various portions of the Farm Driefontein 398 JS, Klippan 452 JS, Paardekraal 422 JS and Pattattafontein 412 JS within Steve Tshwete, Emakhazeni and Albert Luthuli Local Municipalities in Mpumalanga Province. The commodity to be prospected is Coal Ore. The prospecting activities are anticipated to be undertaken for a period of 5 years.

These prospecting activities will be conducted in phases, with the succeeding phase depending on the results and success of preceding phase. The intended phases in sequence are indicated below:

Phase 1 – Desktop Study - Analysis of Existing Data,

The exploration records of all previous work in the area will be re-examined, and the following studies will be carried out:

- Literature review
- Detailed aerial photograph and satellite image interpretation
- Regional airborne geophysics with main emphasis on magnetic and gravity
- Regional soil geochemistry interpretation
- Geological mapping will also be carried out.

These records will need to be captured into a GIS format for geological modelling and exploration scheduling analysis. This work will form an initial desktop and surface fieldwork study to be continued during the period that the prospecting permit application is being assessed and, presumably, approved. A period of 12 months is estimated for this.

Phase 2 – Follow up Ground Geophysics, Soil Geochemistry and Trenching

Once targets have been generated in the first phase there will be a need to follow up on these targets. A detailed and denser soil geochemistry exercise will need to be carried out. Coupled with this will be ground geophysics to sharpen the identified potential areas. Gravity magnetic and time domain Electromagnetic Methods (EM) will need to be done.

After soil geochemical and geophysical targets are generated a trenching or pitting exercise will be done on the anomalies to determine the sidewall properties, profiles and average grades and to do drill hole targeting. It is anticipated that phase will take approximately 12 months to complete

Phase 3 –Drilling and Resource Generation

In the event that the present application is approved and areas with possible targets for the minerals applied for, this identified prospective target will require further subsurface investigation. Drilling (coal ore) of the prospective areas will commence to establish presence of mineralization. Geological borehole logging, down the hole logging and sampling will also be carried out. Whole rock analysis of all the potential intersections will be carried out. For budgeting purposes, it is assumed that every meter of the initial holes will be analysed will be made. It is anticipated that initially approximately 25 drill-holes will be drilled. Drill holes could vary in depth from 50 to 150m, with an average depth in the order of 100 meters. The total amount of drilling to be budgeted for at this stage is 2 500 meters. Dependent on the results of this drilling further 50 drill-holes totalling 5 000 meters may be required. The geological information generated will be used to model and estimate resource. The resources will at least be expected to be in the Indicated Category according to the appropriate reporting standard.

Phase 4 – Resources drilling and Pre-feasibility Study

The final phase of the prospecting programme would involve preparation of a prefeasibility study. This would include:

- Resource drilling

- Geological Modelling
- Initial conceptual Mine Planning.
- Planning the infrastructure requirements
- Environmental management planning
- Financial modelling
- Market analysis
- Analysis of transport logistics to markets
- Assessment of personal and training requirements
- Assessment of socio-economic factors

A feasibility study is multidisciplinary in nature, and requires the highest levels of expertise available. Such studies are both costly and time consuming

e) Policy and Legislative Context

Table 3: Applicable Legislation

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process)	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLIY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT. (E.g. In terms of the National Water Act a Water Use License has/ has not been applied for)
The South African Constitution (Act 108 of 1996)	potential impacts identification as well as mitigation measures and public participation	Rights of all personnel who are directly or indirectly involved in the project has been respected and their concerns attended to during public consultation
The National Environmental Management Act, 1998 (Act No. 107 of 1998)	Impact assessment (best practices)	Mitigation measures and recommendations where provided according to best practice standards.
Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)	The prospecting activities requires the permit from the DMR	A Prospecting Right Application has been submitted to the DMR by the Applicant. The application was accepted by the DMR on the 3rd of February 2017 (MP 305/1/1/2/14334PR) The conditions and requirements attached to the granting of the prospecting right will apply to the prospecting activities.
The National Environmental Management Biodiversity Act (NEM:BA), 2004 (Act No.10 of 2004),	Impact Assessment	The EMPr will regulate the applicant's implementation of biodiversity management measures.
The National Heritage Resources Act (NHRA), 1999 (Act No. 25 of 1999)	Management measures	Should archaeological artefacts or skeletal material be revealed in the area during development activities, such activities should be halted, and Heritage Mpumalanga province notified in order for an investigation and evaluation of the find(s) to take place.
The National Water Act (Act No. 36 of 1998)	The proposed activities will use water, however it will not	No water use license is required for this Application. Any water required for drilling activities will be obtained from a legal source within the area or brought

	consume enough water to trigger water use license application.	in via mobile water tanker. Appropriate dust extractions / suppression equipment will be a condition imposed on the drill contractor for their drill rigs.
National Environmental Management: Waste Act, Act 59 of 2008 (NEMWA)NEM: WA (as amended)	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 the drilling activities will be disposed of in a responsible legal manner. Proof of legal disposal will be maintained on site.
National Environmental Management Air Quality Act (Act No. 39 of 2004, Government Gazette No. 27318) (NEMAQA	Prospecting Activities	Standards for particulates and dust used in Impact Assessment to regulate the concentration of a substance that can be tolerated without any environmental deterioration
Conservation of Agricultural Resources Act, 1983	Prospecting activities	The project should promote the conservation of soil, water and vegetation

f) Need and desirability of the proposed activities.

(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location).

South Africa is one of developing countries whereby the fertility rate is steeply increasing thus putting pressure in the energy demand. Because of this, it is of necessity to establish alternative sources for energy supply i.e. the green energy, however this technology is currently incapable to serve individual's needs at a national scale. Therefore, it is of importance to establish additional sources in order to supplement the sources for current energy provision. Thus there is a need to explore other geologic formations for provision of resource (coal) in order to meet the current energy demand.

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

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

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

The proposed site was selected based on extensive research and also following on information from previous prospecting activities in the area. There are known coal reserves in the area and coal mining is currently taking place to the within 5km radius from the proposed project area. In terms of the technologies proposed, the proposed prospecting methods (i.e. Air Drilling method for shallow surfaces, diamond drilling) have been chosen based on the known success of prospecting using the above methods. 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.

h) Full description of the process followed to reach the proposed preferred alternatives within the site.

NB!! – This section is about the determination of the specific site layout and the location of infrastructure and activities on site, having taken into consideration the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout.

i. Details of the development footprint alternatives considered.

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

a. the property on which or location where it is proposed to undertake the activity;

No location alternative has been considered. The applicant's property or location is being guided by the presence of higher potential underlying coal thus not any location or property is suitable for the proposed activity

b. the type of activity to be undertaken;

It is mandatory that prior to mining activities can be undertaken, a prospecting be conducted so that investments can be made on a proven reserve. The prospecting activity provides the economic value of the ore bodies, oil and natural gas reserves in the underground and also provides the information on the required earth work for stripping the surface for exposure of the ore bodies. From prospecting activities estimation can be made of the total mining cost, ore tonnages, ore grade, and also the mine lifetime can be determined.

c. the design or layout of the activity;

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.

d. the technology to be used in the activity;

Geophysical surveys, trenching and drilling are the only major methods 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.

e. the operational aspects of the activity; and

Water Supply – The employees will bring their own water to site, while operational water will be sourced outside the site. This is mainly to avoid extreme extraction and added pressure on the local water sources. There will be no need to apply for water use license as the water usage will be minimised to be below 50 000 litres a month. The Department of Water Affairs and Sanitation will be contacted to further advice on the water requirement.

Sanitation – The ablution facility will be provided onsite in the form of chemical toilets that will be emptied by a registered company. The choice was made to prevent the employees from using the forest as toilets which would have other impacts on the environment. The chemical toilets can be easily managed as compared to pit latrines that have a potential for ground water contamination.

Drilling activities – Drilling is the most appropriate way of obtaining representative samples of the subsurface geological settings. The samples are required in this project so as to analyse the mineral content of the subsurface rocks.

However, the applicant shall ensure that this Environmental Management Plan is provided to the Project Manager and any other person or organisation who may work on the site. Horomela Investments shall ensure that any person or organisation that works on the site complies with the requirements of this Environmental Management Plan.

f. the option of not implementing the activity.

- The mining sector forms the backbone of the South African economy, and in the Mpumalanga Province the mining sector is the main contributor to the Provincial GDP and as such the option of not carrying out the prospecting activities would prevent future prospects of mining.

- The jobs that were to be created during prospecting phase will also be missed; these employment opportunities would reduce the economic burden on the government as people dependant on social grants would be reduced.
- Continuous illegal mining and prospecting of ore in the area which could results in social conflicts between the miners and community members.
- Continuous spreading of alien species within the grassland biome dominating the proposed areas
- The state of the natural environment will remain the same, amongst other things the following will be beneficial:
    - There will be no geological and soil disturbance which may lead to ground water contamination
    - No excessive generation of wastes from the proposed activities
    - No compaction of path ways affecting the Growth pattern of grasses and movement of micro animals
    - The biodiversity will not be altered as there will be no removal of plants and induced noise from prospecting activities.

ii. Details of the Public Participation Process Followed

Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. (Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.

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

1) Identification of key Interested and Affected Parties (affected and adjacent landowners) and other stakeholders (organs of state and other parties)
2) Placement of site notices on farms, municipal area and other accessible public areas
3) Formal notification of the application to key Interested and Affected Parties (all adjacent landowners) and other stakeholders;
4) Consultation and correspondence with I&AP's and Stakeholders and the addressing of their comments;
5) Public meetings at a central accessible location identified by interested and affected parties;
6) Newspaper adverts; and

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 a search conducted via online search engines accessing the Title Deed office database. In addition to land owners, other relevant organisations where identified and notified of the application. This includes municipal and State departments with jurisdiction in the project area and Non-Governmental Organisations (NGOs) with an interest. Interested and Affected parties (I&AP's) representing the following sectors of society were identified:

- National, provincial and local government;
- Agriculture, including local landowners;
- Community Based Organisations
- Non-Governmental Organisations (EWT);
- Mpumalanga Department of Economic Development, Environment and Tourism (DEDET)
- Department of Water and sanitation
- Industry and mining;
- Commerce; and
- Other stakeholders

Formal notification of the application to key Interested and Affected Parties (adjacent landowners) and other stakeholders

The project was announced as follows:

i. Newspaper advertisement

The project announcement advertisement was published on 19 May 2017 on The Herald newspaper. The advertisement was also used to inform the stakeholders of the availability of the Draft Basic Assessment and Environmental Management Programme. The adverts also invited I&APs to submit their comments to Niketiwe Dlamini. The reports will also be hand delivered to district and local municipalities for review. No comments have been received so far regarding the project. However, comments to be will be added to the comments and register report and incorporated on the final report.

Hefty fines for residents who damage municipal trees

The STLM Physical and Environmental Development (Parks and Recreation) Department is seriously concerned about an increasing number of residents removing or pruning street trees and other trees owned by the municipality without permission.

The so-called topping of trees is also illegal and is seen as damage to municipal property. Fines of up to R5, 000 per tree can be imposed, as it is an offence and contravenes the Physical and Environmental Development and Street Trees By-laws that came into force in 2005. No member of the public may remove any tree under the custodianship of the municipality as it is not in favour of removing street trees, but within reason, written permission may be granted.

The municipality will consider removing, pruning and replacing established trees, shrubs and plants if any dead trees or shrubs on pavements are seen to present a danger to the public and the cost thereof shall be for the account of the municipality. However trees on pavements damaged by the public shall be removed or pruned and the municipality may, at its discretion hold the offender liable and prosecute for removal and replacement costs.

Tree roots causing damage may be removed and trees causing danger on pavements may be pruned back, and the municipality may also prune back trees on private property back to the boundary.

All requests and complaints concerning trees and their removal shall only be considered if in writing and addressed to the municipality.

