



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

DRAFT BASIC ASSESSMENT REPORT

And

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

SUBMITTED FOR ENVIRONMENTAL AUTHORISATIONS IN TERMS OF THE NATIONALENVIRONMENTAL 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: CONSTRUCTO CIVIL CONSTRUCTION AND MINING SERVICES (PTY) LTD

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FILE REFERENCE NUMBER SAMRAD: KZN 30/5/1/1/2/11512 PR

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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 these aspects to determine:

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

(ii) the degree to which these impacts—

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

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

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

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

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

CONTENTS

LIST OF FIGURES	8
LIST OF TABLES.....	9
PART A.....	10
1. SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT.....	10
i) Details of the EAP	10
(2) Summary of EAP's past experience	10
2. LOCATION OF ACTIVITY	11
b) Location of the overall Activity	11
3. DESCRIPTION OF ACTIVITY	15
e. Policy and Legislative Context.....	20
f) Need and desirability of the proposed activities.....	25
g) Motivation for the overall preferred site, activities and technology alternative.....	26
h) Full description of the process followed to reach the proposed preferred alternatives within the site.....	28
i) Details of the development footprint alternatives considered.....	29
ii) Details of the Public Participation Process Followed.....	38
iv) The Environmental attributes associated with the alternatives.....	44
(1) Baseline Environment	44
(a) Type of environment affected by the proposed activity	44
Geology & Soils.....	44
Vegetation	46
Critical Biodiversity Areas (CBA) & Ecological Support Areas (ESA)	46
Alien Invasive Plant Species.....	48
Fauna	49
Topography	50
Hydrology	51
Groundwater.....	51

Climate	51
Wind	52
Air quality	52
Noise	53
Protected Areas.....	53
(b) Description of the current land uses.	53
Cultural & Heritage Landscape	53
Socioeconomic Environment	54
Economic Activities.....	54
Health.....	55
Social Setting	55
(c) Description of specific environmental features and infrastructure on the site.	55
(c) Description of specific environmental features and infrastructure on the site.	55
(d) Environmental and current land use map.	56
v) Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts	57
vi) Methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;	61
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.	66
viii) The possible mitigation measures that could be applied and the level of risk.	66
x) Statement motivating the alternative development location within the overall site.....	66
i) Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site	67
(j) Assessment of each identified potentially significant impact and risk.....	68
k) Summary of specialist reports.....	100
l) Environmental impact statement.....	101
(i) Summary of the key findings of the environmental impact assessment;	101

(iii) Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;.....	103
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.	104
n) Aspects for inclusion as conditions of Authorisation.	109
o) Description of any assumptions, uncertainties and gaps in knowledge.....	110
p) Reasoned opinion as to whether the proposed activity should or should not be authorised	110
ii) Conditions that must be included in the authorisation	111
q) Period for which the Environmental Authorisation is required.	112
r) Undertaking.....	112
s) Financial Provision	113
i) Explain how the aforesaid amount was derived.	114
ii) Confirm that this amount can be provided for from operating expenditure.....	116
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:-.....	116
(1) Impact on the socio-economic conditions of any directly affected person.	116
(2) Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act.	117
u) Other matters required in terms of sections 24(4) (a) and (b) of the Act.	117
PART B:.....	118
ENVIRONMENTAL MANAGEMENT PROGRAMME	118
a) Details of the EAP,	118
b) Description of the Aspects of the Activity	118
c) Composite Map	118
d) Description of Impact management objectives including management statements....	118
i) Determination of closure objectives.	118

ii) Volumes and rate of water use required for the operation.....	120
iii) Has a water use licence has been applied for?	121
iv) Impacts to be mitigated in their respective phases.....	121
e) Impact Management Outcomes.....	128
f) Impact Management Actions	135
i) Financial Provision	142
(1) Determination of the amount of Financial Provision.....	142
(a) Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation.	142
(b) Confirm specifically that the environmental objectives in relation to closure have been consulted with landowner and interested and affected parties	142
(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.	143
(d) Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives.	144
(e) Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline.	145
(f) Confirm that the financial provision will be provided as determined.....	145
l) Indicate the frequency of the submission of the performance assessment/ environmental audit report.....	150
A performance assessment on this EMP will be conducted every year by an external independent auditor and the results of the audit will be provided to the Regional Manager. Please note this is an application for a prospecting right which is only granted for five (5) years.	
m) Environmental Awareness Plan.....	151
(1) Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work.....	151
(2) Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment.....	151
n) Specific information required by the Competent Authority	154
2) UNDERTAKING.....	155

LIST OF FIGURES

Figure 1 EAP's EAPASA registration certificate	11
Figure 2 Locality map.....	13
Figure 3 Site layout	14
Figure 4: Council for Geoscience prior coal borehole logs	26
Figure 5: The South African coalfields and the prime geological formations within which these coalfields occur (Hancox & Götz 2014:174).	27
Figure 6 The site's Regulation 2.2 plan	35
Figure 7: Site notice locations	39
Figure 8 The geology of the project site.	45
Figure 9 The vegetation and soils of the project site	45
Figure 10 Critical Biodiversity Area (CBA) for the project site.....	46
Figure 11 Screening Tool categorisation for agricultural sensitivity	47
Figure 12: Screening Tool categorisation for plant theme sensitivity	48
Figure 13 Screening Tool animal sensitivity map	49
Figure 14: Animals noted as being of high sensitivity within the study area.....	50
Figure 15 Project site topography.....	50
Figure 16 General project site hydrology depicting the 500 m buffers	51
Figure 17 The Newcastle average temperatures and precipitation (Climate Data, 2023)	52
Figure 18: Screening Tool paleontology sensitivity theme map	54
Figure 19 Land use.	56

LIST OF TABLES

Table 1 Listed activities applicable to the project.....	15
Table 2 Applicable legislation and guidelines.	20
Table 3: Interested and affected parties (personal details concealed to protect personal information).....	43
Table 4: Criteria used to determine the consequence of the impact	62
Table 5: Method used to determine the consequence score	63
Table 6: Probability classification	63
Table 7: Impact significance ratings	63
Table 8: Impact Status and Confidence Classification.....	64
Table 9: Types of Impact.....	64
Table 10: Definitions of Impact Significance.....	65
Table 11 Procedure for determining the quantum for financial provision (as per the DMRE guideline document, 2005).....	115

PART A

1. SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

3. Contact Person and correspondence address

a) Details of

i) Details of the EAP

ZN Geo Services (Pty) Ltd

Hloniphile Dlamini

Tel: +2773 470 2691 or +2783 467 3532

Email: projects@zngeo.co.za

Email: zama@zngeo.co.za

ii) Expertise of the EAP.

(1) The qualifications of the EAP

(with evidence).

Refer to **Appendix 1: EAP CV & Declaration**

See (Figure 1) for the EAP's EAPASA registration. Ms Dlamini has an honours degree in environmental management obtained from the University of South Africa. She is also an EAPASA registered consultant.

(2) Summary of EAP's past experience

Refer to **Appendix 1: EAP CV & Declaration**

Environmental Assessment
Practitioners Association
of South Africa



Registration No. 2019/1624

Herewith certifies that

Hloniphile Charlotte
Dlamini

is registered as an

Environmental Assessment Practitioner

*Registered in accordance with the prescribed criteria of Regulation 15. (1)
of the Section 24H Registration Authority Regulations
(Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the
National Environmental Management Act (NEMA), Act No. 107 of 1998, as
amended).*

Effective: 01 March 2023

Expires: 29 February 2024

Chairperson

Registrar



Figure 1 EAP's EAPASA registration certificate

2. LOCATION OF ACTIVITY

b) Location of the overall Activity

Farm Name 1:	Portion 0 of the Farm Lentevlei HS (Farm Number 16524)
Application area (Ha)	±2020,80 ha (in total)
Magisterial district:	Newcastle Local Municipality
Distance and direction from nearest town	±5km northwest of Newcastle town
21 digit Surveyor General Code for each farm portion	N0HS00000001652400000
Farm Name 2:	Portion 0 of the Farm Brack Hoek HS (Farm Number 2271)
Application area (Ha)	±2020,80 ha (in total)
Magisterial district:	Newcastle Local Municipality
Distance and direction from nearest town	±5km northwest of Newcastle town
21 digit Surveyor General Code for each farm portion	N0HS00000000227100000
Farm Name 3:	Portion 1 of the Farm Brack Hoek HS (Farm Number 2271)
Application area (Ha)	±2020,80 ha (in total)
Magisterial district:	Newcastle Local Municipality
Distance and direction from nearest town	±5km northwest of Newcastle town
21 digit Surveyor General Code for each farm portion	N0HS00000000227100001

c) Locality map

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

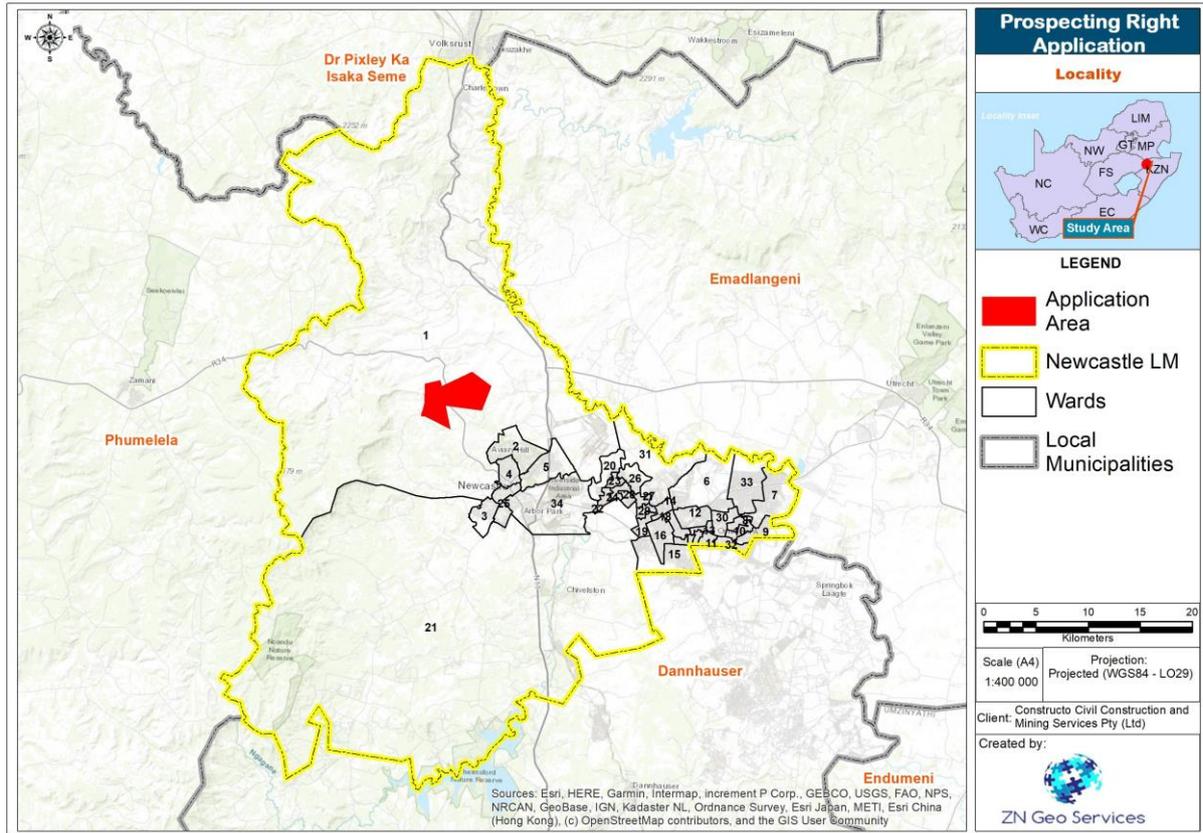


Figure 2 Locality map

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.