However trees shall not be removed because they drop leaves, seedpods, seeds, ooze glue, or because of a similar complaint and anybody removing a tree in contravention of these By-Laws will be held liable for the value of the tree.

Local municipality is taking strong masseurs to protect our trees.

Chronic shortage of healthcare professionals contributes to rise in malaria cases

MEC needs to adress the issue of health care workers before it gets out of hand.

Mpumalanga Health MEC, Gillion Mashego, must take responsibility for the surge in malaria cases in the province. In its fourth quarter report, the Mpumalanga Health Department stated that cases of malaria have increased because healthcare professionals in the province lack the skills to identify the killer disease in time.

Between April and May 2017, a total of 585 malaria cases were reported in the whole of Mpumalanga. This is higher than the number of cases reported in 2016 which stood at 499 during the same period. About 294 of the Malaria cases have been reported in the Bushbuckridge area, of which 235 are local transmissions and only 59 are imported from neighbouring provinces. The Health Department stated that two people are suspected to have died over the last two weeks due to malaria in Mpumalanga. Both deaths occurred at the Tintswalo Hospital which has registered the highest number of Malaria cases (36) between April and May 2017 in area.

The Department's fourth quarter report also stated that another contributing factor to the rise in malaria cases was that patients do not know the symptoms of malaria.

This could have been prevented if healthcare professionals were not overworked and were equipped with the necessary skills to educate communities on malaria prevention. If the number of healthcare professionals in Mpumalanga continues to decrease, the people of this province will continue getting sick unnecessarily.

MEC Mashego must prioritise the staffing of our hospitals and clinics so that doctors and nurses are not overburdened and are able to provide quality services to communities across the province.

The Department needs to implement a rapid education campaign about malaria in the affected areas; to educate both scholars and community members on how to go about preventing malaria, and furthermore enabling them to identify the symptoms before it progresses.

Interprovincial championships looming around the corner

Mpumalanga athletics has sent a clear message to all athletes in the province with regards to the interprovincial championships.

Certain criteria have to be met for qualifying and no compromises will be made in terms of the rules. Athletes are encouraged to contact Mpumalanga athletics for details and entry forms as soon as possible.

"Athletes who want to compete and be considered for the Mpumalanga team (Interprovincial Championships - 10 June 2017) should have completed at least one league before 27 May. I.e. 27 May should be at least the second league.

Athletes, who are participating for the first time on 27 May, will therefore not be considered for the team," said Theuns Luus.

"Athletes who have not been selected for the Mpumalanga team on 27 May will be allowed to participate at the Interprovincial Championships on 10 June which will count as a league for the athlete.

These athletes must participate in their school or club attire; none of these athletes are allowed to run in provincial attire.

Athletes who do not comply with this rule will be disqualified and removed from the track on race day," added Theuns Luus Chairman of Mpumalanga Athletics

Mpumalanga Athletics calls all clubs to be ready for the interprovincial championships and to make this year, s tournament memorable.

NOTICE OF A NEW PROSPECTING RIGHT APPLICATION FOR COAL ORE, COVERING FARM PATATTAFONTEIN 412JS (EXCLUDING REMAINING EXTENT AND PORTION 2) PAARDEKRAAL JS (EXCLUDING PORTION 4, 6 & REMAINING EXTENT), KLIPPAN 452JS (EXCLUDING PORTION 14), BREYTENBACHSRUS 421 JS, DRIEFONTEIN 398 JS (EXCLUDING REMAINING EXTENT & PORTION 1), SITUATED IN THE MAGISTERIAL DISTRICT OF BELFAST, MPUMALANGA PROVINCE.

NOTICE IS HEREBY GIVEN IN TERMS SECTION 16 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, ACT 28 OF 2002 (MPRDA)

NATURE OF ACTIVITY

The proposed prospecting activity will be undertaken in three steps. This will include earth clearing, Site Establishment and the Exploration Drilling. After Exploration Drilling has ceased each drill site will be rehabilitated as close as possible to its previous natural state. Each prospecting site will be earth cleared (only small shrubs and grasses) and topsoil will be stockpiled for reuse during the rehabilitation phase. The specific number and location of the prospecting sites will each be determined through non-invasive methods. There might be one two (or more) active prospecting sites at any given time during the prospective operations.

LOCATION

The application will cover Farm Patattafontein 412JS (Excluding Remaining Extent and Portion 2) Paardekraal JS (Excluding Portion 4, 6 & Remaining Extent), Klippan 452JS (Excluding Portion 14), Breytenbachsrus 421 JS, Driefontein 398 JS (Excluding Remaining Extent & Portion 1)

LISTED ACTIVITIES

DATE OF RELEVANT NOTICE	ACTIVITY NUMBER
EIA Regulations as amended on 08 December 2014 GNR 983	20, 27

NAME OF APPLICANT

Dlamini Family Trust

NAME OF ENVIRONMENTAL ASSESSMENT PRACTITIONER

Tshikovha Green and Climate Change Advocates

REGISTRATION OF INTERESTED AND AFFCETED PARTIES

In terms of Regulations 42 & 43 of the EIA Regulations published in Government Notice No. R983 of 8 December 2014 the public is invited to register as interested and affected parties (I&APs); express interest, comment and participate in the Public Participation Process (PPP), Draft Basic Assessment Report and Environmental Management Programme will be made available to all registered interested and Affected Parties.

REGISTRATION, QUERIES AND WRITTEN COMMENTS SHOULD BE SUBMITTED TO:

Nikethwe Dlamini

CONTACT DETAILS: Cell 076 727 4968 **FAX:** 086 600 1016 **Email:** nikethwe.dlamini@tshikovha.co.za

Moudy Mudzielwana

CONTACT DETAILS: Cell: 076 431 1016 **FAX:** 086 600 1016 **Email:** moudy.mudzielwana@tshikovha.co.za

Postal Address: 747 Park Street, Arcadia Pretoria, 0028

TSHIKOVHA

ii. Site notice placement

In order to inform surrounding communities and adjacent landowners of the proposed development, site notices were erected on site and at visible locations close to the site on the 09th May 2017.

Figure 2: Site Notices (Driefontein)

Figure 3: Site Notices (Driefontein)

Figure 4: Site Notice at Klippan

Figure 5: Site Notice at Paardekraal

Figure 6: Site Notice (Patattafontein)

iii. Written notification

I&AP's and other key stakeholders have been sent the Background Information Document notifying them of the project, on the 31 of May 2017 2016 and the Basic Assessment report have been sent to all registered I&AP's for a 30 day commenting period from the 1st June 2017.

iv. Public Meeting

All registered stakeholders and I&APs will be notifying on the date of the public meeting.

iii. Summary of issues raised by I&Aps

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

No comments have been received at this stage regarding the proposed project.

iv. The Environmental attributes associated with the alternatives.

(The environmental attributed described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects)

1. Baseline Environment

a) Type of environment affected by the proposed activity.

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

- **Climate**

The proposed project is situated in an area that normally receives about 572mm of rain per year, with most rainfall occurring during summer. The chart below (lower left) shows the average rainfall values for project location per month. It receives the lowest rainfall (0mm) in June and the highest (105mm) in January. The monthly distribution of average daily maximum temperatures (centre chart below) shows that the average midday temperatures range from 17.3°C in June to 25.5°C in January. The region is the coldest during July when the mercury drops to 2°C on average during the night.

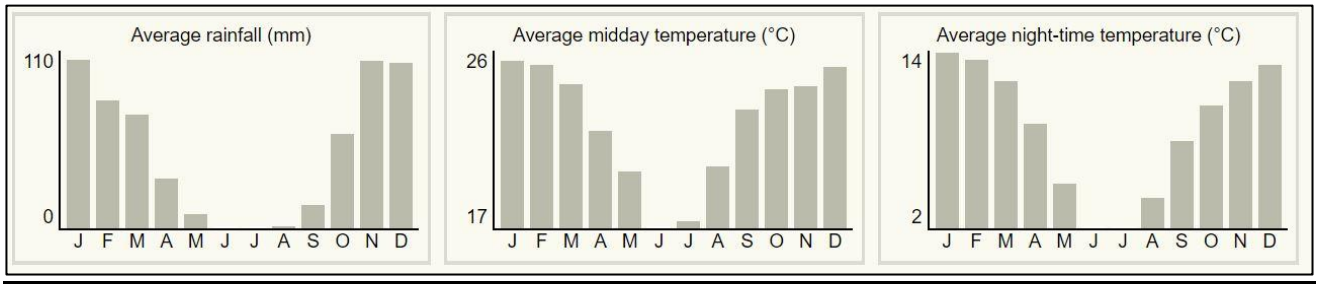


Figure 7: Climate graphs for the proposed project location

- **Vegetation**

The farm Driefontein (entirely) and some portions of farm Paardekraal and Pattattafontein are situated in an area characterized by the vegetation type: Rand Highveld Grassland. This type of Vegetation occurs on a highly variable landscape with extensive sloping plains and a series of ridges slightly elevated over undulating surrounding plains. The vegetation is species-rich, wiry, sour grassland alternating with low, sour shrubland on rocky outcrops and steeper slopes.

There is a high diversity of herbs. Rocky hills and ridges carry sparse (savannoid) woodlands accompanied by a rich suite of shrubs. Poorly conserved, only small patches protected. Almost half has been transformed mostly by cultivation, plantations, urbanisation or dam-building (*Environmental Management Framework for the Olifants and Letaba Rivers Catchment Areas*).

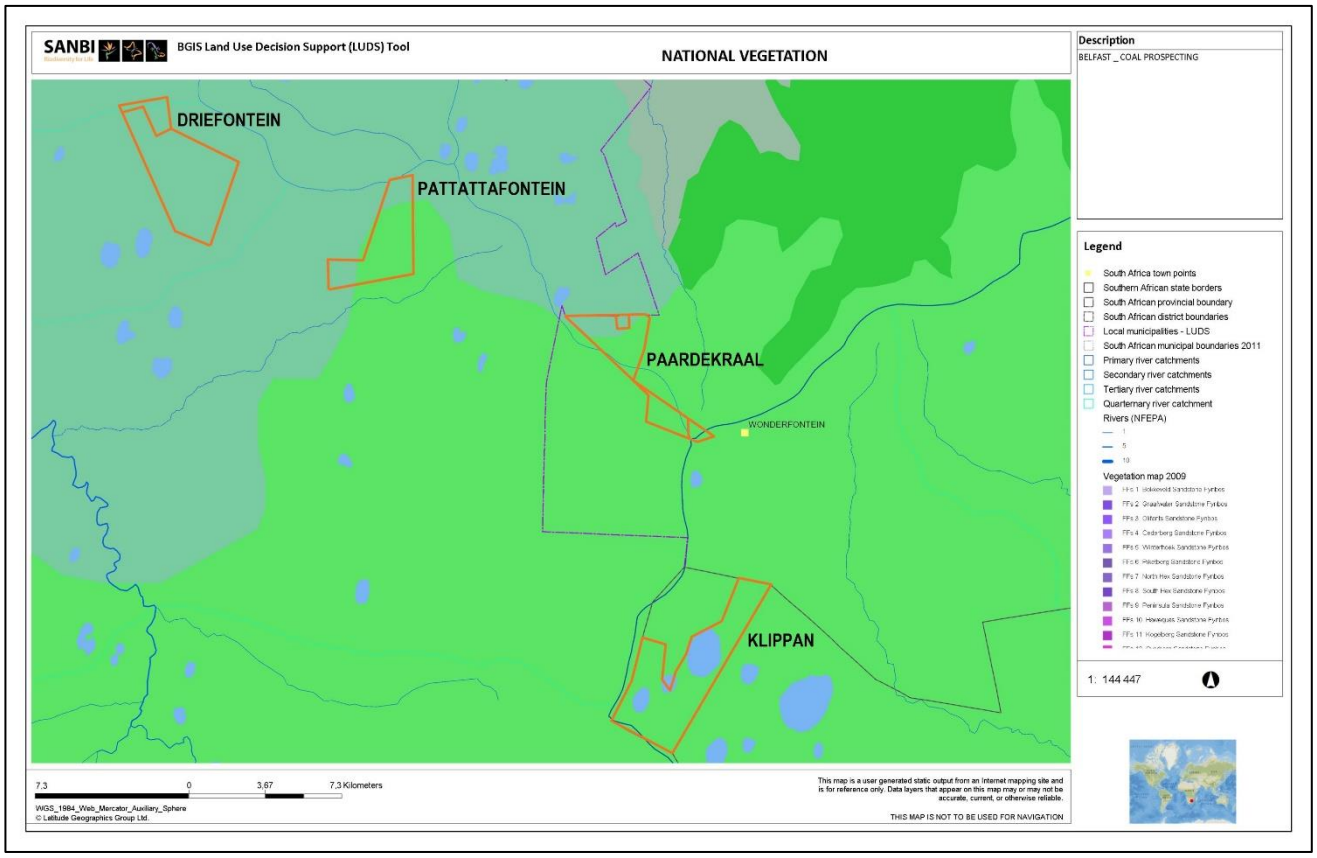


Figure 8: National Vegetation

According to Mpumalanga Biodiversity Sector Plan, the farm Klippan (entirely) Paardekraal and most portions of Pattattafontein and Paardekraal are situated in an area characterized by vegetation type: Eastern Highveld Grassland. This vegetation type occurs on slightly to moderately undulating planes, including some low hills and pan depressions. The vegetation is a short dense grass land dominated by the usual highveld grass composition (*Arsitida, Digitaria, Erafrostsis, Themeda, Tristachya* etc.) with small scattered rocky outcrops with, wiry sour grasses and some woody species. Some 44% transformed primarily by cultivation, plantations, mines, urbanisation and by building of dams. No serious alien invasions are reported.

- **<u>Soils</u>**

Both farms are situated in an area characterized by undifferentiated structureless soils. This type of soil is considered to have one or more of: low base status, with restricted soil depth, excessive or imperfect drainage, and high erodibility. This soil is can be found in red, yellow and / or greyish soils with low to medium base status.

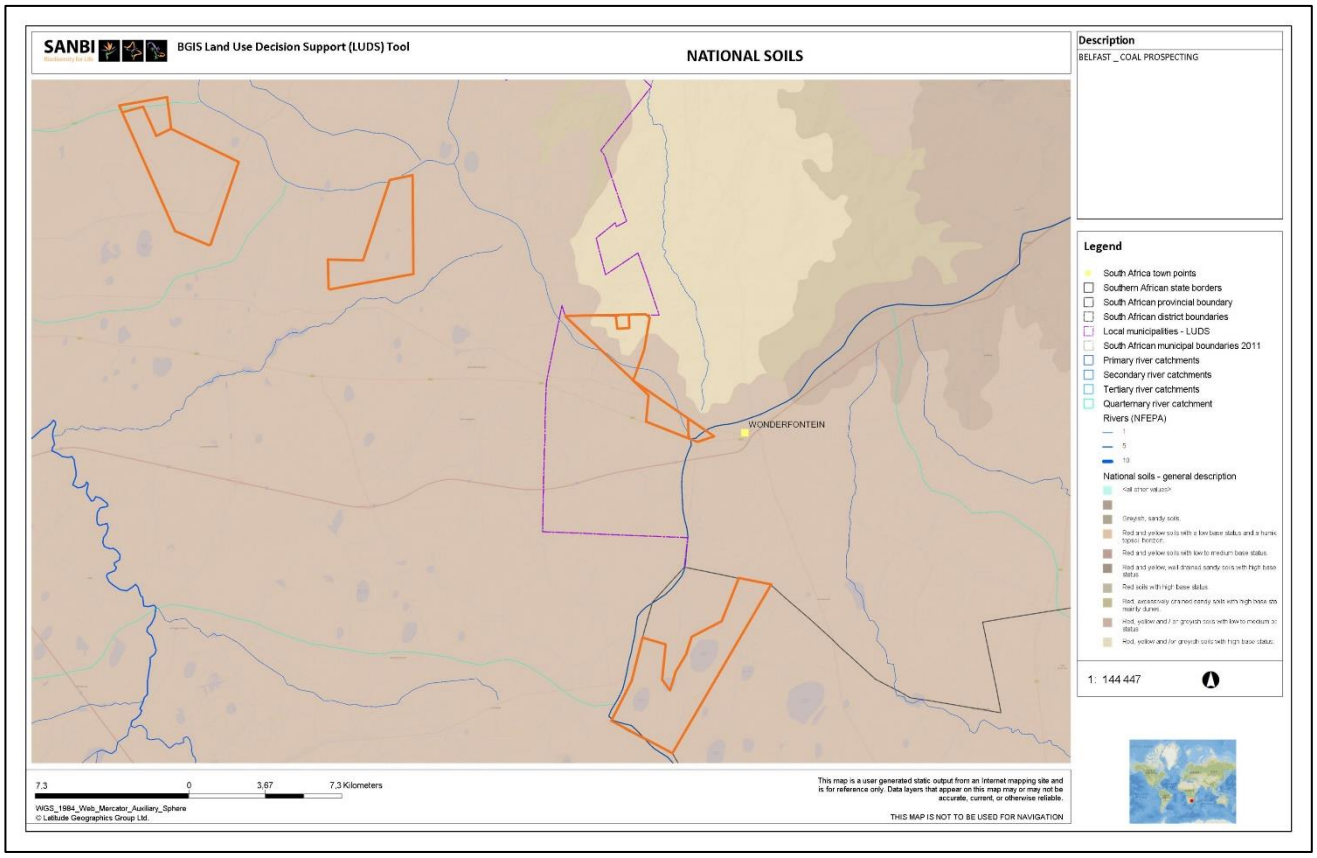


Figure 9: National Soils

- **Land Cover**

As demonstrated on the on the map below, The predominant present land cover in both farms is cultivated land due to the presence of large areas being occupied by high potential soil. However, approximately 102.094 hectors of the farm: Klippan is covered with mining activities. The Klippan dam and Rietpan also forms part of the Klippan farm.

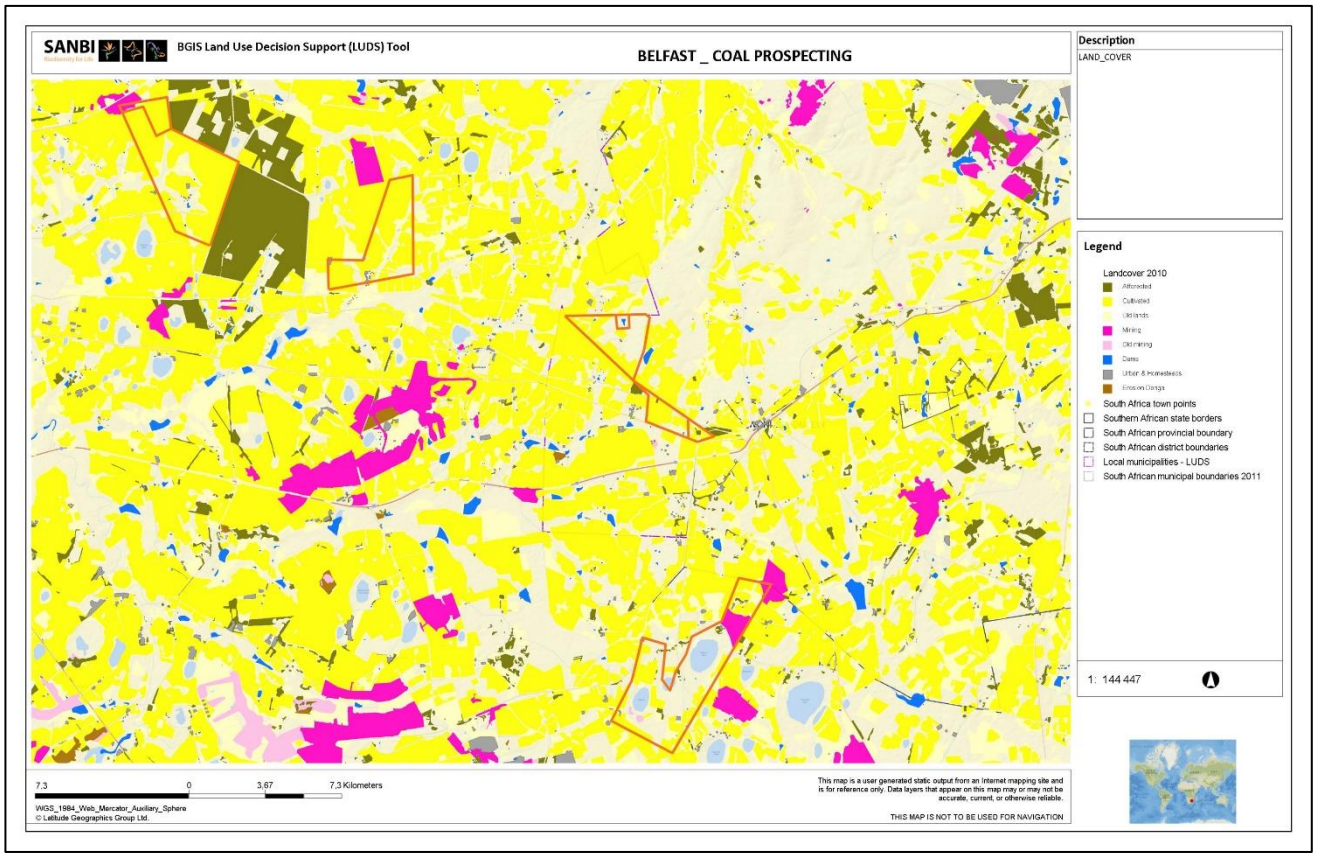


Figure 10: Land Cover

- **Rivers and Wetlands**

A total of nineteen (19) wetland features have been identified within the in both farms, namely Mesic Highveld Grassland Group 4. The table below gives the description of wetland respective to their numbers.