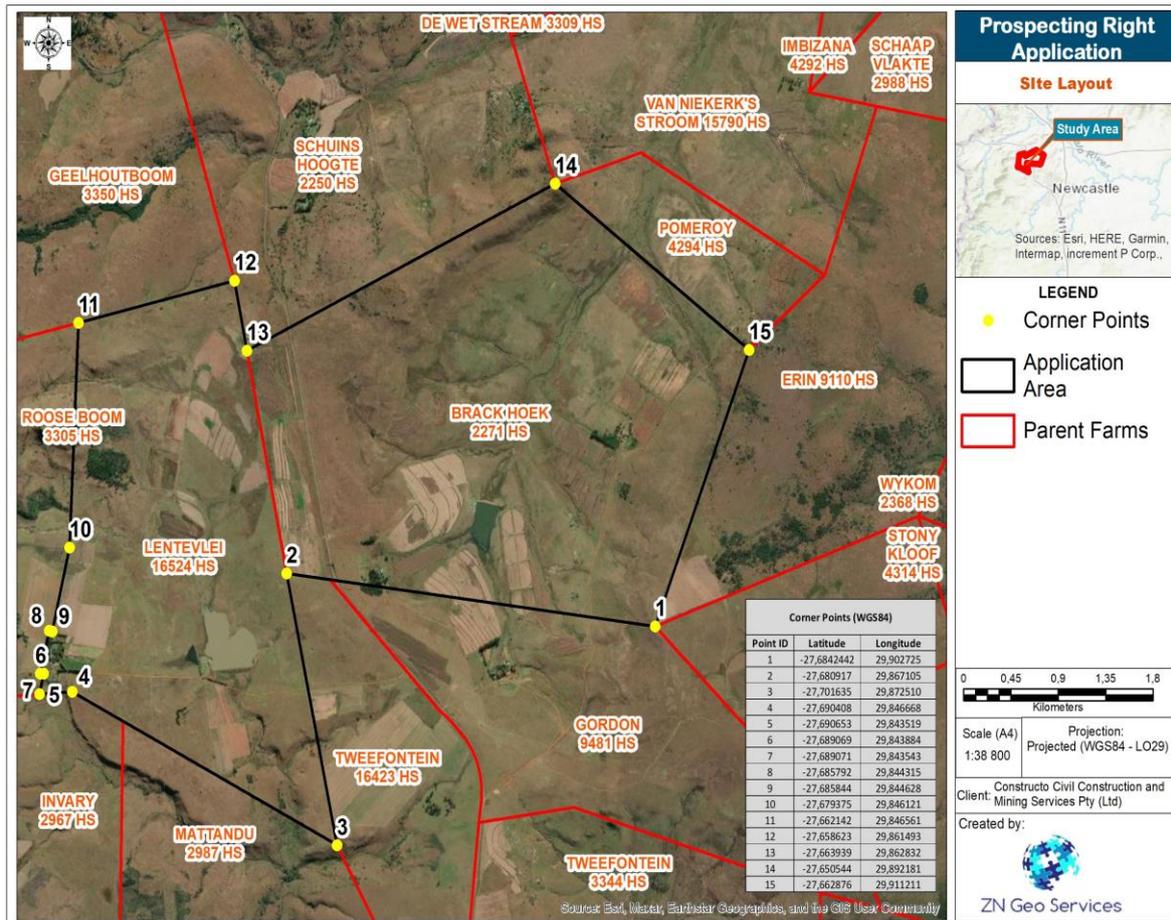


Figure 3 Site layout .

Constructo Civil Construction And Mining Services (Pty) Ltd (hereafter or interchangeably referred to as Constructo), has noted that existing geological data notes the potential existence of good quality coal reserves within the identified farms (Lentevlei 16524 HS and Brack Hoek 2271 HS). As such, Constructo is intending to apply for a prospecting right to assess whether the amount and quality of the coal within the aforementioned farms is viable. The area applied for is approximately 2020,80 hectares.

This application only encompasses drilling and other prospect ring related activities. No full-scale mining shall take place. Should the outcome of prospecting activities prove to be viable, only then may Constructo contemplate applying for any mining environmental authorisation such as wither a mining permit or mining right.

It is Constructo Cibil Construction And Mining Services(Pty) Ltd (“Constructo”) intention to apply for a Prospecting Right in terms of Section 24 of the NEMA, 1998 (as amended) read with Regulation 19 of the EIA Regulations, 2014 (amended in 2021) and in terms of Section 16 of the Minerals and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) (MPRDA), as amended by Section 12 of the MPRDA, 2008 (Act No. 49 of 2008), for the

environmental authorisation of prospecting activities for the coal mineral. The extent of the area applied for; under the ambit of the prospecting right is approximately 2000 hectares (some 2020,80 hectares).

The environmental authorisation application was lodged with the Department of Mineral Resources & Energy ("DMRE") with reference (11512 PR). Prospecting activities will enable Constructo Civil Construction And Mining Services (pty) Ltd to determine if economically viable mineral deposits exist within the area being applied for. The identified farms are listed below:

- The Farm Lentevlei 16524HS HS
- Portion 0 of the farm Brack Hoek 2271 HS
- Portion 1 of the farm Brack Hoek 2271 HS

The town of Newcastle is located approximately 5km north west of the proposed prospecting site, under the jurisdiction of Ward 1 of the Newcastle Local Municipality and Amajuba District Municipality, Kwazulu-Natal Province (refer to Figure 2).

Prospecting activities will enable Constructo to determine if economically viable coal mineral deposits exist within the area being applied for. No mining shall take place, only prospecting. Assessment of the geological data available has determined that the area in question may have coal mineral reserves. In order to ascertain the above and determine the nature, location and extent of the coal mineral reserves within the proposed area, it will be necessary that prospecting activities be undertaken. The prospecting activities will also determine if there are any features that may have an impact on the economic extraction of coal.

3. DESCRIPTION OF ACTIVITY

(i) Listed and specified activities

Table 1 Listed activities applicable to the project

NAME OF ACTIVITY (E.g., For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc	AERIAL EXTENT OF THE ACTIVITY	LISTED ACTIVITY	APPLICABLE LISTING NOTICE	WASTE MANAGEMENT AUTHORISATION
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 associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	10 boreholes will be drilled ≤0.5ha for each borehole	X	(GNR 517) activity 20, Listing Notice 1	Not applicable

<p>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for – (i) Undertaking of a linear activity; or (ii) Maintenance purpose undertaken in accordance with a maintenance</p>	<p>Approx. 1 hectare will be cleared for access roads and related activities</p>	<p>X</p>	<p>(GNR 517) activity 27, Listing Notice 1</p>	<p>Not Applicable</p>
<p>The decommissioning of any activity requiring - (i) a closure certificate in terms of section 43 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002); or (ii) a prospecting right, mining right, mining permit, production right or exploration right, where the throughput of the activity has reduced by 90% or more over a period of 5 years excluding where the competent authority has in writing agreed that such reduction in throughput does not constitute closure.</p>	<p>≤0.5ha, on every borehole that would have been drilled</p>	<p>X</p>	<p>(GNR 517), activity 22, Listing Notice 1</p>	

(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 application is for both non-invasive and invasive methods of prospecting. The overall objective of the prospecting program is to identify the nature and extent of the target mineral (coal) which can potentially be economically mined in future. Prospecting activities will be undertaken over a period of 5 years. The prospecting activities will take place in the form of initial non-invasive prospecting activities (e.g., desktop studies, aerial surveys and literature reviews), followed by invasive prospecting measures such as drilling and thereafter sampling. Invasive methods are those which will impact on the land whilst non—invasive methods do not.

The cores (NQ size; i.e. 75.7mm hole diameter) will be drilled to intersect the expected mineralization zone and will be logged by the geologist. At least 10 holes will be drilled at depths averaging 100 metres over the entire ~2000 hectares application area. The intersected mineralized zone will be sampled and sent to the laboratory for quality determination. This data will form the basis for the geological modelling and financial evaluation. The prospecting programme would require 24 months to complete. Rehabilitation activities would be conducted concurrently where possible, but due to legislative issues that still need to be address, final rehabilitation and removal of prospecting infrastructure additional time may be required. The period for which the environmental authorisation should be valid is 5 years allowing for unexpected issues, rehabilitation, and closure activities.

Infrastructure Requirements

Using desktop studies, geological mapping, Geophysical Survey, core drilling together with all associated infrastructure and activities. These include site establishment (access to site and establishing drilling equipment), pegging of drilling sites, drilling of exploration boreholes, logging and sampling of drilled cores, plugging drilled holes and site rehabilitation.

A summary of the activities to be undertaken is outlined below:

Desktop study:

- Prefeasibility study
- Obtain and interpret all relevant geological data.
- Field Geological Mapping of all rock outcrops
- Ground magnetic survey and interpretation of data
- Data Interpretation and Planning
- Develop conceptual geological model based on existing and acquired geological data., geological mapping,

Diamond core drilling:

- Drilling of ten core drill holes.
- Logging of core and sampling of coal.
- Downhole geophysical survey.
- Laboratory analysis.

Rehabilitation of Drilling Sites by sealing of boreholes and clean-up and restoration.

Refer to **Appendix 7** for site photographs.

e. Policy and Legislative Context

Table 2 Applicable legislation and guidelines.

<p>APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT</p> <p>(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.</p>	<p>REFERENCE WHERE APPLIED</p>	<p>HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT. (E.g. In terms of the National Water Act. Water Use License has been applied or)</p>
<p>The constitution of the republic of South Africa</p>	<p>RSA</p>	<p>The Constitution, which is the cornerstone of the democracy in South Africa, lays the foundation of a more just and equitable society. It guarantees everyone the right to an environment that is not harmful to their health or wellbeing and guarantees the right to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures.</p>

National Environmental Management Act (No. 107 of 1998).	KZN 30/5/1/1/2/11512 PR	This Basic Assessment is being undertaken in terms of the National Environmental Management Act (No. 107 of 1998). This is in order to determine any possible impacts on the environment and to propose sufficient mitigation in order to not harm the environment.
Environmental Impact Assessment Regulations: GNR 326 to 327 of 07 April 2017 (amended by GN 517 in June 2021)	KZN 30/5/1/1/2/11512 PR	This Basic Assessment is being undertaken in terms of the Environmental Impact Assessment Regulations: GN R 326 to 327 of 07 April 2017 (amended in 2021). This is in order to determine any possible impacts on the environment and to propose sufficient mitigation in order to not harm the environment.
National Environmental Management: Waste Act (59 of 2008)	NEM:WA	The applicant must ensure that all activities associated with the quarry address waste related matters in compliance with the requirements of the Act. This is in respect of general waste management. No listed activities for waste management have been triggered.
The National Heritage Resources Act (No. 25 of 1999)	SAHRA	No heritage resources will be affected by drilling related processes. The National Heritage Resources Act legislates the

		<p>necessity for cultural and heritage impact assessment in areas earmarked for development, which exceed 0.5 hectares (ha). The Act makes provision for the potential destruction to existing sites, pending the archaeologist's recommendations through permitting procedures. Permits are administered by the South African Heritage Resources Agency (SAHRA). Should the proposed activities impact on heritage resources, application to SAHRA would be required to obtain the necessary permits. The proposed opencast mining operations will not have any impact on Heritage resources, as no resources of significance were identified within the footprint of the proposed development.</p>
National Environmental Management: Biodiversity Act (No. 10 of 2004)	KZN 30/5/1/1/2/11512 PR	There is a possibility that flora and fauna found on site may be impacted upon. Vegetation clearance will be limited to those areas where required for prospecting activities to continue.
National Environmental Management: Air Quality Act, 39 of 2004 [NEMAQA] and Relevant Regulations	KZN 30/5/1/1/2/11512 PR	This Act will be applicable during site establishment and drilling phases of the

		project. Impacts on air quality are anticipated to be minimal at most and also intermittent (i.e., during drilling)
Minerals and Petroleum Resources Development Act (No 28 of 2002) and National Environmental Management Act, 1998 (Act No. 107 of 1998) [NEMA] and relevant regulations.	Sections 38 to 47 of MPRDA S24(1) of NEMA S28(1) of NEMA	An application and reports submitted to DMRE for prospecting right and environmental authorisation.
The Minerals and Petroleum Resources Development Act, 2002 (Act No 28 of 2002)	KZN 30/5/1/1/2/11512 PR	The Minerals and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) was developed to ensure that provision is made for equitable access to, and sustainable development of, South Africa's mineral and petroleum resources and to provide insight, guidance and control for matters connected thereto. It seeks to provide management tools that ensure that all mining operations are undertaken in an environmentally sound manner according to government approved documents that hold the applicant responsible for any environmental degradation that their mining actions might cause. It also seeks to expand opportunities for historically disadvantaged South Africans and promote employment and welfare of SA citizens. It ensures that holders of mining and production rights contribute towards the socio-economic development of the areas in which they operate.

Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	Section 16	Application for a prospecting right (Section 16 of the MPRDA).
Hazardous Substances Act (No. 15 of 1973)	KZN 30/5/1/1/2/11512 PR	Hazardous waste must be managed in a manner that it does not endanger human health or the environment.
Occupational Health and Safety Act	Department of labour (DoL)	The Occupational Health and Safety Act, 1993 (No 85 of 1993) provides for the health and safety of persons at work; for the health and safety of persons in connection with the use of plant and machinery, and the protection of plant and machinery; and the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work. A number of regulations are published under this Act including: <ul style="list-style-type: none"> • Regulations for Hazardous Chemical Substances (GN R179 of 1995-08-25)

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).

According to Stats SA (2023), the unemployment rate increased from 30,8% in quarter 2. The preceding three years have noted the highest unemployment rate recorded since the start of the Quarterly Labour Force Survey in 2008. COVID-19 has also had dire consequences on the economy.

Assessment of the geological data available has determined that the area in question may have coal mineral reserves. In order to ascertain the above and determine the nature, location and extent of the coal mineral reserves within the proposed area, it will be necessary that prospecting activities be undertaken. The prospecting activities will also determine if there are any features that may have an impact on the economic extraction of these minerals.

The data obtained from the prospecting of coal (if sufficient reserves are discovered) will be necessary to determine how and where the coal will be extracted and how much economically viable reserves are available within the proposed prospecting area. Should sufficient coal be found in the project area, Constructo would, only then, be in a position to apply for a mining right or mining permit.