Table 4: Classification system for wetland features identified within the study area

Wetland No:	Wetland Type	Level 2: Regional Setting	Level 3: Landscap_unit	Level 4: Hydrogeomorphic (HGM) unit	NFEPARANK
1	Natural Wetland	Mesic Highveld Grassland Group 4_Flat	Bench	Flat	2
2	Natural Wetland	Mesic Highveld Grassland Group 4_Channelled valley-bottom wetland	Valley floor	Channelled valley-bottom wetland	2
3	Natural Wetland	Mesic Highveld Grassland Group 4_Depression	Bench	Depression	2
4	Natural Wetland	Mesic Highveld Grassland Group 4_Depression	Bench	Depression	2
5	Seep	Mesic Highveld Grassland Group 4_Seep	Slope	Seep	2
6	Natural Wetland	Mesic Highveld Grassland Group 4_Depression	Bench	Depression	2
7	Natural Wetland	Mesic Highveld Grassland Group 4_Flat	Bench	Flat	5

8	Artificial Wetland	Mesic Highveld Grassland Group 4_Channelled valley-bottom wetland	Valley floor	Channelled valley-bottom wetland	6
9	Artificial Wetland	Mesic Highveld Grassland Group 4_Seep	Slope	Seep	6
10	Natural Wetland	Mesic Highveld Grassland Group 4_Channelled valley-bottom wetland	Valley floor	Channelled valley-bottom wetland	5
11	Natural Wetland	Mesic Highveld Grassland Group 4_Unchannelled valley-bottom wetland	Valley floor	Unchannelled valley-bottom wetland	5
12	Natural Wetland	Mesic Highveld Grassland Group 4_Seep	Slope	Seep	5
13	Natural Wetland	Mesic Highveld Grassland Group 4_Seep	Slope	Seep	5
14	Natural Wetland	Mesic Highveld Grassland Group 4_Seep	Slope	Seep	6
15	Natural Wetland	Mesic Highveld Grassland Group 4_Seep	Slope	Seep	5
16	Artificial Wetland	Mesic Highveld Grassland Group 4_Seep	Slope	Seep	6
17	Artificial Wetland	Mesic Highveld Grassland Group 4_Seep	Slope	Seep	6
18	Natural Wetland	Mesic Highveld Grassland Group 4_Seep	Slope	Seep	6
19	Natural Wetland	Mesic Highveld Grassland Group 4_Seep	Slope	Seep	6

Below is the map representing the identified wetlands and their respective numbers, (as indicated by the South African National Biodiversity Institute, Biodiversity GIS)

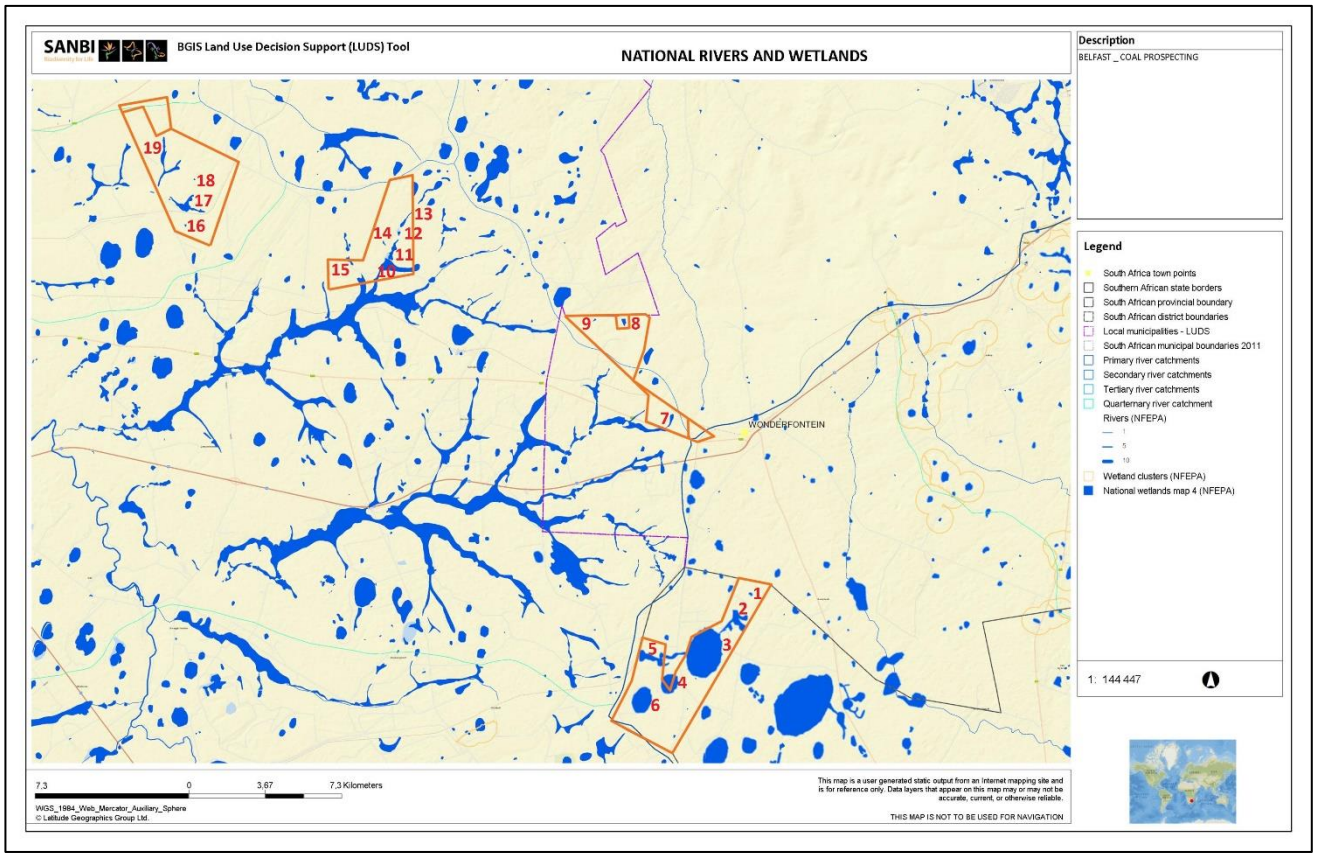


Figure 11: National Wetlands

- **Topography**

The general topography of proposed project location is characterised with relative slopes and undulating hills, with elevated heights ranging between 1786m and 1598m m above mean sea level (amsl). The proposed site is situated within a landscape which is approximately 1786m ams. The tables below gives a detail of the topology of the proposed project location.

Table 5: Elevation Profile

Farm Name	Distance	Min	Avg	Max	Max slope	Avg slope
Klippan, Farm No 452 JS	25,7km	1682m	1722m	1757m	9.8%. -7,3%	1,6%, -1.7%

Farm Name	Distance	Min	Avg	Max	Max slope	Avg slope
Paardekraal, Farm No 422 JS	19,27km	1726m	1758m	1786m	6.4%, -8,4%	1.9%, -1,9%

Farm Name	Distance	Min	Avg	Max	Max slope	Avg slope
Pattattafontein, Farm No 412 JS	14,9km	1622m	1670m	1729m	4,5%, -4,4%	1,8%, -1,7%

Farm Name	Distance	Min	Avg	Max	Max slope	Avg slope
Driefontein, Farm No 398 JS	20,2 km	1598m	1656m	1695m	7,4%, -5,6%	1,4%, -1,5%

Below is the topographical model of the proposed project location (Please also see Appendix B):

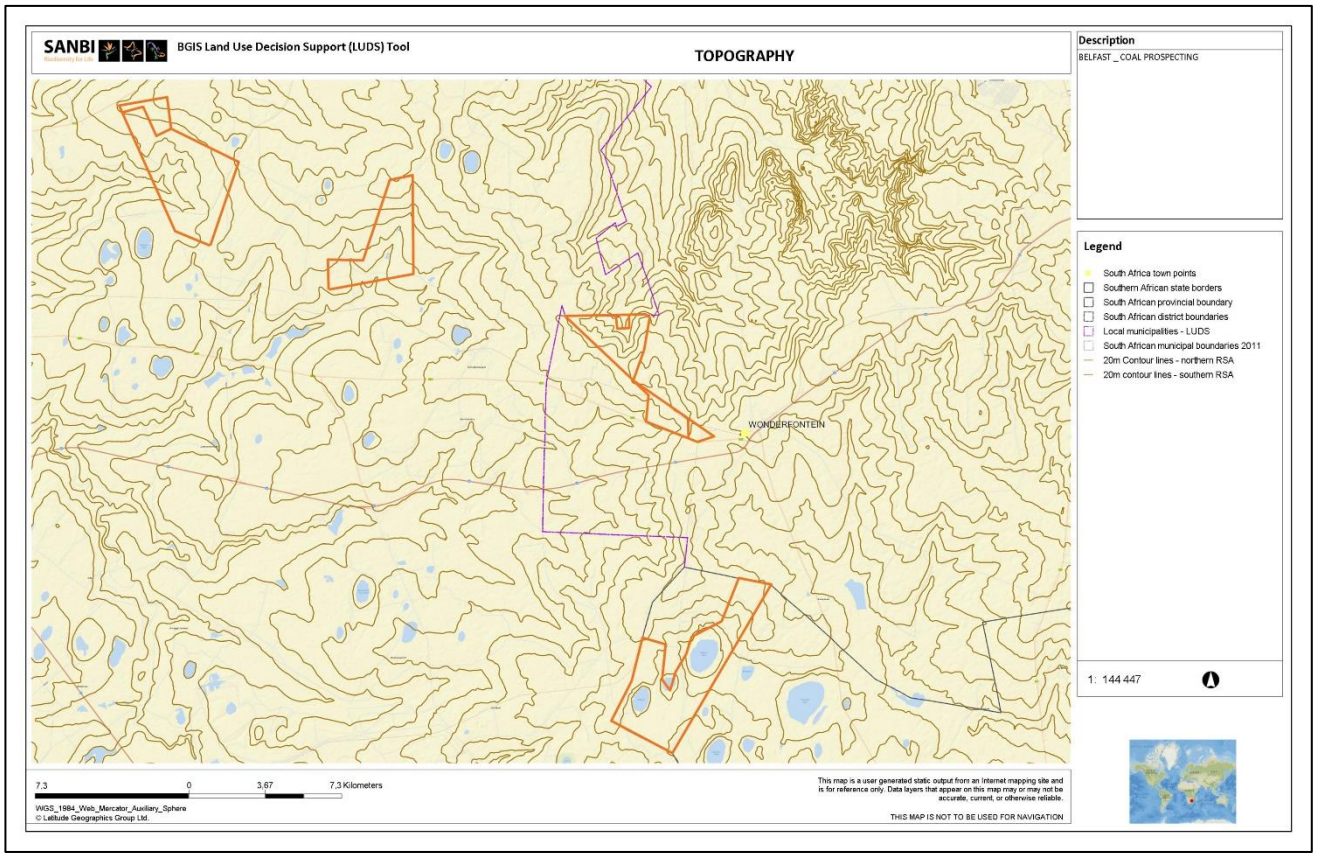


Figure 12: Topographical map of the proposed project area

- **Socio-Economic**

  - **Paardekraal, Farm No 422 JS**

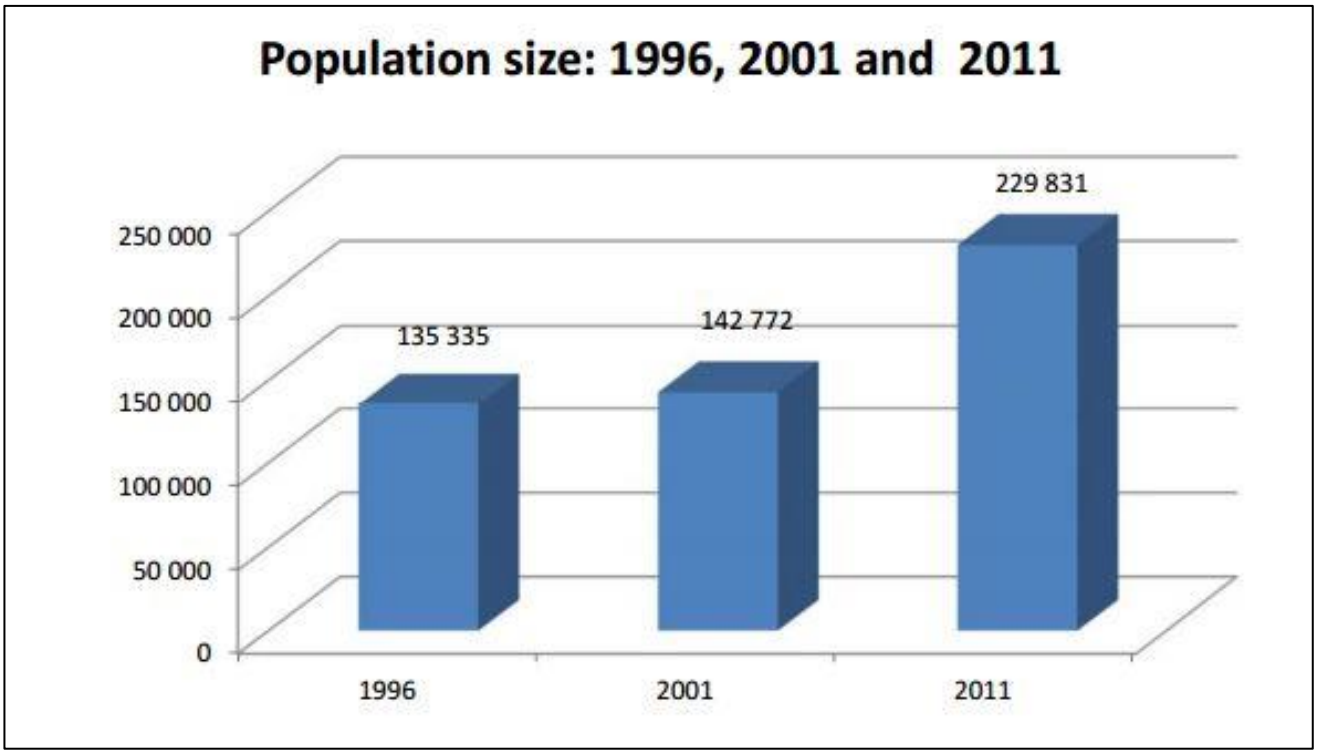
The Paardekraal, Farm is situated with the Emakhazeni Local Municipality which occupies the heart centre of the Mpumalanga Province. The Paardekraal farm is situated between the two major towns in Mpumalanga Province, namely Middelburg and Nelspruit and is connected to both these centres via the N4 Freeway.

Table 6: Summary Profile of Emakhazeni Local Municipality

Emakhazeni Local Municipality	
Total Population Size	47216
Percentage of the population 0-14	28
Percentage of the population 15-65	66.2
Percentage of the population 65+	5.8
Percentage Black	87
Percentage Coloured	1.2
Percentage Asian	0.2
Percentage White	10.8
Population density	10 persons km^2
Employment rate % (15-65)	74.1
Unemployment rate % (15-65)	25.9
Unemployment ratio	184
Employment status for Females, 15 – 65 (employed)	5188
Employment status for Females, 15 – 65 % (employed)	66
Employment status for Females, 15 – 65 (unemployed)	2687
Employment status for Females, 15 – 65 % (unemployed)	34.12
Major Industry	Community; social and personal

  - **Pattattafontein, Farm No 412 JS and Driefontein, Farm No 398 JS**

Both Pattattafontein, Farm and Driefontein, Farm are situated with the Steve Tshwete Local Municipality, a category B municipality situated in Nkangala District in Mpumalanga Province. The municipality is well located as it is traversed by the Maputo Development Corridor, the Middelburg/ Steelpoort mining resource link, as well as the Middelburg/ Bethal/ Ermelo/ Richards Bay Corridor. Furthermore, a number of National and Provincial roads traverse the area of jurisdiction of Steve Tshwete Local Municipality.



The graph indicates that Steve Tshwete is increasingly under pressure due to population growth. In 2011, the total population in Steve Tshwete was approximately 142772. Population grew by 0.53% between 1996 and 2001. Over the ten year period from 2001 to 2011, STLM's population increased by 4.76%. This could be attributed to the number of industries that were opened within the 10 years (2001-2011) that attracted workers into Middelburg.

Table 7: Employment Status

Labour Indicators	Census 2001	Census 2011
Employment		
Economically Active Population (EAP) /Labour Force	64 474	107 069
Number of employed	41 679	85 968
Unemployment		
Number of unemployed	22 795	21 101
Official Unemployment rate (%)	35.4%	19.7%
Unemployment amongst people with disabilities	38.0%	
Youth Unemployment	46.1%	26.5%
Woman Unemployment	49.2%	27.8%

Out of the 107069 economically active population in the municipality, 21 101 are unemployed while 85968 are employed. The unemployment rate has dropped from 35.4% in 2001 to 19.7% in 2011. Youth unemployment remains a major challenge both provincially and the municipality. Limited number of the population with tertiary education might be the major causes of youth unemployment as they can be absorbed into the labour market.

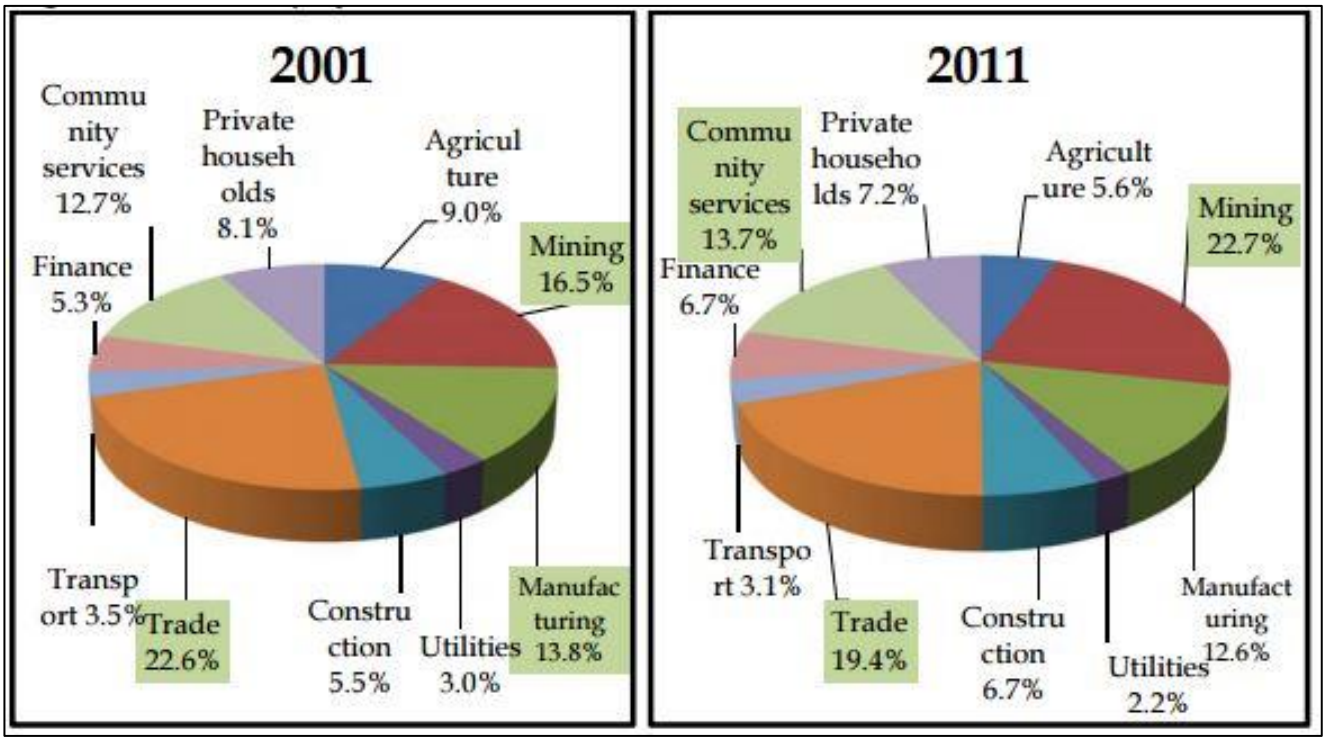


Figure 13: Sector Employment 2001 and 2011

According to the census, the number of people without an income has decreased from 91608 to 84088 between 2001 and 2011. The majority (63690) of Steve Tshwete individual earn within the R1-R 3200 followed by about 47 633 individuals who earn from R3200-R102 400 in 2011 There has been an increase This could be attributed to the number of mines and manufacturing industries located in STLM.

- **Klippan, Farm No 452 JS**

The Klippan farm is situated with the Albert Luthuli Local Municipality within the Gert Sibande District Municipality, a Category B municipality situated within the Gert Sibande District Municipality, and on the eastern escarpment of Mpumalanga, and shares its eastern border with the country of Swaziland.

Other key features include forestry areas in the central and southern areas of the Municipality, a river system, and the Nooitgedacht and Vygeboom Dams, as well as the edge of a greater wetland region. Economic activities that are dominant spatially in the municipality include agriculture, forestry and mining. Retail and services are concentrated in Carolina and also in smaller centres such as Elukwatini and eManzana (previously Badplaas)

The population indicated positive growth of 0,2 % amounting to 186 010 with projection of 192 952 in 2030

Demographic Indicators	**StatsSA Census**	**StatsSA Census**
	2001	**2011**
Population	187 751	186 010
Households	41 209	47 705
Area (km2)	-	5 559km2
Population per km2	-	35

The majority of the population comes from the African group (97.6%); followed by the White group (1.6%), the Indian/Asian group (0.4%), and the Coloured group (0.2%).

The functional age groups are made up by the working age group between 15 to 64 years (58.2%); the age group 0 to 4 years (36,5%); and the elderly age group 65+ (5.3%). Females represented 53.1% of the population and males 46.9%. Youth up to 34 years represented made up 36.0% of the population. The sex ratio for the population was 88 males per 100 females.

The economically active age group from 15 to 64 years included 58.2% of the population; 36,000 people in this age group were not working; and only 15.7% of the population was employed. The unemployment rate in the Municipality was 35.4%, 1n 2011 but has since decreased to 32.7 in 2016 of which the majority are young people 15 to 35 years; 34.0% are discouraged work seekers or not economically active. Employment in the formal sector was 65.6%, and in the informal sector 21.9%. The proportion of the population in low-skilled employment is 44.0%. The high unemployment rate is mainly influenced by the lack of economic opportunities in the municipal area.

The poverty rate slight decrease from 46.7% 2011 to 40.8% in 2015 while the average household income is R48,790 per annum, which is directly linked to the low employment rate; 19% of households earned less than R800 per month. Income equality was indicated at 0.57 on the Gini-coefficient scale of 0 to 1 (0 = perfect equality where all households earn equal income; and 1 = one household earning all income and other households earn nothing). The rate was increasing, which indicated that income inequality was increasing in the Municipality.

The dependency ratio in the Municipality is 71/100, which indicates that 71 persons, either young or old, depended on 100 persons of working age. However, it must be noted that when employment rates are low, the economic dependency of young, old and unemployed on each working person will be higher than the population dependency rate.

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

(Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impacts of such activities, and as informed by the consultations with affected parties together with the significance, probability, and duration of the impacts. Please indicate the extent to which they can be reversed, the extent to which they may cause irreplaceable loss of resources, and can be avoided, managed or mitigated).

- **Fauna and Flora**

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	
Clearing of vegetation	Habitat and loss of species	Prospecting	1	1	3	3	(-15)	Yes	Moderate	Appoint an Environmental Control Officer (ECO) prior to commencement of construction phase. Responsibilities should include, but not necessarily be limited to, ensuring adherence to EMP guidelines, guidance of activities, planning, reporting to authorities. Conduct a search and rescue operation for all conservation important plants on the site. This operation should be conducted during the austral summer period when vegetative and reproductive growth is evident. Exclude all wetland related habitat and required buffer zones from the proposed activities.	1	1	2	2	(-8)
	Exposed soil susceptible to erosion	Prospecting	1	1	2	2	(-8)	Yes	Low		1	1	1	2	(-6)
Disturbance of soils	Alien plant invasions in disturbed areas	Prospecting	1	1	2	2	(-8)	Yes	Low		1	1	1	2	(-6)
Fauna	Faunal Mortality and Displacement	Prospecting	1	2	2	2	(-10)	Yes	Low		1	1	1	1	(-3)
	Impact on riparian zones	Prospecting	2	1	2	3	(-15)	Yes	Moderate		2	1	1	2	(-8)

- **Geo-Hydrology**

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment/ resource	Potential mitigation measures	After Mitigation				Ranking of impact/ risk
			E	D	I	P					E	D	I	P	
Groundwater quality	Spillage of fuels, lubricants and other chemicals.	Prospecting	2	1	3	3	(-18)	Yes	Moderate	Groundwater monitoring network (both quality and quantity) should be established.	2	1	2	2	(-10)

- **Socio-economic Impacts**

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	
Influx of people (jobseekers)	Disruption of social fabric (e.g. crime)	Prospecting	2	1	2	2	(+10)	No	Low	'Locals first' employment policy; Complaints register	2	1	2	3	(+15)
Labour required for project development and operation	Employment opportunities	Prospecting	2	1	2	2	(+10)	No	Low	'Locals first' employment policy considering the skills are adequate	2	1	2	3	(+15)