The prospecting programme proposed by Constructo will address the investigation of the availability of an economic mineral resource. Prospecting activities would therefore need to be undertaken through invasive prospecting methods to confirm historic information of the mineral resource, including occurrence of other viable mineral resources; and if a viable mineral deposit still exists within the project site.

Prospecting will confirm the information obtained through field mapping, desktop studies and literature review. It will allow the preparation of Geological Modelling and a resource estimation which confirms if the identified mineral resource/s can be feasibly mined in future in an environmentally, socially and economically viable manner. The applicant chose to prospect for coal in the local area which is known for having such mineral deposits.

If the prospecting activities prove that the mineral deposit can be optimally mined at the proposed site, it becomes a viable and prosperous land use option for the local community. A new mine may/could be developed with the potential to contribute to the local economy as well as generate much needed employment for the local community.

In addition to contributing to supply and employment, mineral exploration adds value to the geological and geoscientific database.

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

Prior drilling campaigns archived at the Council for Geoscience note the existence of viable coal reserves. As such, the applicant, Constructo civil Construction And Mining Services, has selected the designated farms (Brack Hoek 2271 HS and Lentevlei 16524 HS) to pursue prospecting activities (Figure 4).

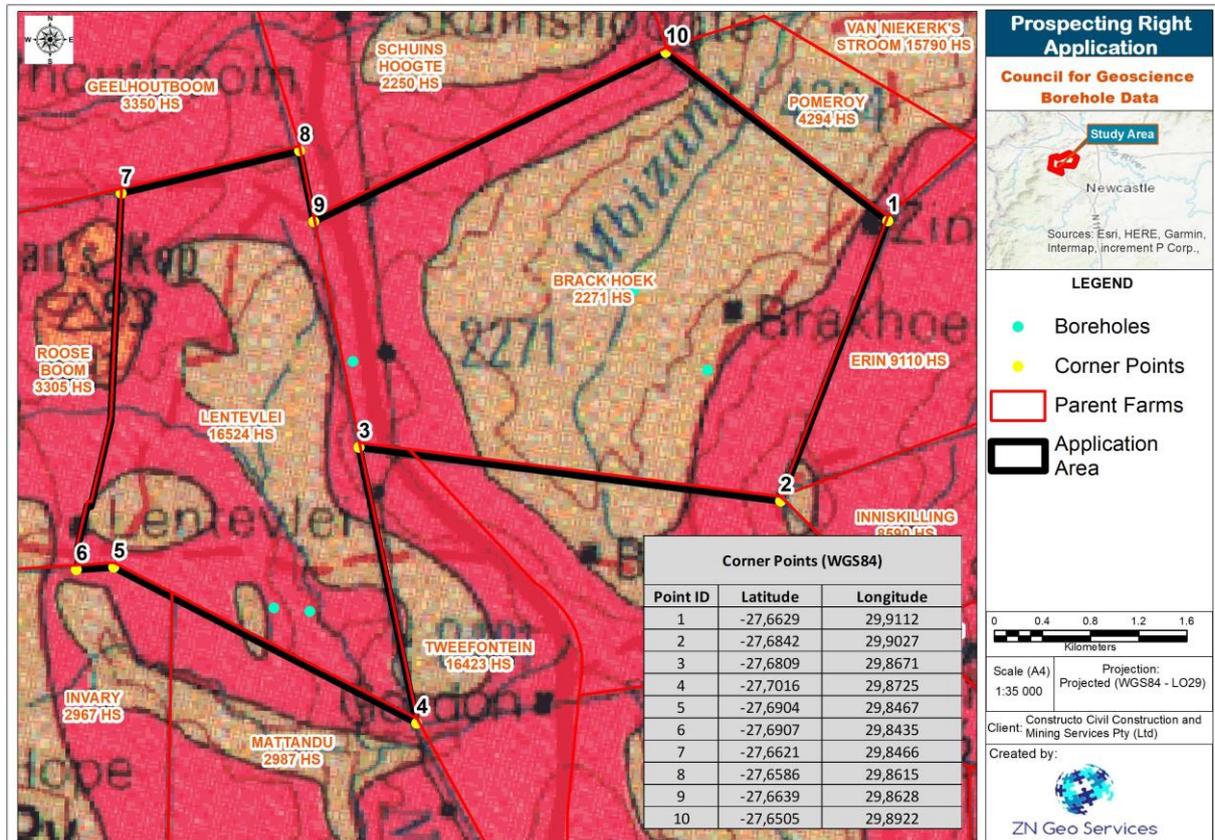


Figure 4: Council for Geoscience prior coal borehole logs

Coal prospecting activities will be conducted by both invasive and non-invasive means. However, drilling is imperative technology to determine the quality and account with better accuracy the anticipated coal reserves and is thus necessary. Site selection has been determined by the likely occurrence of coal within the area as it forms part of the Klip River Coalfield.

South Africa’s coal resources are contained in the Ecca deposits, a stratum of the Karoo Supergroup. The KwaZulu-Natal Coalfields, although not a producer of high tonnages has been integral in the production of good quality coal. There are five coalfields in KwaZulu-Natal, namely the Klip River, Nongoma, Somkhele, Utrecht and Vryheid (Figure 5).

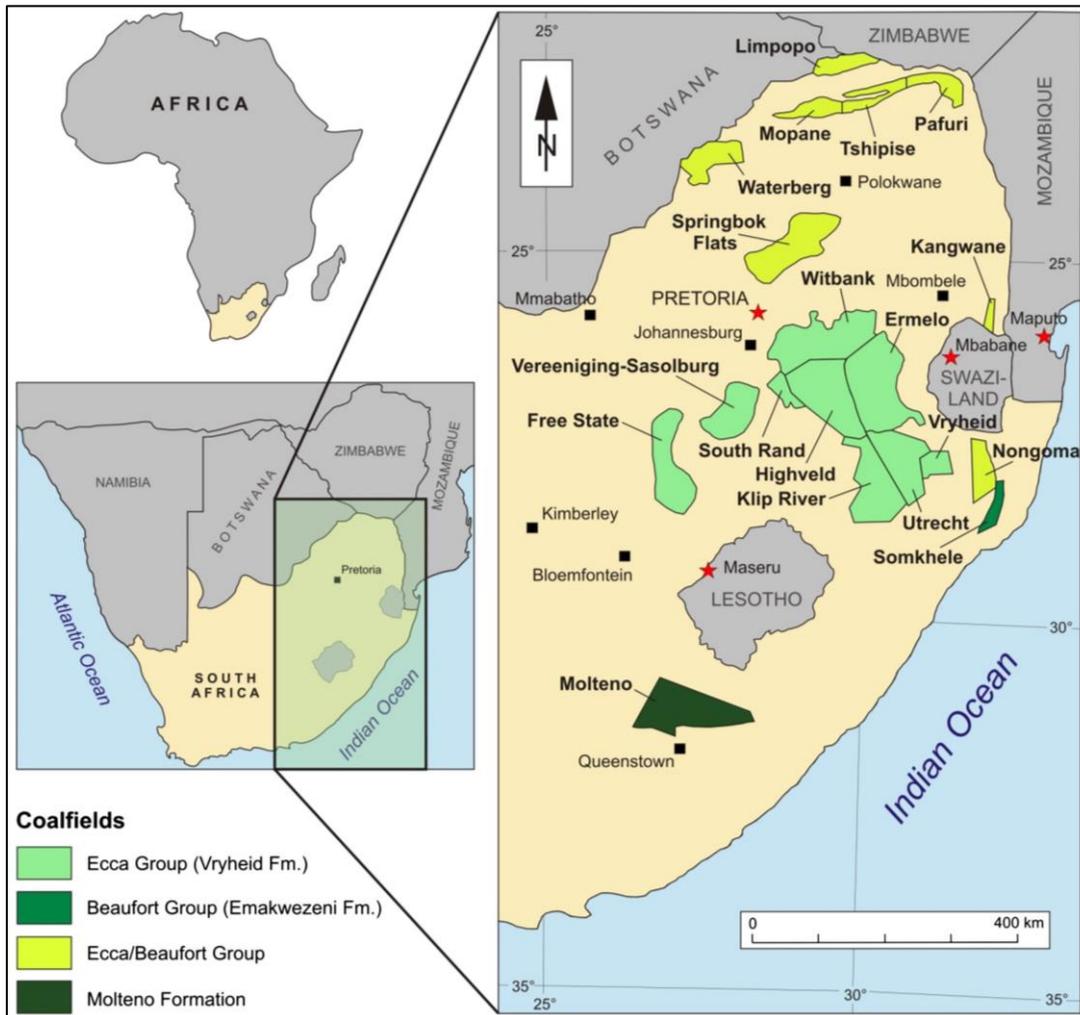


Figure 5: The South African coalfields and the prime geological formations within which these coalfields occur (Hancox & Götzt 2014:174).

Coal within the Klip River Coalfield is hosted within the Vryheid Formation of the Ecca Group, Karoo Supergroup. The Klip River Coalfield spans between Newcastle in the north, Ladysmith to the south and Dundee to the south-east (within which the study area occurs). This coalfield, which expands 600 000 hectares, is particularly renowned to produce South Africa's highest quality coking coal and anthracite (Hancox & Götzt 2014:41).

Five seams are known in the coalfield and various nomenclatures exist. However, only two seams, known as the Top and Bottom Seams, are usually commercially exploited. The two seams are considered to be the stratigraphic equivalents of the Alfred and Gus Seams in the Utrecht Coalfield and occur stratigraphically approximately 200m above the top of the Pietermaritzburg Formation and 120m below the base of the Volksrust Formation. The Top Seam comprises mainly dull coal and is the uppermost economic coal seam in the Klip River Coalfield. The seam attains its maximum thickness of 3.6m to the northeast of Alcockspruit and Dannhauser and is also thicker in the northern reaches of the coalfield. Elsewhere it is usually developed to a thickness of between 0.80m and 3.6m. The Bottom Seam comprises mainly bright coal. The thickest development of the seam occurs in the

east central parts of the coalfield, and thins towards the west and southwest, thickening again to the far south in the vicinity of the town of Colenso.

The two seams are separated by between 0.3m and 15m of predominantly coarse-grained to pebbly, cross stratified sandstone, which fines upwards into carbonaceous siltstone and mudstone. Apart from where locally tilted by dolerite intrusions, the seams (and strata) are generally flat lying although gently undulating with a regional dip to the south of less than one degree.

Prospecting will confirm the information obtained through field mapping, desktop studies and literature review. It will allow the preparation of Geological Modelling and a resource estimation which confirms if the identified mineral resource/s can be feasibly mined in future in an environmentally, socially and economically viable manner. The applicant chose to prospect for coal in the local area which is known for having such mineral deposits.

Any general waste that may be produced on-site will be contained in sealed refuse bins to be transported to a local municipal landfill site. Contaminated soil will be removed to the depth of the spillage and contained in sealed bins until removed from site by a hazardous waste handling contractor to be disposed of at a registered hazardous waste handling site. Certificates of safe disposal shall be kept on site.

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.

No comments have been received from interested and affected parties (I&AP) thus far as the project is still at the draft basic assessment phase. Specific layouts cannot be determined as drill holes are to be located as per the suite of activities of the intended prospecting right. 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 will be identified after the geophysical surveys have confirmed the presence of the ore body. 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.

- No prospecting will take place at horizontal distance of 100 m from any infrastructure and 500 for water bodies.
- Constructo will use non-invasive methods within protected areas. These methods include surface mapping and applicable Geophysical methods.

- Any boreholes, sewer pipelines, etc will be marked-off prior to site establishment and avoided during operations.
- Where possible, existing access roads will be utilized to access the potential drill sites.

Buffer zones will be applied to sensitive environmental, and heritage features where invasive prospecting methods would be applied and will include:

- Invasive activities are to avoid identified heritage resources at all other target areas.
- No invasive activities are to be placed within 50m from such heritage sites;
- A 500m buffer zone will be upheld to wetlands and riparian zones and be regarded as no go zones for invasive prospecting methods.
- Prospecting at rocky ridges would be avoided, if it cannot be avoided footprint areas will be limited to a minimum on rocky ridges;
- Disturbance through exploration in old river channels will be limited to an absolute minimum.
- Prospecting activities are to be located along existing access roads as far as possible.

i) Details of the development footprint alternatives considered.

With reference to all the site plans and maps combined provided as **Appendix 3** (for site location map only) and **Appendix 4** (for all maps) and the location of the individual activities on site, provide details of the alternatives considered with respect to:

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

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

The coal prospecting activities will enable Constructo Civil Construction And Mining Services (pty) Ltd to determine if economically viable mineral deposits exist within the area being applied for. The identified farms are listed below:

- The Farm Lentevlei 16524HS HS
- Portion 0 of the farm Brack Hoek 2271 HS
- Portion 1 of the farm Brack Hoek 2271 HS

The town of Newcastle is located approximately 5km north west of the proposed prospecting site, under the jurisdiction of Ward 1 of the Newcastle Local Municipality and Amajuba District Municipality, Kwazulu-Natal Province (see Figure 2).