- **Air Quality**

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	
Air Quality disturbance due to emissions from operations and trucks	Decrease in the quality of the air	Prospecting	2	1	2	4	(-20)	No	High	Keep within regulated acceptable emissions standards & consider cumulative impacts	2	1	2	3	(-15)
Dust generation	Increase in road traffic on dirt roads causing dust generation	Prospecting	2	1	2	3	(-15)	No	Moderate	Use of grey water for dust spraying and wetting, proper grading of roads and keeping traffic to a reasonable level	2	1	2	2	(-10)

- **Economic**

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment/ resource	Potential mitigation measures	After Mitigation				Ranking of impact/ risk
			E	D	I	P					E	D	I	P	
Project expenditure (incl. direct capital investment,	Investment and growth in local economy	Prospecting	2	1	2	2	(+10)	No	Moderate	None	2	1	2	3	(+15)

and compulsory social investment)																

- **Noise**

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	
Noise disturbance during exploration	Disruption to surroundings due to noise levels	Prospecting	2	2	2	4	**(-25)**	No	High	Adaptive project design to avoid excessive noise disturbance	2	2	1	3	**(-15)**

- **Geotechnical**

Impact pathway	Nature of potential impact/risk	Phase impact occurs	Before Mitigation				Significance of impact	Reversibility of impact	Irreplaceability of receiving environment/ resource	Potential mitigation measures	After Mitigation				Ranking of impact/ risk
			E	D	I	P					E	D	I	P	
Disturbance of surface geology	Gully or donga erosion by concentrated, uncontrolled water-flow	Prospecting	1	2	2	2	**(-10)**	Yes	Low	Excavations deeper than 1.5 m be cut back to not more than 750 of horizontal and that the ingress of water in and around any excavations be prevented.	1	2	2	1	**(-5)**

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

(Describe how the significance, probability, and duration of the aforesaid identified impacts that were identified through the consultation process was determined in order to decide the extent to which the initial site layout needs revision).

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 8: Criteria Used for Rating of Impacts

CRITERIA	DESCRIPTION			
Extent	**National (4)** The whole of South Africa	**Regional (3)** Provincial and parts of neighbouring provinces	**Local (2)** Within a radius of 2 km of the construction site	**Site (1)** Within the construction site
Duration	**Permanent (4)** Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient	**Long-term (3)** The impact will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter. The only class of impact which will be non-transitory	**Medium-term (2)** The impact will last for the period of the construction phase, where after it will be entirely negated	**Short-term (1)** The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than the construction phase
Intensity	**Very High (4)** Natural, cultural and social functions and processes are altered to extent that they permanently cease	**High (3)** Natural, cultural and social functions and processes are altered to extent that they temporarily cease	**Moderate (2)** Affected environment is altered, but natural, cultural and social functions and processes continue albeit in a modified way	**Low (1)** Impact affects the environment in such a way that natural, cultural and social functions and processes are not affected

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.

Table 9: Criteria for Rating of Classified Impacts

Low impact/ Minor (3 -10 points)	A low impact has no permanent impact of significance. Mitigation measures are feasible and are readily instituted as part of a standing design, construction or operating procedure.
Medium impact/ Moderate (11 -20 points)	Mitigation is possible with additional design and construction inputs.
High impact (21 -30 points)	The design of the site may be affected. Mitigation and possible remediation are needed during the construction and/or operational phases. The effects of the impact may affect the broader environment.
Very high impact/ Major (31 - 48 points)	Permanent and important impacts. The design of the site may be affected. Intensive remediation is needed during construction and/or operational phases. Any activity which results in a "very high impact" is likely to be a fatal flaw.
Status	Denotes the perceived effect of the impact on the affected area.
Positive (+)	Beneficial impact.
Negative (-)	Deleterious or adverse impact.
Neutral (/)	Impact is neither beneficial nor adverse.
It is important to note that the status of an impact is assigned based on the status quo – i.e. should the project not proceed. Therefore not all negative impacts are equally significant.	

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

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

(Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties)

- **Positive impacts**

The positive impacts of the activities are the creation of employment which is really required in the region.

The proposed activities have very low significance since these are short term activities. The probability of occurrence of an impact was determined and most of these activities can be controlled and impacts can be reduced or avoided. The probability was also used basing on looking at other prospecting activities of similar nature. 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. Changes in plan will be discussed with the farmers and approvals will be signed

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

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/ discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered).

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

ix. Motivation where no alternative sites were considered.

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.

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

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

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.

i) Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site (In respect of the final site layout plan) through the life of the activity.

(Including (i) a description of all environmental issues and risks that erer identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.)

In order to identify the potential impacts associated with the proposed prospecting activities the following steps were undertaken:

- The stakeholder consultation process is currently undertaken in a manner to be interactive, providing landowners and identified stakeholders with the opportunity to provide input into the project. This is a key focus, as the local residence has capabilities of providing site specific information, which may not be available in desktop research material. Stakeholders are requested to provide their views on the project and any potential concerns which they may have. All comments and concerns are captured and formulated into the impact assessment.
- A detailed desktop investigation was undertaken to determine the environmental setting in which the project is located. Based on the desktop investigations various resources were used to determine the significance and sensitivity of the various environmental considerations. The desktop investigation involved the use of:
    - South African National Biodiversity Institute (SANBI) Biodiversity Geographic Database LUDS system
    - Geographic Information System base maps;
    - Department of Water Affairs and Sanitation's information documents such as the ground water vulnerability report.
    - Municipal Integrated Development Plan
    - Municipal Strategic Development Framework
    - South African National Biodiversity Institute GIS Map
- A site visit was conducted on the 09th and 11th of May 2017. The site visit was to ensure that the information gathered as part of the Desktop investigation reflects the current status of the land.
- The ratings of the identified impacts were undertaken in a quantitative manner as provided in Impact Assessment Section. The ratings were undertaken in a manner to calculate the significance of each of the impacts. The EAP also assesses the outcomes of the calculation to determine whether the outcome reflects the perceived and the actual views.
- The identification of management measures are done based on the significance of the impacts and measures that have been considered appropriate and successful, specifically as Best Practical and Economical Options.

j. Assessment of each identified potentially significant impact and risk

(This section of the report must consider all the known typical impacts of each of the 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 impact and risk

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**POTENTIAL IMPACT** (Including the potential impacts for cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc.…etc…)	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	**SIGNIFICANCE** *if not mitigated*	**MITIGATION TYPE** (modify, remedy, control, or stop) through(e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc) E.g. Modify through alternative method. Control through noise control Control through management and monitoring through rehabilitation.	**SIGNIFICANCE** *if mitigated*
Desktop Study	None Identified	N/A	Planning Phase	N/a	No mitigation Proposed	
Identification of legislative requirements	Commencement of activities without all the required licenses and permits	Policy and legal Requirements	Planning Phase	Low (-ve)	The applicant must ensure that all relevant legislations and regulations have been adhered to before commencement of the project.	Insignificant
Chipping of outcrops to obtain outcrop samples	Bodily injuries or death at a worst case	Health and Safety	Field Mapping	Medium Significance (Negative)	The Geologists conducting field mapping should wear protective clothing.	Insignificant
Encounter with dangerous wild animals	Bodily injuries or death at a worst case	Health and Safety	Field Mapping		Repellent for snakes should be spread on the path ways.	Low (Negative)

				Medium Significance (Negative)	All site personnel must have a working cell phone to communicate in case of emergency	
Geologist trapped in the caves	Loss of life or serious Body injuries	Health and Safety	Field Mapping	Medium Significance (Negative)	Entrance into the caves must be communicated and planned before such action is taken. The stability of the cave walls must be known.	Insignificant
Use of Vibrators for seismic geophysical method	Tremor ground vibrations	Geology & Ground Stability	Geophysical Surveys	Low (-ve)	Residential and business areas should be marked as No-Go areas where seismic method is used.	Low (-ve)
Set-up of Geophysical Survey Equipment	Clearing of Vegetation	Flora and Fauna	Geophysical Survey	Medium (-ve)	Already cleared areas should be preferred over heavily dense areas	Low (-ve)
Set-up of Geophysical Survey Equipment	Theft	Socio-Economic	Geophysical Survey	Low (-ve)	The site camp must be secured and entrance into the site must be controlled	Low (-ve)
Preparation of drilling sites and access roads	Loss of Vegetation	Flora and Fauna	Drilling Phase	Medium (-ve)	Where possible existing access roads must be used	Low (-ve)
	Loss of micro animals	Flora and Fauna	Drilling Phase	Medium (-ve)	Search and rescue mission should be undertaken for species on drilling site	Low (-ve)
	Contamination of surface water	Hydrology	Drilling Phase	High (-ve)	Coal ore mining has a high potential for contaminating any stream water Large machinery crossing the river should be given extra care such that no chemical and oil leaks occur	Medium (-ve)
Preparation of drilling sites and access roads	Soil contamination	Soil & Geology	Drilling Phase	Medium (-ve)	The equipment and machinery must be monitored for leaks	Low (-ve)
Drilling Activities	Ground & Surface Water contamination	Hydrology	Drilling Phase	High (-ve)	The drill bits must be maintained in good condition to prevent leakages of oil when in the underground.	Medium (-ve)

					Aquifer detection methods should be applied before drilling can be undertaken.	
					Streams must be diverted where alluvial activities are taking place.	
Drilling Activities	Waste Generation	Waste Management	Drilling Phase	Very 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.	Medium (-ve)
					Skips and marked bins must be provided at the site for waste separation.	
					Waste water must not be released into the natural streams prior treatment	
					The mechanical wastes must be stored separately from other areas in a waste skip and must be disposed of at an appropriate landfill site.	
					Equipment maintenance must be done off site, and where there is need to conduct it on site, it must be done on a bunded area.	
					Cleaning of equipment must be done on a bunded area.	
Drilling Activities	Animals falling into drill holes	Health and Safety	Drilling Phase	Medium (-ve)	The drill holes must be capped overnight and when not in operation.	Low (-ve)
	Theft	Socio-economic	Drilling Phase	Medium (-ve)	Site Must be secured and Security personnel must be stationed at all points where there is equipment.	

Drilling Activities	Lowering of groundwater levels	Hydrology	Drilling Phase	Medium (-ve)	Areas with shallow aquifers must be avoided	Low (-ve)
Drilling Activities	Removal of topsoil	Geology &Soils	Drilling Phase	Medium (-ve)	Topsoil must be located away from the drainage lines	Low (-ve)
					Contaminated soil must not be mixed with clean stockpiles	
					No chemicals should be placed near the topsoil stockpiles.	
					The stockpiles must not be more than 1,5m high	
Drilling Activities	Spillages of hazardous chemicals	Soil & geology; Hydrology	Drilling Phase	Medium (-ve)	All substances required for vehicle maintenance and repair must be stored in sealed containers until they can be disposed of / removed from the site	Low (-ve)
					Hazardous substances / materials are to be transported in sealed containers or bags.	
					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.	
Drilling Activities	Destruction of Heritage Resources	Socio-Economic	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 contacted immediately. Work at the discovery site may only be recommenced on instruction from SAHRA.	Low (-ve)
Decommissioning of Site Camp	Waste generation	Waste management	Decommissioning Phase	Medium (-ve)	The uncontaminated stockpiled materials must be used for backfilling	Low (-ve)

Decommissioning of Site Camp	Contamination of the soil and water	Soil; Hydrology	Decommissioning	Medium (-ve)	The hazardous substances onsite must be stored in marked containers.	Low (-ve)
					All the equipment must be shipped out of the site	
					The compacted soils must be loosened and topsoil spread on top, and also spreading seeds of indigenous species.	

The supporting impact assessment conducted by the EAP must be attached as an appendix, marked **Appendix**

k. Summary of specialist reports.

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

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
No specialist studies have been undertaken	N/A	N/A	N/A

Attach copies of Specialist Reports as appendices

I. Environmental impact statement

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

The proposed prospecting operation will not affect any existing alternative land uses on the property or on adjacent property or non-adjacent property. The following actions are subject to the proposed mitigation measures and require monitoring:

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

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.

II. Final Site Map

Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers .Attach as **Appendix**

The exact location of drilling points cannot be pinpointed as the prospecting activities are conducted in phases, and each phase depends on the success of the previous phase. The drill points must be identified after the geophysical surveys have confirmed the presence of the ore body. The sensitive areas will be identified during the planning phase of the project and no activities will be undertaken at any sensitive area. A detailed map can be produced after the geophysical surveys has been undertaken, although the map will be subjected to changes depending on the results of the preliminary drilling and assaying.

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

Proposed Activity	Potential Impacts
Desktop Study	No impacts on site
Ground Geophysics, soil geochemistry and trenching	• Low impacts from short-term staff and • vehicle access to the site, • interfering with the animal grazing paddocks • managing fences and gates • Livestock falling into dug trenches • Creation of employment
Drilling	• Access tracks • Disturbance of vegetation and topsoil • Oil & fuel spills • Dust & noise • Labour issues • Litter

	• Possible discovery of fossils • Creation of employment
Sample processing / evaluation / decision making	No impacts on site.
Rehabilitation	Replacing topsoil, covering with brushwood etc

The proposed activities have very low significance since these are short term activities. 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 used to control any potential impact.

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

Based on the assessment and where applicable the recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorisation.

Impact management objectives are described in terms of the Mitigation Hierarchy of the ERM Impact Assessment Standard. The mitigation hierarchy is as follows:

- **Avoid at Source:** Reduce at Source: avoiding or reducing at source through the design of the Project (e.g., avoiding by siting or re-routing activity away from sensitive areas or reducing by restricting the working area or changing the time of the activity).
- **Abate on Site:** add something to the design to abate the impact (e.g., pollution control equipment, traffic controls, perimeter screening and landscaping).
- **Abate at Receptor:** if an impact cannot be abated on-site then control measures can be implemented off-site (e.g., noise barriers to reduce noise impact at a nearby residence or fencing to prevent animals straying onto the site).
- **Repair or Remedy:** some impacts involve unavoidable damage to a resource (e.g. agricultural land and forestry due to creating access, work camps or materials storage areas) and these impacts can be addressed through repair, restoration or reinstatement measures.
- **Compensate in Kind; Compensate Through Other Means:** where other mitigation approaches are not possible or fully effective, then compensation for loss, damage and disturbance might be appropriate (e.g., planting to replace damaged vegetation, financial compensation for damaged crops or providing community facilities for loss of fisheries access, recreation and amenity space).

- **Impact management objectives:**

- Provide sufficient information to strategically plan the prospecting activities as to avoid unnecessary social and environmental impacts
- Provide sufficient information and guidance to plan the prospecting activities in a manner that would reduce impacts (both social and Environmental) as far as practicable.

- Ensure an approach that will provide the necessary confidence in terms of environmental compliance.
- Provide a management plan that is effective and practical for implementation

Through the implementation of the proposed mitigation measures, it is anticipated that the identified social and environmental impacts can be managed and mitigated effectively. Through the implementation of the mitigation and management measures it is expected that:

- Noise impacts can be managed through consultation and through the restriction of operating hours;
- The pollution of soil and water resources can be effectively managed through containment;
- Ecological impact can be managed through the implementation of pollution prevention measures, minimising land clearing, restricting working hours (faunal disturbances) and rehabilitation.
- Concerns regarding access control to the farm can be managed through the development and ensuring compliance to an appropriate access control procedure.
- Risks associated with crime can be mitigated through avoiding recruitment activities on site as well as monitoring and reporting.
- Visual impacts can be minimized through giving consideration to drill site, infrastructure placement and materials used.

(n) Aspects for inclusion as conditions of Authorisation.

(Any aspects which must be made conditions of the Environmental Authorisation)

No aspect to be included as conditions of Authorisation. The company should comply with all environmental legislation. Specific aspects to be adhered to from environmental legislation include; National Environmental Management Act, Act 107 of 1998 (NEMA), Minerals and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA), National Water Act, Act36 of 1998 (NWA) and Conservation of Agricultural Resources Act, Act No. 43 of 1983 (CARA)

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

(Which relate to the assessment and mitigation measures proposed)

No assumptions, uncertainties and gaps in knowledge. All mitigation measures are possible and practical.

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

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

- 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 to compile the required annual environmental compliance report required by the DMR.
- The desktop studies have proven that the site is located on a mineralised zone, prospecting activities must be undertaken to confirm the ore reserves
- It has also been noted that mining sector is the pillar of South African economy and also provides employment opportunities for many.

- There has been illegal prospecting and mining activities onsite, and as such authorising the prospecting activities will curb illegal mining which may result in community conflict.
- 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.

ii. Conditions that must be included in the authorisation

No aspect to be included as conditions of Authorisation. The company should comply with all environmental legislation. Specific aspects to be adhered to from environmental legislation include; National Environmental Management Act, Act 107 of 1998 (NEMA), Minerals and Petroleum Resources Development Act, Act 28 of 2002 (MPRDA), National Water Act, Act36 of 1998 (NWA) and Conservation of Agricultural Resources Act, Act No. 43 of 1983 (CARA)

(p) 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.

(q) Undertaking

(Confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic assessment report and the Environmental Management Programme report).

An undertaken by the EAP and the client is provided for in Section 2 of the EMP.

(r) Financial Provision

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

R78 452, 99

i) 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 a mine. The amount is anticipated to be an operating cost and provided for in the Prospecting Work Programme. The financial provision has been added on to the initial amount quoted in the Prospecting Work Programme.

(i) Confirm that this amount can be provided for from operating expenditure. (Confirm that the amount, is anticipated to be an operating cost and is provided for as such in the Mining work programme, Financial and Technical Competence Report or Prospecting Work Programme as the case may be).

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

(t) Specific Information required by the competent Authority

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

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

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as an Appendix).

Current land uses inside the prospecting area, such as grazing, may be temporarily impacted through the presence of the fenced areas that drill rigs will operate within. These are however, small areas, approximately 10m x10m in total. These areas will be rehabilitated post drilling activities and the areas will once again become available for grazing. The farmers raised issues like leaving the gates open and opening of many access roads.

- Potential water and soil pollution resulting from hydrocarbon spills and soil erosion;
- Noise due to the undertaking of the site fly-overs and drilling activities;
- Generation of waste that would be injected into the local waste stream;
- Poor access control resulting in impacts on cattle movement breeding and grazing practices;
- Influx of persons (job seekers) to site as a result of increased activity and the possible resultant increase in opportunistic crime; and
- Visual Impact

Table 11: impact summary

Potential Impact	Significance Pre-Mitigation	Significance Post-Mitigation
Socio- Economic Environment and Livelihoods		
Creation of Employment opportunities	Minor (+)	Minor (+)
Loss of Productive land for Agricultural Purposes	Minor (-)	Insignificant (-)
Physical and Economic Impacts		
Water and Soil Pollution resulting from spillages of hydrocarbons	Moderate (-)	Minor (-)
Increased noise levels from the fly-overs planes and drilling activities	Major (-)	Moderate (-)
Generation of wastes that would be injected into local waste stream	Major (-)	Minor (-)
Legal and Legacy Issues		
Resentment and anger from unfulfilled expectations	Moderate (-)	Minor (-)
Influx of job seekers	Moderate (-)	Minor (-)
Criminal activities (Site Camp invasion)	Moderate (-)	Minor (-)

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

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(*i*)(vi) and (vii) of that Act, attach the investigation report as **Appendix 2.19.2** and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

As outlined in Section d (ii), of this report, prospecting will be undertaken in phases; the first phase being a desktop assessment, followed by ground and/or aerial magnetic survey and soil sampling. During the site visit there were no sites that were identified that are of heritage importance

Based on the outcome of these activities, soil sampling and potential drill sites will be determined. Potential heritage impact may only occur once soil sampling and geophysics have been used to identify sites for drilling, and it is therefore recommended that the any Heritage Artefacts that may be encountered should be reported to SAHRA and at the mean time all the activities should cease.

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

(the EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist. The EAP must attach such motivation as **Appendix 4)**.

No alternatives of the site were considered based on the following:

- The proposed prospecting area is targeted as historically, coal seams occurrences are common in the area and a number of this has been exploited for coal in the past. There have also been various mining operations within the vicinity of the exploration area.
- There is no perennial stream traversing the site that could create environmental concerns such as water contamination.
- There is sufficient open area with no settlements or any economic activities that could possibly create conflicts with the land owners.

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

1) Draft environmental management programme.

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

The requirement f or the provision of the details and expertise of the EAP are included in PART section 1(a).

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

The requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (1) (h)

c) Composite Map

(Provide a map **(Attached as an Appendix**) at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers)

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

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

The following section details the goals and objectives that Dlamini Trust will aim to achieve. It includes both a commitment to ensure legal compliance and then highlights the goals and objective for those impacts which are deemed most significant for exploration. Environmental Legislation to comply with all environmental legislation. Specific aspects to be adhered to from environmental legislation include; National Environmental Management Act, Act 107 of 1998 (NEMA) As the NEMA is the cornerstone of all environmental legislation, the management measures implemented by the Dlamini Trust will strive to adhere to the principles of NEMA:

- That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
- that pollution and degradation of the environment are avoided, or, where they cannot be altogether avoided, are minimised and remedied;
- that the disturbance of landscapes and sites that constitute the nations cultural heritage is avoided, or where it cannot be altogether avoided, is minimised and remedied;

- that waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner
- that the use and exploitation of non-renewable natural resources is responsible and equitable, and takes into account the consequences of the depletion of the resource;
- that a risk averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and
- That negative impacts on the environment and on people's environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.

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.

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

10 000litres per day

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

The water use has not been applied for thus because the volume of water to be used during the prospecting activities does not trigger any listed activities. The Department of Water Affairs and Sanitation will be consulted as a project stakeholder.

i) Impacts to be mitigated in their respective phases

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

ACTIVITIES **(E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc** **E.g. For mining**,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**PHASE** (Of operation in which activity will take place. State; Planning and design, Pre-Construction' Construction, Operational, Rehabilitation, Closure, Post closure).	**SIZE AND SCALE of disturbance** (volumes, tonnages and hectares or m²)	**MITIGATION MEASURES** (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	**COMPLIANCE WITH STANDARD** (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:-.. Upon cessation of the individual activity Or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.
Site Office and core shed	Prospecting	N/A	Arrangements may be done with farmers to use existing structures for offices and coreshed.	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr	N/a
Accommodation	Prospecting	0.002Ha	In order to minimise impacts in the prospecting area, no camp site will be established. All employees will stay outside prospecting area. The employees will drive to the site every day when drilling operations are in progress.	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr	N/A

			A security company may be contracted to protect the drilling equipment overnight or over weekends if the drill contractors have a weekend off.		
Trenching	Prospecting	0.5Ha	The area that was disturbed by the drilling operation at each site shall be rehabilitated, as far as is practicable, to its original state as soon as the drilling is completed. Photographs, for monitoring purposes, should be taken before drilling commences and after each drilling site has been rehabilitated. These photographs should be included in the required Performance Assessment Reports.	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr	Rehabilitate upon cessation of the individual activity that is as soon as a trench is completed. No trench shall be left open overnight unless if guarded.
Drill site	Prospecting	2000m	Every effort must be made to minimise the area needed at each drilling site. Vegetation should not be cut or trimmed unless absolutely essential. The area that was disturbed by the drilling operation at each site shall be rehabilitated, as far as is practicable, to its original state as soon as the drilling is completed. Photographs, for monitoring purposes, should be taken before drilling commences and after each drilling site has been rehabilitated. These photographs should be included in the required Performance Assessment Reports.	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr	Rehabilitate upon cessation of the individual activity that is as soon as a drill hole is completed.
Access routes			No new roads are to be constructed on this site. Tracks across areas covered by natural vegetation will be kept to the absolute minimum required.	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr	Rehabilitate immediately