(b) the type of activity to be undertaken

Prospecting activities will enable Constructo to determine if economically viable coal mineral deposits exist within the area being applied for. No mining shall take place, only prospecting.

Assessment of the geological data available has determined that the area in question may have coal mineral reserves. In order to ascertain the above and determine the nature, location and extent of the coal mineral reserves within the proposed area, it will be necessary that prospecting activities be undertaken. The prospecting activities will also determine if there are any features that may have an impact on the economic extraction of coal.

A summary of the anticipated activities is outlined below:

Desktop study:

- Prefeasibility study
- Obtain and interpret all relevant geological data.
- Field Geological Mapping of all rock outcrops
- Ground magnetic survey and interpretation of data
- Data Interpretation and Planning
- Develop conceptual geological model based on existing and acquired geological data., geological mapping,

Diamond core drilling:

- Drilling of ten core drill holes.
- Logging of core and sampling of coal.
- Downhole geophysical survey.
- Laboratory analysis.

- Rehabilitation of Drilling Sites by sealing of boreholes and clean-up and restoration.

The following section gives a comprehensive description of all the phases and specific activities that are associated with proposed project. The main activities of the project as provided in the prospecting Work Program entails the non-invasive and invasive activities. The non-invasive activities describe how the mineral resource and mineral distribution of the prospecting area will be determined through. The activities may include geochemical, geophysical and geobotanical survey, geological mapping, and aerial surveys.

Invasive activities describe the prospecting method or methods to be implemented. The activities include excavation, drilling, sampling and testing. The activities can be subdivided in four phases which include the planning phase, construction phase, the operational phase and the decommissioning phase.

Planning phase

This phase consists of gather all vital project information, including necessary tasks and technical resource required. During this phase, information will be gathered on how to complete the project in a certain timeframe and designated resources. The planning phase also involve the desktop study, geological mapping, Geophysical surveying, and prefeasibility prospecting study.

Desktop studies to be undertaken over the area would include studying of all available geological maps/plans, aerial photographs, topography maps and any other related geological information about this area. Upon completion of the desktop study, field geological mapping of the area will be conducted. A project GIS is established which includes regional and site-specific datasets of cadastral, geological, and geophysical data. The available literature, comprising technical papers in the academic literature, and all available reports pertaining to historical exploration are compiled and assessed. Data pertaining to the area under investigation, such as published geological maps, aerial photographs and orthophoto maps of 1:10 000 scale will initially be collated to facilitate a regional understanding of the geology. These data will also aid in the interpretation of the morphological and structural geological features.

The desktop study is followed by on the ground mapping programs would verify the geological and structural interpretations and assist in the extrapolation of the geological formations. Existing roads and tracks are used where access by vehicle is permitted, while foot accesses more remote areas. No disturbance of the vegetation or surface material occurs during geological mapping. Data obtained during this phase provides the groundwork for follow-up exploration work.

Geophysical surveys, which employ non-destructive techniques, may be used to better define anomalous areas. In many cases aeromagnetic data may be purchased from the government. However, where more detailed data are required, the surveys usually involve small field crews with sensitive instruments walking the grid lines and taking measurements. Geophysical prospecting techniques are non-harmful to the environment. Data obtained from geophysical equipment are manipulated using the latest computer software to generate targets and define anomalies for interpretation.

The pre-feasibility study entails the interpretation and modelling of all the data collected. Then a technical and economic appraisal of the project which will determine its economic viability will be done. If the result of the study proves that the project is economically viable, an application for a mining permit or right may be lodged at the DMRE. If the results are negative, an application for decommissioning or closure will be lodged at the DMRE. The planning phase will take approximately 6 months to be completed.

Site establishment & construction phase

This phase includes the establishment of the campsite (construction of temporary Site camp and toilets), laydown areas and physical surveying of the site. The site camps and laydown areas should be located in low sensitivity areas and should be demarcated.

Operational phase

The operational phase mainly consists of drilling, logging and sampling. The operational phase (which include invasive phase) will last approximately 24 months. During this phase, the following activities, and aspects are involved: Diamond drilling, borehole, Infill drilling, excavation, core logging, sampling, and lab analysis.

Diamond drilling

Diamond drilling will be conducted. It is envisaged that approximately 10 boreholes with around 40m deep will be drilled in phases. The first phase will include drilling of widely spaced boreholes to confirm the occurrence of coal as well as to understand the stratigraphy of the project area. If the results are positive, infill drilling will be done to upgrade the resource to an Indicated Resource or Measured Resource.

The boreholes will enable the determination of the depth to which suitable fresh material is available and as a result the true volume of coal available for mining. The time required for drilling, and thus the cost, will be determined by a number of variables that include access to site, water supply, number of boreholes and the depth of each borehole. Borehole positions

will be determined by the preceding work conducted. All borehole cores are collected and transported to a core yard where it is geologically logged, and samples sent to accredited laboratories for analysis. These samples also serve as a record of lithological types and may be used to interpret the structure of the ore body. The company will utilise the service of experienced South African drilling contractors who are familiar with the strict environmental codes enforced by the DMR. Only non-toxic drilling fluids are used, and groundwater discharged from drill holes is re-circulated to avoid wastage. No contaminated water is allowed to flow into stream drainages. After the core is logged, sampled and captured, the data will be uploaded into 3D software for modelling using acceptable parameters on coal exploration. The results will then be uploaded to the model to determine areas of higher quality.

Core logging and Sampling

The retrieved core will be logged by a geologist. The intersected coal seams will be sampled, and the samples will be sent for analysis at an independent and certified laboratory. Most mineralisation that is exposed at the surface.

If the quality of information obtained from previous studies is suitable and available for use in the current evaluation, then such information will be utilized. This may result in some minor changes to some of the proposed activities, for example, if previous soil sample data can be sourced, these could possibly be verified with a smaller orientation study rather than a larger “new” study. It should also be emphasized that each subsequent phase of exploration is dependent on the results of the preceding phase, and that minor adjustments to the programme may be required as results are obtained.

Decommissioning phase

The decommissioning phase entails the Decommissioning of temporary infrastructure the removal of all equipment and personnel from site. The sump lining and drill spoil/sludge will be removed and disposed in an environmentally responsible manner in line with the waste management standards. The boreholes will be covered and made safe. Once all equipment has been removed the sump will be backfilled and the area leveled with the topsoil as stockpiled during the clearing activities. The stored rocks and stones will be replaced evenly over site to prevent wind and water erosion, trap seeds and aid water retention and re-vegetation. This phase may take approximately 6 months to be completed. It should be noted that if the result of the prospecting proves that the project is economically viable, an application for mining permit or right will be lodged at the DMR.

Existing production inputs and infrastructure

Access Roads

Existing access roads (road tracks) will be used on site, as far as is practicably possible for drilling to continue. The site is accessible via the R34 “Memel Road” and taking the D459 onto a gravel road. The preferred access to the site is via R34 from Newcastle town.

Water Supply

Prospecting activities will not use a lot of water. Water will be used for drinking, bathing, during drilling activities, and for dust suppression.

During drilling, water is injected into the drill pipe, to wash out the rock cuttings produced by the bit. Process water supply for the operation will be sourced from an existing artificial dam near the study site and will be carted onto the site in a tanker. A 4000-liter water cart will be adequate for the size of this operation. Dust suppression will be conducted when necessary.

Potable water required for the proposed operation is approximately 40 liters per day (ℓ/day). The water will be used for drinking purposes and will be sourced from local water vendors within Newcastle community. The water that will be used for the prospecting activities will be sourced on agreement from an existing authorized water user, which could be either the landowner or local municipality.

(c) the design or layout of the activity

Please see Appendices 3 and 4 respectively for A3-sized versions of the site maps.

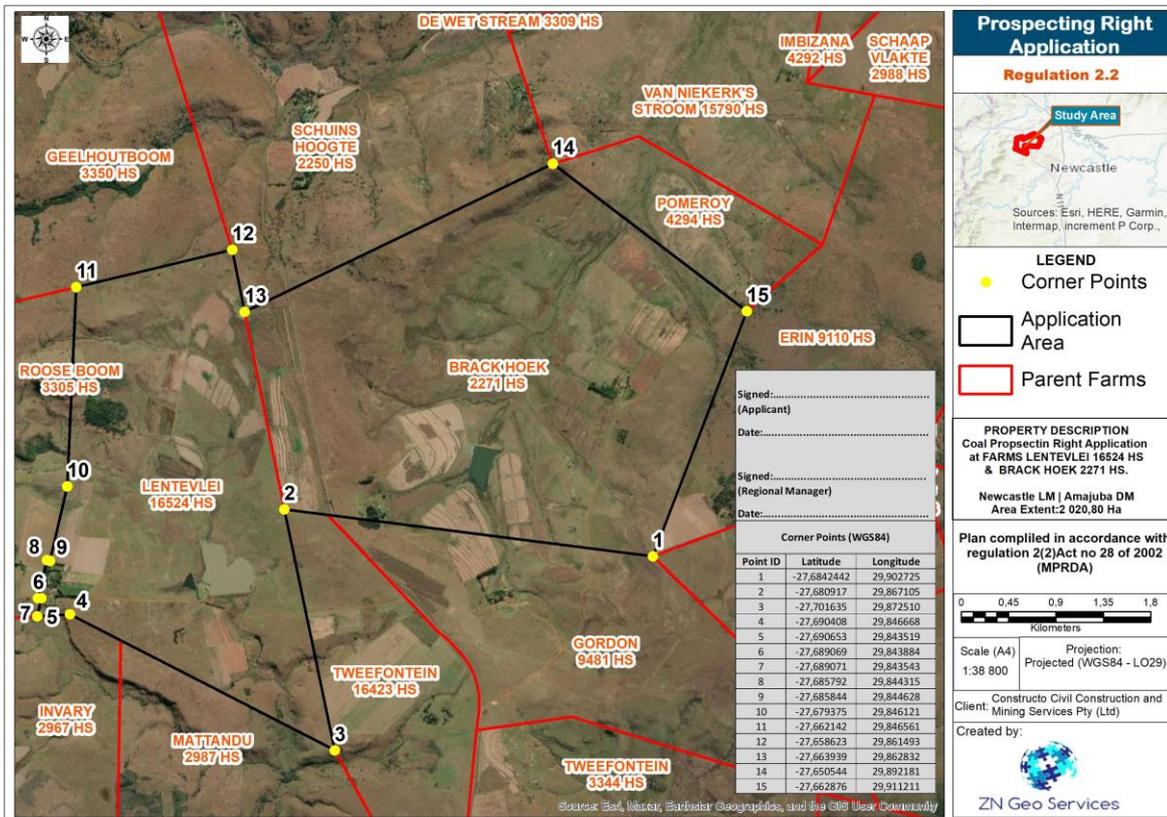


Figure 6 The site's Regulation 2.2 plan

- No prospecting will take place at horizontal distance of 100 m from any infrastructure and 500 for water bodies.
- Constructo will use non-invasive methods within protected areas. These methods include surface mapping and applicable Geophysical methods.
- Any boreholes, sewer pipelines, etc will be marked-off prior to site establishment and avoided during operations.
- Where possible, existing access roads will be utilized to access the potential drill sites.

Buffer zones will be applied to sensitive environmental, and heritage features where invasive prospecting methods would be applied and will include:

- Invasive activities are to avoid identified heritage resources at all other target areas.
- No invasive activities are to be placed within 50m from such heritage sites;

- A 500m buffer zone will be upheld to wetlands and riparian zones and be regarded as no go zones for invasive prospecting methods.
- Prospecting at rocky ridges would be avoided, if it cannot be avoided footprint areas will be limited to a minimum on rocky ridges;
- Disturbance through exploration in old river channels will be limited to an absolute minimum.
- Prospecting activities are to be located along existing access roads as far as possible.

(d) the technology to be used in the activity

The application is for both non-invasive and invasive methods of prospecting. The overall objective of the prospecting program is to identify the nature and extent of the target mineral (coal) which can potentially be economically mined in future. Prospecting activities will be undertaken over a period of 5 years. The prospecting activities will take place in the form of initial non-invasive prospecting activities (e.g., desktop studies, aerial surveys and literature reviews), followed by invasive prospecting measures such as drilling and thereafter sampling. Invasive methods are those which will impact on the land whilst non—invasive methods do not.

The cores (NQ size; i.e. 75.7mm hole diameter) will be drilled to intersect the expected mineralization zone and will be logged by the geologist. At least 10 holes will be drilled at depths averaging 100 metres over the entire ~2000 hectares application area. The intersected mineralized zone will be sampled and sent to the laboratory for quality determination. This data will form the basis for the geological modelling and financial evaluation. The prospecting programme would require 24 months to complete. Rehabilitation activities would be conducted concurrently where possible, but due to legislative issues that still need to be address, final rehabilitation and removal of prospecting infrastructure additional time may be required. The period for which the environmental authorisation should be valid is 5 years allowing for unexpected issues, rehabilitation, and closure activities.

An alternative in technology / method is being considered for drilling of surface boreholes. Core drilling, reverse circulation or percussion drilling will be considered. Diamond/Core drilling has been chosen based on its known success of prospecting. This method gives more accurate profile of the mineral composition at each depth than any other style of drilling, and cause less environmental impacts (e.g, with the core drilling, one can get depths of 30 meters in 12 hours, compared to 150 meters with reverse circulation drilling).

(e) the operational aspects of the activity

The surface infrastructure of the prospecting area includes the following:

- » Access Roads
- » Drill Holes
- » Drill Rig
- » Ablution (temporary)
- » Light delivery vehicles

Please refer to the Site Layout map of **Appendix 3** or Figure 3. Site layout features have not been determined as the prospecting activities shall determine where the drillholes shall be, and thus inform the location of ablutions, vegetation to be cleared for access to drill hole sites etc. 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 will be identified after the geophysical surveys have confirmed the presence of the ore body. 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) the option of not implementing the activity

This refers to the current status quo and the risks and impacts associated with it. The current land use of the proposed site is typically grasslands and agricultural land (see Appendix 4). Should the project not be implemented the area will not be disturbed more than it already has been. Other advantages of the no-go option include no potential impact on watercourses (including rivers) and no nuisance in terms of drilling activities.

Disadvantages of the no-go option are that the area are listed below:

- No potential temporal employment opportunities

- Communities will not benefit from the employment opportunities and royalties associated with development of a mine post positive prospecting results.
- The only land use option left for the community to pursue would be either agriculture, grazing or game farm ventures which may not be as prosperous as mining.
- There will be no detailed data to validate the economic feasibility to mine the available mineral resource. Therefore, no new mine will be established.
- Constructo would forfeit the opportunity to generate a prosperous income from a potential mining operation.

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.

Kindly refer to **Appendix 2** for proof of the public participation process (PPP) aspects undertaken as well as the Comments and Responses Report (CRR). No comments have been received thus far as the project is still at the draft basic assessment phase.

Stakeholders and I&AP's were informed of the project by means letters of notification and Background Information Documents (BIDs). Four (4) site notices (labelled A to D) were placed on the 13th of October 2023, inviting Interested and Affected parties (I&APs) to kindly register and get more information on the project.

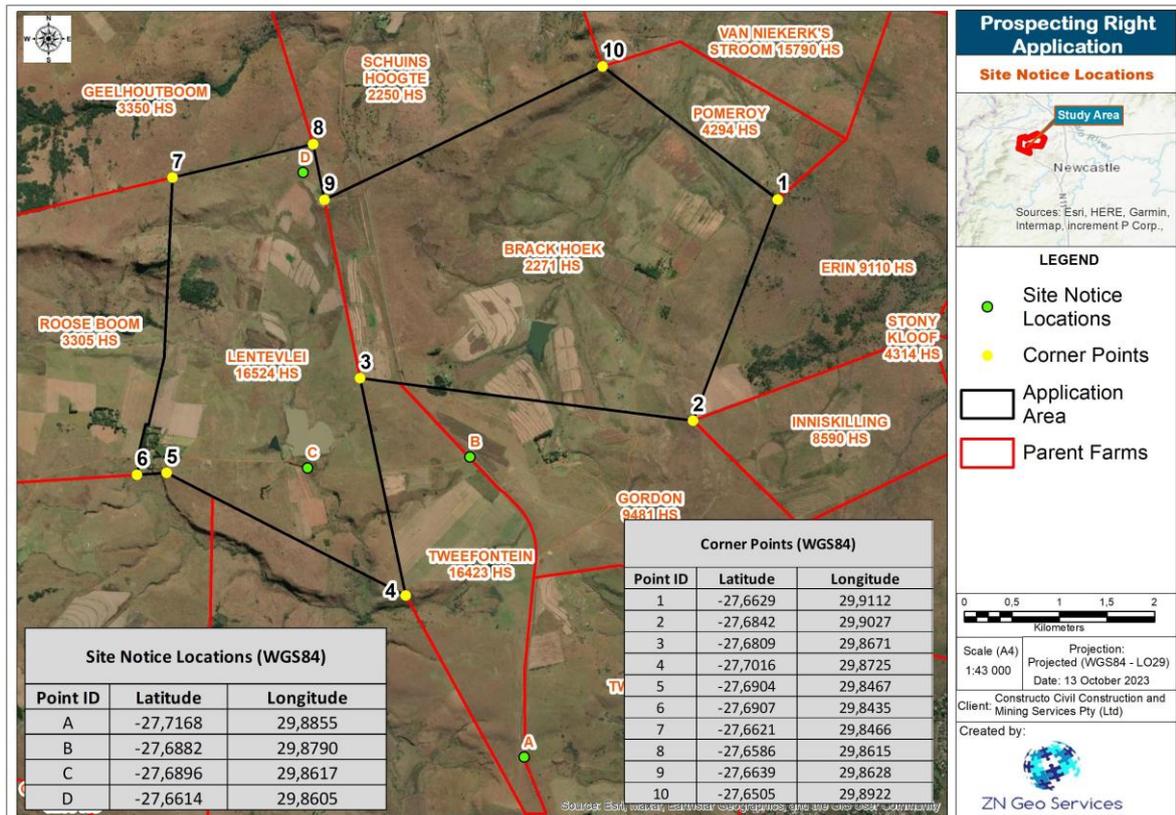


Figure 7: Site notice locations

A newspaper advert was placed in the Newcastle Express Weekly Newspaper on the 10th of October 2023. An erratum was thereafter published, also in the Newcastle Express, on the 24th of October 2023 which updated the dates for the availability of the draft basic assessment report (DBAR) and applicable farms.

Landowners were notified of the project. Please see Appendix 2.

The Draft basic Assessment report shall be made available at the Lennoxton Public Library in Newcastle.

The DBAR can also be downloaded from the following DropBox link:
<https://www.dropbox.com/scl/fo/a1hybq4vbsjn7bit8ro7f/h?rlkey=clb452nxs9jv2scdt1w7sj4wa&dl=0>

There will be a public meeting located at NOFTA Hall (address: 7B Nightingale Street, Lennoxton; Newcastle) on the 9th Of November 2023 and starting at 9:00am.

The project details have been uploaded onto the SAHRIS portal.

This draft BAR shall be made available to all I&APs and stakeholders for comment for a period of at least 30 days (between 27 October 2023 and 27 November 2023).

A land claim enquiry was lodged with the KwaZulu-Natal Land Claims Commissioner. The outcomes are that there were land claims on the intended farms, but these claims were subsequently excluded. Taken from the received correspondence (See Appendix 2): "our records indicate that a claim for restitution in terms of the provisions of the Restitution of Land Rights Act, 22 of 1994 (as amended)

was lodged in respect of the property described as Portion 1 of the farm Brack Hoek No. 2271. This property falls under the Ingogo Community. The notice of the claim was subsequently amended to exclude said property.”

“Our records indicate that a claim for restitution in terms of the provisions of the Restitution of Land Rights Act, 22 of 1994 (as amended) was lodged in respect of the property described as Portion 0 of the farm Brack Hoek No. 2271. This property falls under the Ingogo Community claim. The notice of the claim was subsequently amended to exclude said property”

No comments have been received thus far as the project is still as the draft basic assessment phase.

The public participation process (PPP), also known as the Stakeholders Engagement Process (SEP) is a fundamental component of the Environmental Impact Regulations (as amended) Regulation 40, 41 -44 of the EIA Regulations. Not only is public participation a statutory requirement in terms of Section 56 of the NEMA, but a process which is designed to lead a joint effort by interested and affected parties to evaluate all aspects and issues of the proposed development, with the ultimate goal of improving the project by minimizing adverse effects and maximizing the benefits of the project. Public participation is designed to provide sufficient and accessible information to Interested and Affected Parties (I&APs) in an objective manner to assist them to:

- Be acquainted with the proposed Constructo Prospecting Right application;
- Raise issues of concern and make suggestions for alternatives and enhanced benefits;
- Contribute local knowledge;
- To obtain stakeholder views and concerns, and;
- Verify and validate that their issues have been captured and considered in the Basic Assessment Report.

Regulation 2(4)f under the principles of NEMA further states that: the participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantage persons must be ensured. The following media of communication with interested and affected parties (I & APs) will be used:

- A newspaper advert will be placed in the local newspaper, giving notice to I & APs of the applicant`s intention to prospect the area as well as inviting all affected parties to a meeting where the applicant would provide full details of the project.
- Site notices (A2 sized) will be placed in strategic areas surrounding the site. E-mail and telephonic communication with I & APs;
- Comment and registration sheet: I & APs will be requested to provide written comments, concerns and inputs that would be consolidated into the BAR;

- A register of I & APs is kept and as such the following information will be distributed to them:
- Background Information Document (BID). The BID is comprised of the following information:
 - The description of the land concerned;
 - The location of the project;
 - The minerals applied for;
 - The meeting schedule, time, venue

Identifying Regulatory Authorities:

The authorities for this project were identified from similar projects in the past. The authorities contacted with regards to this project include:

- Ezemvelo KwaZulu-Natal Wildlife (EKZN)
- KwaZulu-Natal Department of Water & Sanitation
- Telkom
- Eskom SOC Ltd
- Transnet SOC Ltd
- KwaZulu Natal Department of Mineral Resources & Energy (DMRE)
- KwaZulu Natal Department of Water & Sanitation
- Roads Agency KwaZulu-Natal
- KwaZulu-Natal Department of Economic Development, Environment & Tourism
- KwaZulu-Natal Department of Rural Development and Land Reform
- Newcastle Local Municipality
- Amajuba District Municipality

Document Review:

In addition, this Report will be subjected to at least a 30-day commenting period (27 October 2023 to 27 November 2023). I & APs will be informed of its availability. All comments received during the draft phase will be incorporated within the Final Basic Assessment Report, which will be submitted to the competent Authority (DMRE) for their decision.

The present Draft Basic Assessment Report and Draft Environmental Management Programme will be made available (this document). A Register of interested and affected parties has been opened

and will be maintained (see Table 3). A fully detailed feedback report on the public participation activities will be undertaken to inform the public, stakeholders and Organs of State of the applications and availability of the Basic Assessment Report. This will be included in the Appendix 2 of the Final Basic Assessment Report.

DRAFT

Table 3: Interested and affected parties (personal details concealed to protect personal information)

KCM 20/6/12/2/11612 PR:1 SAPo DATABASE						
Regional or Provincial	Name of Organization	Department	Contact Person	Phone	Email	Address
KCM	Biodiversity	EKEM Wildlife - Scientific Technical IEM Planning Division	Verissa Pity			
KCM	DWB	Water and Sanitation	Mr Sibusiso Buhezi			
KCM	Edkom	Land Development	Land Development Department Common Email			
KCM	Telkom	Telkom	Wayleses			
KCM	KCM Department of Agriculture and Rural Development Amajuba District Office	KZMBARD Acting Deputy Director: Newcastle Local Office	Mr Mborgheni Muzalo			
KCM	Co-operative Governance & Traditional Affairs	Director: Infrastructure Development	Andre Bule			
KCM	Department of Mineral Resources & Energy	Director: Environmental Management	Karoon Moodley			
DEDEA	Regional Department of Economic Development, Tourism & Environmental Affairs	KZMEDTEA - EA Manager (Amajuba District)	Poool Moodley			
KCM	Department of Transport	DOT - Newcastle	Tizane Dlongolo			
Amajuba District Municipality	District Municipality	Dept Director: Environmental Management	Ms Nobile Mkhizulu			
Newcastle Local Municipality	Local Municipality	Municipal Manager	Zamani Mcheka			
Newcastle Local Municipality	Local Municipality	Acting Director: Corporate Services	Thabile Shole			
Newcastle Local Municipality	Ward Councillor	Ward 1 Ward Councillor	Pauline Shababala			
Future Coal (coal mining company)	Environmental Manager	Environmental Management	Khulwile Maithekwane			
Land Owner	Landowner	Land owner: Mr Brink (Portion D of Lentubei HS)	Mr Brink			
Land Owner	Landowner	Land owner: Mr Mzimbo (Portion D of Brack Hoek Z271 HS)	Mr J. Mzimbo			
Land Owner	Landowner	Land owner: Mr Muller (Portion 1 of Brack Hoek Z271 HS)	Mr G. Muller			
Newcastle Library	Lennoxton Public Library	For placement of BIDs, Screening Tool and Draft Scoping Report etc.	The Librarian (Lennoxton Library)			
Transect	Transect Properties	Administrator	Ms Fezile Ndlovu			
KCM	Amata	Administrator	Mr John Fakwe			
Registered Interested and Affected Party	Northern Natal Land Survey Office	Interested and Affected Party: Registered from Newspaper Advert	Northern Natal Land Survey Office			

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

The majority of current land use significantly encompasses agricultural activities. This is in the form of cattle/livestock related activities.

(a) Type of environment affected by the proposed activity.