			Employees must comply with all speed and traffic regulations on public roads and should not exceed 40km/hour on farm roads		

b) Impact Management Outcomes

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

ACTIVITY (whether listed or not listed). **(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.).**	**POTENTIAL IMPACT** **(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)**	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated **(e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)**	**MITIGATION** **TYPE** **(modify, remedy, control, or stop)** **through** **(e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)** **E.g.** • **Modify through alternative method.** • **Control through noise control** • **Control through management and monitoring** • **Remedy through rehabilitation..**	**STANDARD TO BE ACHIEVED** **(Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.**
Site Office and core shed	Physical surface disturbance	Visual	Post closure	No construction on site. If need be to utilise existing building and agreement to be done with farmer	Impact avoided
Accommodation	Physical surface disturbance	Visual	Post closure	No construction on site. If need be to utilise existing building and agreement to be done with farmer	Impact avoided
Site Establishment	Dust and Noise from Vehicles driving in veld to access the proposed drill site	Air	Operation	Noise control, Reduce dust by driving slow. Ensure vehicles and equipment is maintained. Silencers should be fitted on all engines.	Impact controlled

Site Establishment	Carbon emissions due to internal combustion of fuel	Air	Operation	Ensure vehicles and equipment is maintained.	Impact controlled
Trenching	Topsoil loss and destruction of vegetation	Biodiversity loss	Operation and Post Closure	Trenching sites to be located in disturbed areas wherever possible. The prospecting area including trench sites and access routes are to be rehabilitated to as near original condition as possible. No fires to be made in the prospecting area.	Impact controlled
Trenching	Dust	Air	Operation	Dust control measures	Impact controlled
Trenching/ Drilling	Noise	Environmental nuisance	Operation	Ensure vehicles and equipment is maintained. Silencers should be fitted on all engines.	Impact controlled
Drill site	Removal of top soil for sump. Drainage surface disturbance	Biodiversity loss	Operation and Post Closure	Vegetation needs to take place with topsoil that has the surrounding vegetation seedbanks. Badly damaged areas shall be fenced in to enhance rehabilitation. Areas to be rehabilitated must be planted with a mixture of local pioneer species indigenous to the area, as soon as the new growing season starts. To get the best results in a specific area, it is a good idea to consult with a vegetation specialist or the local extension officer of the Dept of Agriculture. Seed distributors can also give valuable advice as to the mixtures and amount of seed necessary to seed a certain area.	Impact controlled

				Re-seeding, as well as fencing in of badly damaged areas, will always be at the discretion of the Environmental Control Officer and in compliance with EMP.	
Drill site	Dust	Air pollution	Operation	Put dust control measures	Impact controlled
Drilling	Use of drilling mud during drilling operations	Ground Water contamination	Operation and Post Closure	Put control measures	Impact controlled
Drilling	Failure of drill sludge control system	Surrounding environment, Ground water contamination	Operation	Establish EMP procedures to minimise hydrocarbon spills.	Impact controlled
Drilling	Breakdown of machinery, oil spillages	Surrounding environment and water contamination	Operation	Establish EMP procedures to minimise hydrocarbon spills.	Impact controlled

c) Impact Management Actions

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

ACTIVITY whether listed or not listed. **(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.).**	**POTENTIAL IMPACT** **(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)**	**MITIGATION** **TYPE** **(modify, remedy, control, or stop)** **through** **(e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)** **E.g.** • **Modify through alternative method.** • **Control through noise control** • **Control through management and monitoring** **Remedy through rehabilitation..**	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:-.. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
Site Office and core shed	Physical surface disturbance	No construction on site. If need be to utilise existing building and agreement to be done with farmer	N/A	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr

Accommodation	Physical surface disturbance	No construction on site. If need be to utilise existing building and agreement to be done with farmer	N/A	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr
Site Establishment	Dust and Noise from Vehicles driving in veld to access the proposed drill site	Noise control, Reduce dust by driving slow. Ensure vehicles and equipment is maintained. Silencers should be fitted on all engines.	Ongoing during activity	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr
Site Establishment	Carbon emissions due to internal combustion of fuel	Ensure vehicles and equipment is maintained.	Ongoing during activity	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr
Trenching	Topsoil loss and destruction of vegetation	Trenching sites to be located in disturbed areas wherever possible. The prospecting area including trench sites and access routes are to be rehabilitated to as near original condition as possible. No fires to be made in the prospecting area.	Upon cessation of individual activity	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr
Trenching	Dust	Dust control measures	Ongoing during activity	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr
Trenching/ Drilling	Noise	Ensure vehicles and equipment is maintained. Silencers should be fitted on all engines.	Ongoing during activity	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr
Drill site	Removal of top soil for sump. Drainage surface disturbance	Vegetation needs to take place with topsoil that has the surrounding vegetation seedbanks. Badly damaged areas shall be fenced in to enhance rehabilitation. Areas to be rehabilitated must be planted with a mixture of local pioneer species indigenous	Ongoing during activity	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr

		to the area, as soon as the new growing season starts. To get the best results in a specific area, it is a good idea to consult with a vegetation specialist or the local extension officer of the Dept of Agriculture. Seed distributors can also give valuable advice as to the mixtures and amount of seed necessary to seed a certain area. Re-seeding, as well as fencing in of badly damaged areas, will always be at the discretion of the Environmental Control Officer and in compliance with EMP.		
Drill site	Dust	Put dust control measures	Ongoing during activity	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr
Drilling	Use of drilling mud during drilling operations	Put control measures	Ongoing during activity	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr
Drilling	Failure of drill sludge control system	Establish EMP procedures to minimise hydrocarbon spills.	Ongoing during activity	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr
Drilling	Breakdown of machinery, oil spillages	Establish EMP procedures to minimise hydrocarbon spills.	Ongoing during activity	Dlamini Trust will ensure that all employees, contractors, visitors comply with the EMPr

i) Financial Provision

(1) Determination of the amount of Financial Provision.

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

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 the EMP.
- Sustain the pre-prospecting land use.
- To record and communicate the results of the monitoring programme during decommissioning to the participating stakeholders.
- To receive an effective closure certificate (should the prospect indicate that the resource(s) would not support a sustainable mining operation).

(b) 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.

(c) Provide a rehabilitation plan that describes and shows the scale and aerial extent of the main mining activities, including the anticipated mining area at the time of closure.

The activities involved are for prospecting and will involve no permanent removal of soil and rock. Should the prospecting yield negative results, then the end use for area will revert to its pre-prospecting land use. The end-use of the area will therefore not be changed by the prospecting operations.

However, should the prospecting operation yield positive results, then the farm could be subject to a mining rights application and another more comprehensive Public Participation, Scoping, EIA and EMP process. If a mining right is granted then the area will be rehabilitated according to the requirements of the approved Environmental Management Programme that would apply throughout the life of the mine.

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

The amount for rehabilitation is anticipated to be an operating cost and provided for in the Prospecting Work Programme Drill site rehabilitation will be undertaken by the contract drilling company on completion of every borehole. This will include:

- The removal of all wastes generated on-site by the drilling activity.
- Backfilling of sumps, where applicable
- The ripping of cleared and compacted soils where this may have occurred; and
- The re-contouring of drill sites to resemble the topography similar to that prior to the commencement of drilling activities
- Take photos of the site before prospecting commences and after prospecting

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

The quantum of the financial provision required is therefore: R78 452 99. The Company must annually update and review the quantum of the financial provision (Regulation 54 (2)

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

Dlamini Family Trust undertakes to provide financial provision and a Bank Guarantee will be the method of providing for the financial provision. The amount is anticipated to be an operating cost and provided for in the Prospecting Work Programme.

		CALCULATION OF THE QUANTUM						
Applicant:	**Dlamini Trust Pty Ltd**				**Ref No.:**			
Evaluator:					**Date:**	**30-May-17**		
No.	**Description**	**Unit**	**A**	**B**	**C**	**D**	**E=A*B*C*D**	
			Quantity	**Master**	**Multiplication**	**Weighting**	**Amount**	
				Rate	**factor**	**factor 1**	**(Rands)**	
1	Dismantling of processing plant and related structures	m3	0	12,28	0,52	1	R -	
	(including overland conveyors and powerlines)							
2 (A)	Demolition of steel buildings and structures	m2	0	171	0,52	1	R -	
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	252	1	1	R -	
3	Rehabilitation of access roads	m2	400	30,6	0,52	1	R 6 364,80	
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	279	1	1	R -	
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	162	1	1	R -	
5	Demolition of housing and/or administration facilities	m2	0	342	0,52	1	R -	
6	Opencast rehabilitation including final voids and ramps	ha	0	174057,55	1	1	R -	
7	Sealing of shafts adits and inclines	m3	0	91,8	1	1	R -	
8 (A)	Rehabilitation of overburden and spoils	ha	0,3	119518,31	0,52	1	R 18 644,86	
8 (B)	Rehabilitation of processing waste deposits and evaporation	ha	0	148857,9	1	1	R -	
	ponds (non-polluting potential)							
8 (C)	Rehabilitation of processing waste deposits and evaporation	ha	0	432353,9	1	1	R -	
	ponds (polluting potential)							
9	Rehabilitation of subsided areas	ha	0	100078,59	0,04	1	R -	
10	General surface rehabilitation	ha	**1**	94678,67	0,04	1	R 3 787,15	
11	River diversions	ha	0	94678,67	0,04	1	R -	
12	Fencing	m	2000	108	0,04	1	R 8 640,00	
13	Water management	ha	1	35999,49	0,52	1	R 18 719,73	
14	2 to 3 years of maintenance and aftercare	ha	0,5	12599,82	0,04	1	R 252,00	
15 (A)	Specialist study	Sum					R -	

15 (B)	Specialist study	Sum				R -	
					Sub Total 1	R 56 408,53	
1	Preliminary and General		6769,024123		**weighting factor 2**	R 6 769,02	
					1		
2	Contingencies		5640,853436			R 5 640,85	
					Subtotal 2	R 68 818,41	
					VAT (14%)	R 9 634,58	
					Grand Total	**R 78 452,99**	

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

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

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Drilling and Trenching (Site Establishment)	The clearing of vegetation	Monitor daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR
Drilling	The storage of hydrocarbon based materials on site	Monitor daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR
Trenching, Drilling	On-site waste management	Monitor daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental

				compliance report required by the DMR
Trenching and Drilling	The creation of roads/tracks	Monitor daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR
Trenching and Drilling	The removal of storage and soil	Monitor daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR
Trenching and Drilling	Driving activities	Monitor daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR
Drilling	Groundwater: Monitor the water quality of the boreholes	Monitor daily	Geologist/ EAP	Daily by Geologist, Annually by independent environmental assessment practitioner to compile the required annual environmental compliance report required by the DMR

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

Environmental audit report will be submitted annually.

j) Environmental Awareness Plan

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

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.

(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.

k) Specific information required by the Competent Authority

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

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.

4) UNDERTAKING

The EAP herewith confirms

a) the correctness of the information provided in the reports ☒

b) the inclusion of comments and inputs from stakeholders and I&APs ; ☐

c) the inclusion of inputs and recommendations from the specialist reports where relevant; ☐and

d) that the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected. parties are correctly reflected herein. ☐

Signature of the environmental assessment practitioner:

Tshikovha Green and Climate Change Advocates

Name of company:

30 –May- 2017

Date:

-END-