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

Geology & Soils

The study area typically conforms to the Ecca Group. The foundations of KwaZulu-Natal comprise two distinct geological units; the Kaapvaal Craton and the Natal Metamorphic Province. The subsurface geology has a great influence on the terrain of Newcastle including the soil and vegetation cover which are essential to the conditions of development. The geological structure comprises four kinds of rock formations which includes Jurassic age dolerite, Permian age mudstone and sandstone, Permian/carboniferous age shale of the Volkrust formation, and the carboniferous age sandstone of the Vryheid formation. The mineral potential of Newcastle is also closely related to the geological systems of the area. The minerals within the area contribute to the economic value of Newcastle. The underlying geology of the site is alluvial boulders along the watercourse and Ecca group shale as the primary bedrock. Soils are typically well-drained (Figure 9). The study area comprises a suite of dolerite intrusives and sandstones or shales (Figure 8). For the A3-sized map please refer to Appendix 4.

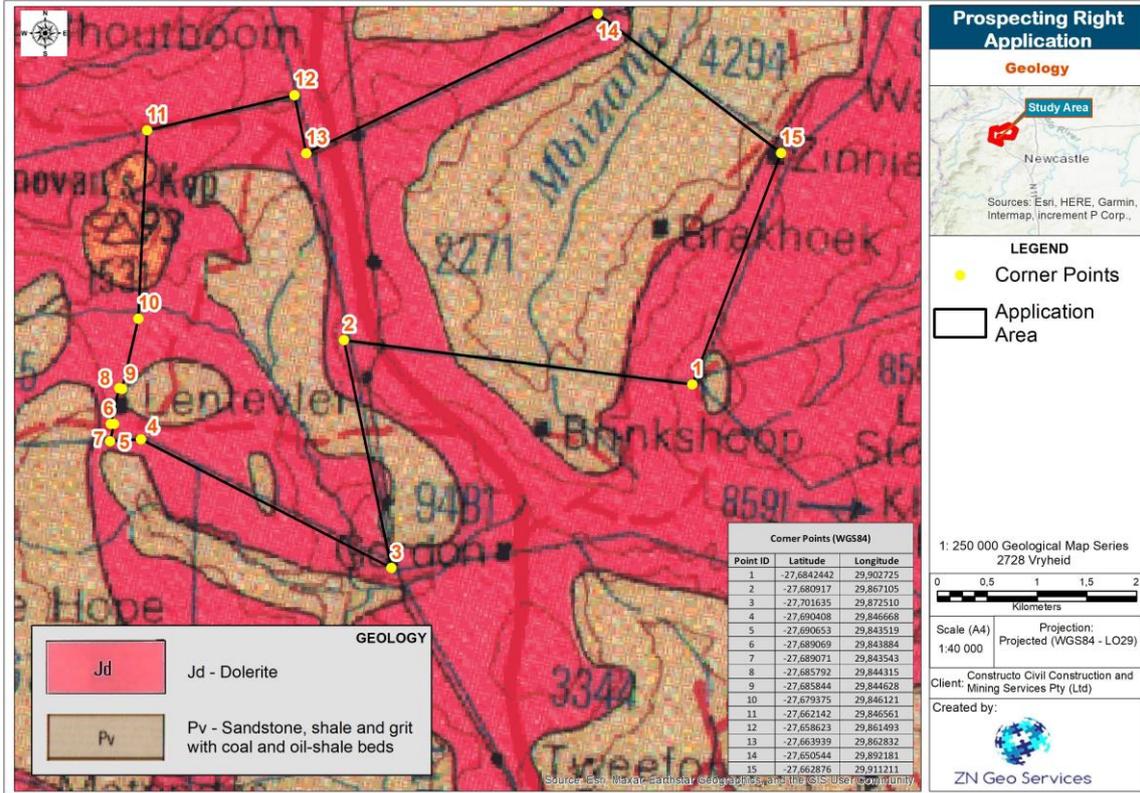


Figure 8 The geology of the project site.

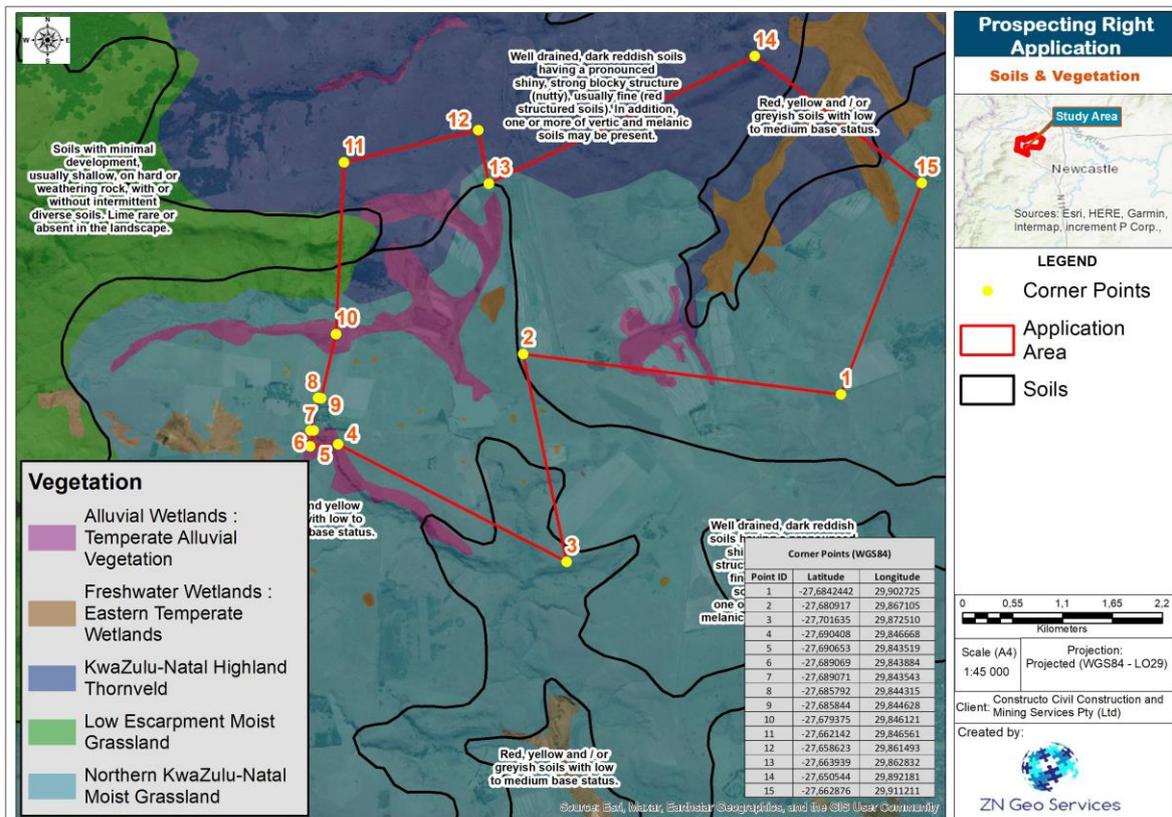


Figure 9 The vegetation and soils of the project site

Vegetation

The proposed prospecting right application area primarily comprises KwaZulu-Natal highland thornveld and KwaZulu-Natal moist grassland with some wetland vegetation noted (Figure 9) For the A3-sized map please refer to Appendix 4.

Critical Biodiversity Areas (CBA) & Ecological Support Areas (ESA)

The proposed prospecting site intersects with Critical Biodiversity Areas (CBA) (Figure 10). The KwaZulu Natal Biodiversity Sector Plan includes reference to Critical Biodiversity Areas (CBA) which are terrestrial and aquatic features in the landscape that are critical for retaining biodiversity and supporting continued ecosystem functioning and services (EKZNW, 2016).

In addition, the conservation assessment also made provision for Ecological Support Areas (ESA's), which are areas that are not essential for meeting biodiversity representation targets/thresholds but which nevertheless play an important role in supporting the ecological functioning of critical biodiversity areas and/or in delivering ecosystem services that support socio-economic development, such as water provision, flood mitigation or carbon sequestration. For the A3-sized map please refer to Appendix 4.

Although the site intersects both ESA and CBA, the current land use also notes that the area under application is utilised significantly for agricultural purposes (Figure 19). Of the approximately 2000 hectares applied for within the ambit of this prospecting right, it is anticipated that less than 10 hectares shall be impacted.

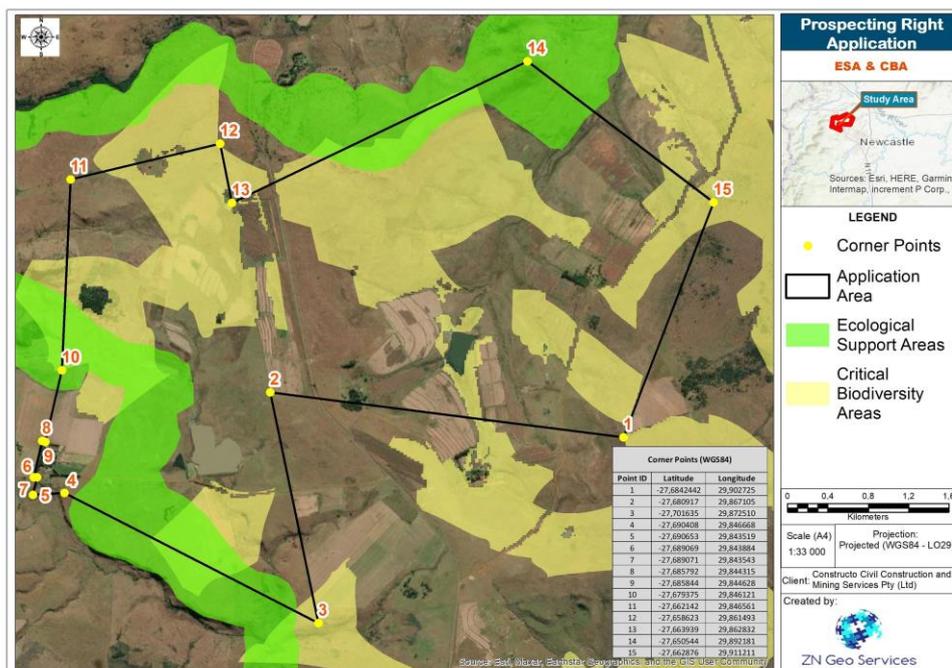


Figure 10 Critical Biodiversity Area (CBA) for the project site.

According to the Screening Tool report (see Figure 11 and Appendix 9), the agricultural theme typically ranges between medium and very high for the area. This further notes the strong agricultural activities already taking place on the project site.

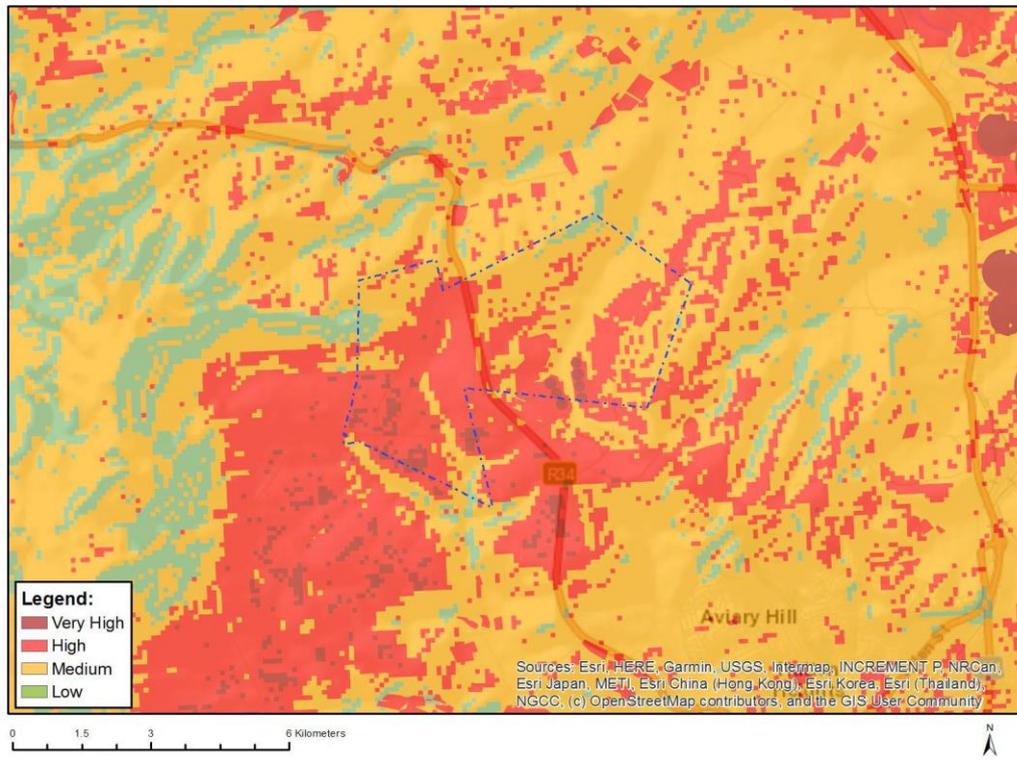


Figure 11 Screening Tool categorisation for agricultural sensitivity

DRY

Alien Invasive Plant Species

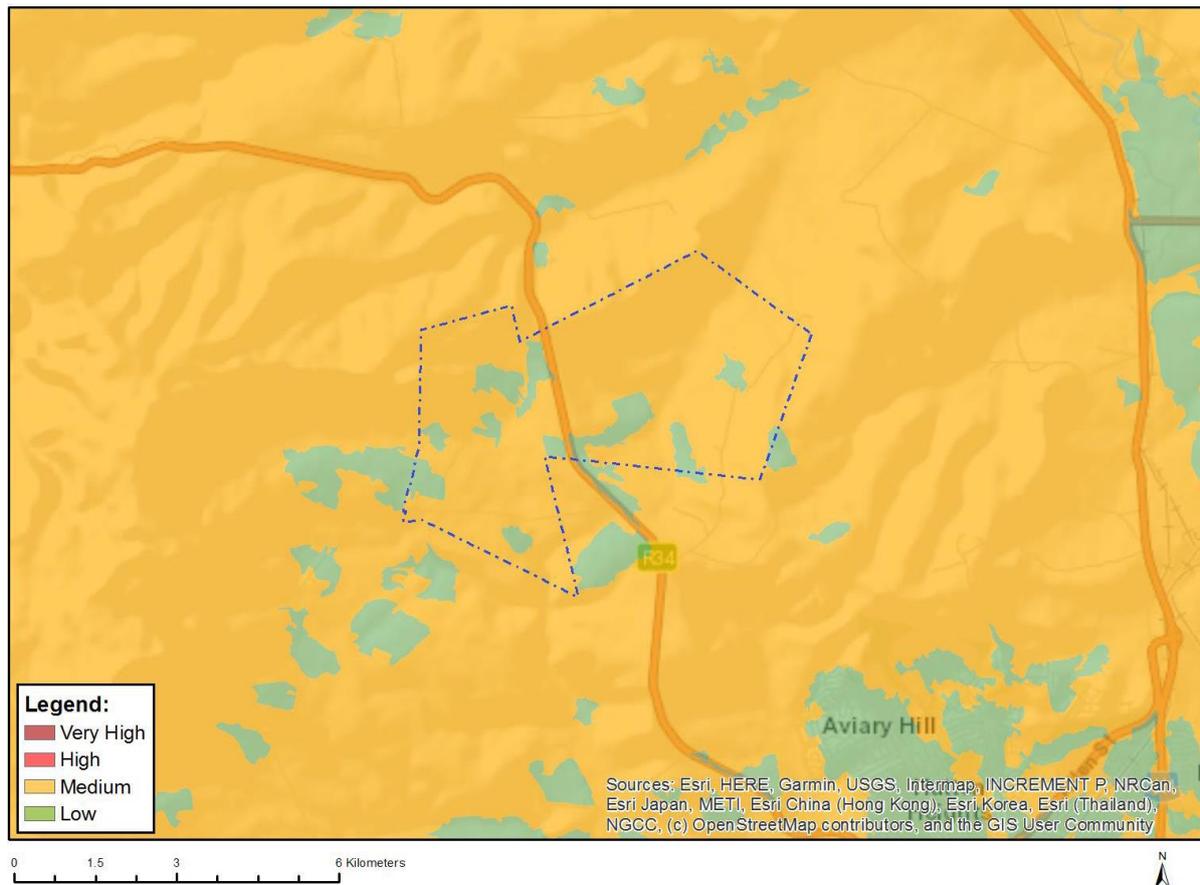


Figure 12: Screening Tool categorisation for plant theme sensitivity

The Screening Tool notes a low to medium sensitivity for plant species within the study area. This may be largely attributed, once again, to the considerable agricultural activities taking place within the intended prospecting area (Figure 12). However, it is still imperative to note that alien and invasive plant species are mitigated and controlled within the working areas of the prospecting right.

The National Environmental Management: Biodiversity Act (NEMBA) is the most recent legislation pertaining to alien invasive plant species. The legislation calls for the removal and / or control of alien invasive plant species (Category 1 species). In addition, unless authorised thereto in terms of the National Water Act, 1998 (Act No. 36 of 1998), no land user shall allow Category 2 plants to occur within 30 meters of the 1:50 year flood line of a river, stream, spring, natural channel in which water flows regularly or intermittently, lake, dam or wetland. Category 3 plants are also prohibited from occurring within proximity to a watercourse.

Below is a brief explanation of the three categories in terms of the National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA):

- **Category 1a:** Invasive species requiring compulsory control. Remove and destroy. Any specimens of Category 1a listed species need, by law, to be eradicated from the environment. No permits will be issued.
- **Category 1b:** Invasive species requiring compulsory control as part of an invasive species control programme. Remove and destroy. These plants are deemed to have such a high invasive potential that infestations can qualify to be placed under a government sponsored invasive species management programme. No permits will be issued.
- **Category 2:** Invasive species regulated by area. A demarcation permit is required to import, possess, grow, breed, move, sell, buy or accept as a gift any plants listed as Category 2 plants. No permits will be issued for Category 2 plants to exist in riparian zones.
- **Category 3:** Invasive species regulated by activity. An individual plant permit is required to undertake any of the following restricted activities (import, possess, grow, breed, move, sell, buy or accept as a gift) involving a Category 3 species. No permits will be issued for Category 3 plants to exist in riparian zones.

Fauna

The Sensitivity Report generated from the National Web-based Environmental Screening Tool indicated that animal species sensitivity ranges between medium and high (Figure 13).

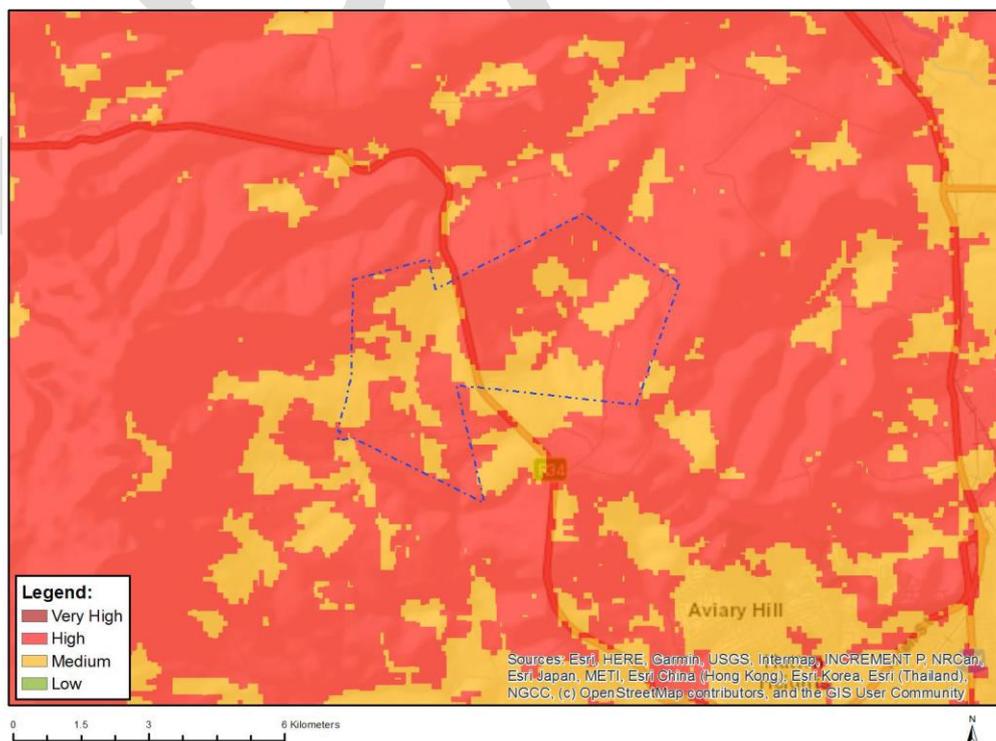


Figure 13 Screening Tool animal sensitivity map

It is to be noted that the animal themes rated as “high” are per Figure 13 above are all within the avian or “bird” species. The risk to bird life as prospecting activities occur is minimised by the intermittent noise of the drill rig, which is not for the entire duration of the prospecting right period.

Sensitivity	Feature(s)
High	Aves-Neotis denhami
High	Aves-Balearica regulorum
High	Aves-Geronticus calvus
High	Aves-Eupodotis senegalensis
High	Aves-Circus ranivorus
High	Aves-Sagittarius serpentarius

Figure 14: Animals noted as being of high sensitivity within the study area

Topography

The proposed activity is prospecting. The site is somewhat undulating and more gentle towards the west. The site highest point is 2076 meters above sea-level and the lowest is 1175 meters above sea-level (Figure 15).

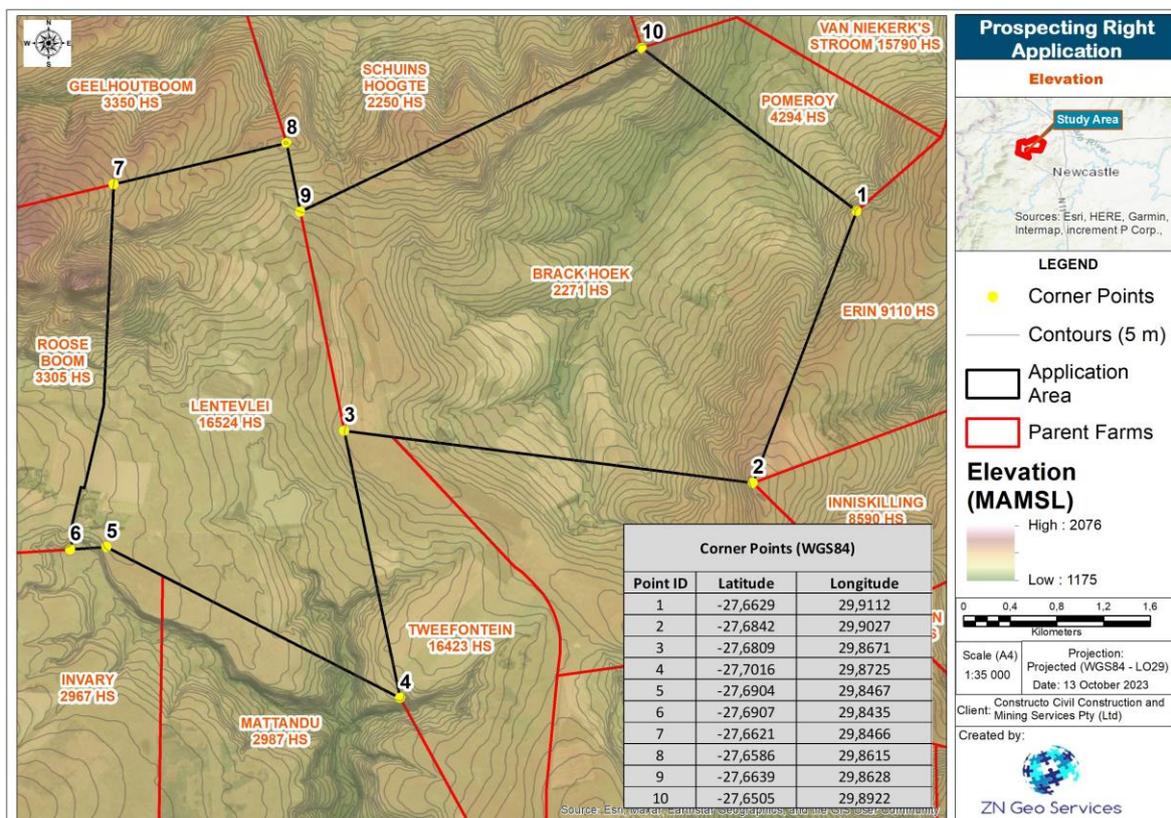


Figure 15 Project site topography.

Hydrology

The proposed prospecting site is located within Quaternary Catchment V31D and V31J, falling under Buffalo water management area. The proposed area sits on a Ngudumeni and Mbizana streams, tributaries of the Buffel river. Watercourses identified within the project site included: Seep Wetland units, unchanneled valley, depressions, and drainage Lines, and streams (Mbizana sand Ngudumeni streams) As recommended in the mitigation measures 500 m buffer should be maintain around the watercourses (Figure 16).

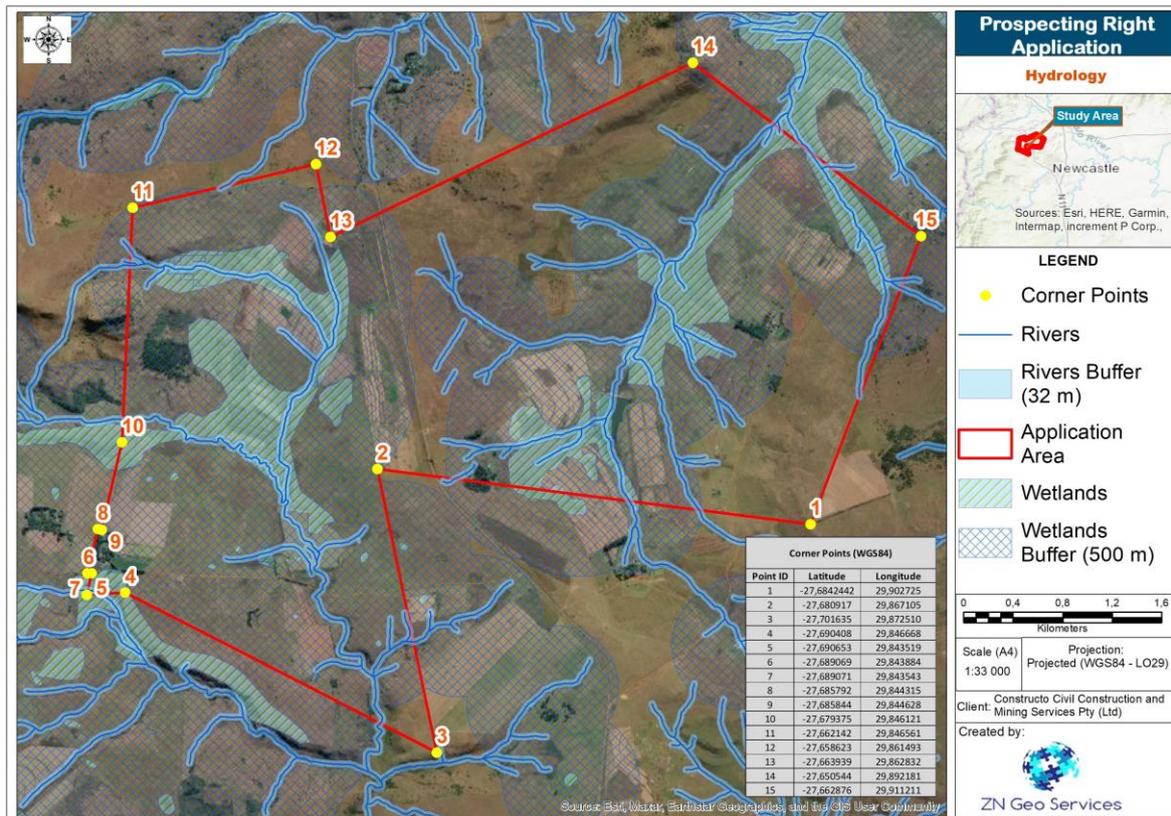


Figure 16 General project site hydrology depicting the 500 m buffers

Groundwater

The aquifer underlying the study area is classified as a minor aquifer. This minor aquifer system can be fractured or potentially fractured rocks, which do not have a high primary permeability, or other formations of variable permeability. The lithology is mostly arenite underlain by shale underlain by coal. The aquifers seldom produce large quantities of water but are important both for local supplies and supplying base flow to rivers.

Climate

The climate in Newcastle is considered warm and temperate. The summers are much rainier than the winters in Newcastle. This location is classified as Cwb by Köppen and Geiger. The

mean yearly temperature recorded in Newcastle is 16.0 °C, as per the available data. The annual rainfall is 895 mm. The months of summer are: December, January, February, March.

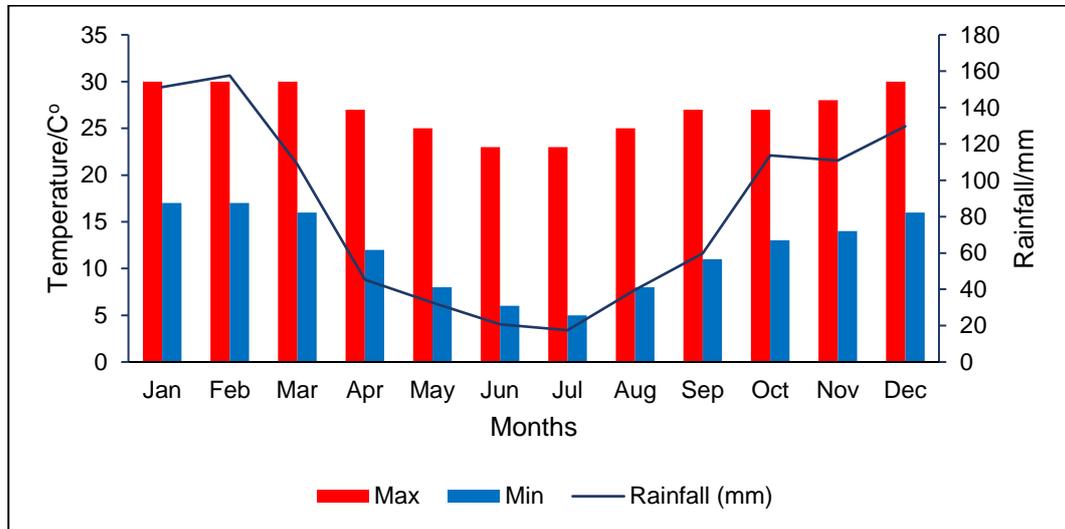


Figure 17 The Newcastle average temperatures and precipitation (Climate Data, 2023)

Wind

Dust may be liberated during drilling activities. The wind experienced at any given location in Newcastle is highly dependent on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages.

The average hourly wind speed in Newcastle experiences significant seasonal variation over the course of the year. The windier part of the year lasts for 5.9 months, from May 30 to November 28, with average wind speeds of more than 8.7 miles per hour. The windiest month of the year in Newcastle is September. The calmer time of year lasts for 6.1 months, from November 28 to May 30. The calmest month of the year in Newcastle is March, with an average hourly wind speed of 6.9 miles per hour. The wind is most often from the west for 8.8 months, from March 27 to December 21, with a peak percentage of 60% on June 14. The wind is most often from the east for 3.2 months, from December 21 to March 27, with a peak percentage of 36% on January 1.

Air quality

Air quality in the area may be slightly deteriorated due to moving vehicles (R34 and access roads passes through the project site).

Noise

The project site is within a quiet and calm area. The average noise levels are often less well behind the 60 dB, the SANS noise levels. There are few habitations around and within the proposed project site. The noise emit during the project will negatively affect the surrounding and communities withing the proposed development area.

Protected Areas

There are no protected areas within 10 km distance to the proposed project.

(b) Description of the current land uses.

The dominant land use in the area is agriculture. Land uses in the proposed site mainly consists of farms, assortment of agriculture, transformed vegetation and grazing land for livestock and few trees.

Cultural & Heritage Landscape

It is clear that most of the study area has been previously disturbed by agricultural activities. A screening study for the proposed development area showed the low sensitivity in terms of the importance of heritage site and items in the proposed mining area. The proposed site does not fall within 10km of a heritage site.

However, The Map of relative paleontology theme sensitivity from the Screening Tool indicates high and very high sensitivity (Figure 18). There is thus a possibility to find paleontological objects on some parts of the project site.

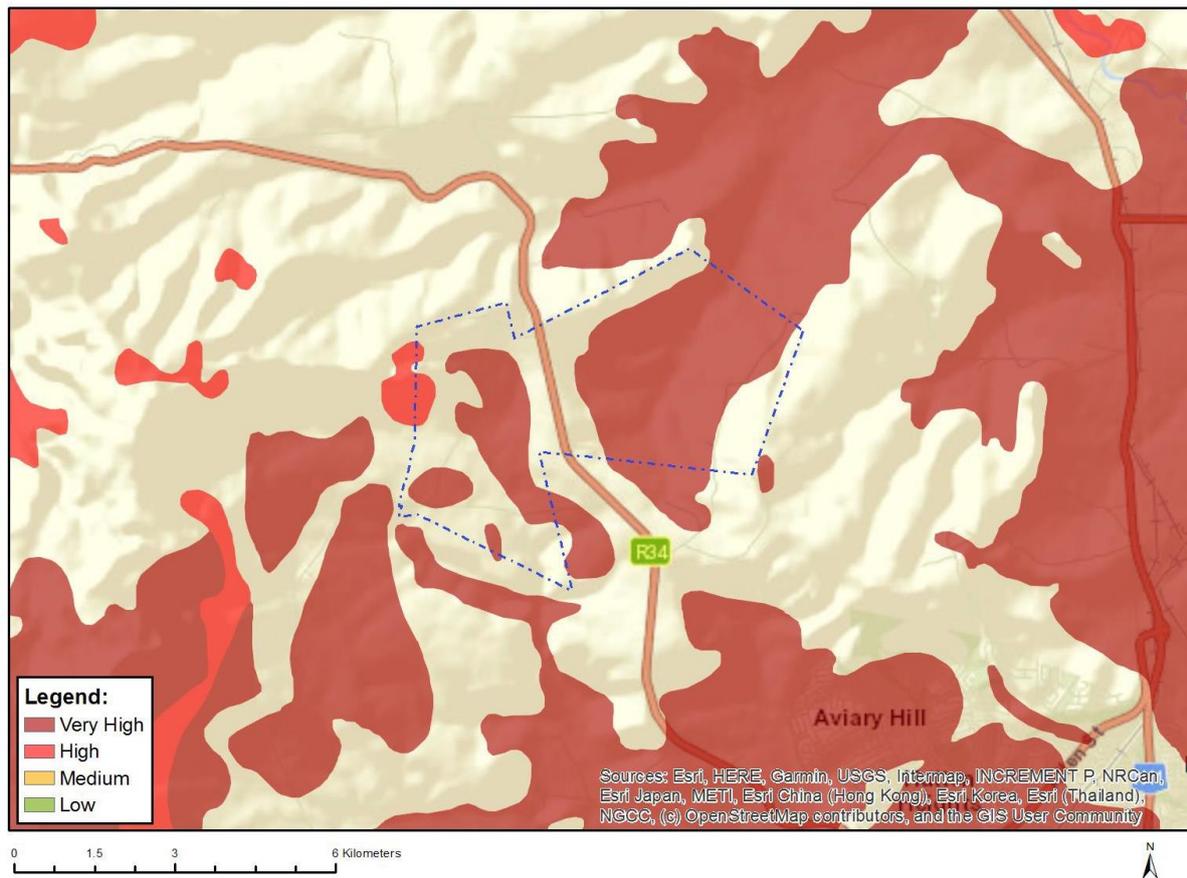


Figure 18: Screening Tool paleontology sensitivity theme map

Socioeconomic Environment

The proposed project is located within the local municipality of Newcastle, at approximately 5 kilometres northwest of the town. The Municipality counts approximately 389 117 inhabitants in total (Newcastle IDP Report, 2020) within 1855 km² in size. The majority of the population is relatively young with almost 72% of people aged between 19 to 34 years. According to the Newcastle IDP report, the level of education in the area is fairly good. The area comprised a considerable number of education institutions.

Economic Activities

Newcastle is the main urban centre and economic hub of the Amajuba district which is among one of the major coal mining regions in South Africa. Livestock farming and crop production are the dominating activities in the area. The community in the area live below poverty line; only few are employed in the farms and Newcastle town. In 2020 the IDP numbered 5 Operating Mining Activities within the Newcastle Local Municipality's jurisdictional area and many others mining prospects. Mining and agriculture related services as well as skilled and unskilled workmanship are available from all neighbouring townships around Newcastle.

Health

The municipality encountered approximately 10 permanent clinics and at least two hospitals. One is located in town while the other is in Madadeni Township. While Madadeni Hospital serves the district function, Newcastle Hospital is classified as a Provincial Hospital and provides service to the whole of Amajuba District and the surrounding areas. According to the Newcastle IDP report there is a need for interventions to address HIV/Challenges.

Social Setting

The Newcastle Local Municipality is the third largest urban area within KwaZulu-Natal (KZN), forming the border of KZN, with Phumelela in the Free State to the west and Pixley ka Seme in Mpumalanga to the north. The NLM area covers a total area of 1855 square kilometres and is made up of 31 wards. Newcastle is the main urban centre and economic hub, with an increase of households realised from previous surveys done. Average household size is about 4.3 people per dwelling unit.

Generally, the economy of the municipality has been dominated by three sectors namely manufacturing, mining and community services. However, the local economy is currently dominated by the services sector in terms of output and employment. The contribution of the manufacturing sector is large in terms of output but significantly lower in terms of employment, indicating to the capital intensity of the sub-sectors that dominate in the Newcastle economy, i.e., steel, rubber manufacturing, heavy engineering, cement, chemicals, textiles. The local municipality has been noted to have huge backlogs in the delivery of basic services (electricity, water, sanitation), despite being a hive for economic activity in KwaZulu-Natal. The social institutions governing residents in the area include the local cooperative set ups, farming communities, local municipality, district municipality, national and international frameworks.

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

There are no protected areas within 10 kilometres of the project site. There are wetlands which occur within 500m of the study area and buffers have been delineated. No archaeological aspect like graves, artefacts that will be tempered with. There is a possibility of encountering paleontological artefacts. The area has been significantly utilised for agricultural purposes.

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

The surface infrastructure of the prospecting area includes the following:

- » Access Roads
- » Drill Holes
- » Drill Rig(s)
- » Ablution (temporary)
- » Light delivery vehicles

Please refer to the Site Layout map of **Appendix 3** or Figure 3. Site layout features have not been determined as the prospecting activities shall determine where the drillholes shall be, and thus inform the location of ablutions, vegetation to be cleared for access to drill hole sites etc. 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 will be identified after the geophysical surveys have confirmed the presence of the ore body. 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.

(d) Environmental and current land use map.

(Show all environmental, and current land use features)

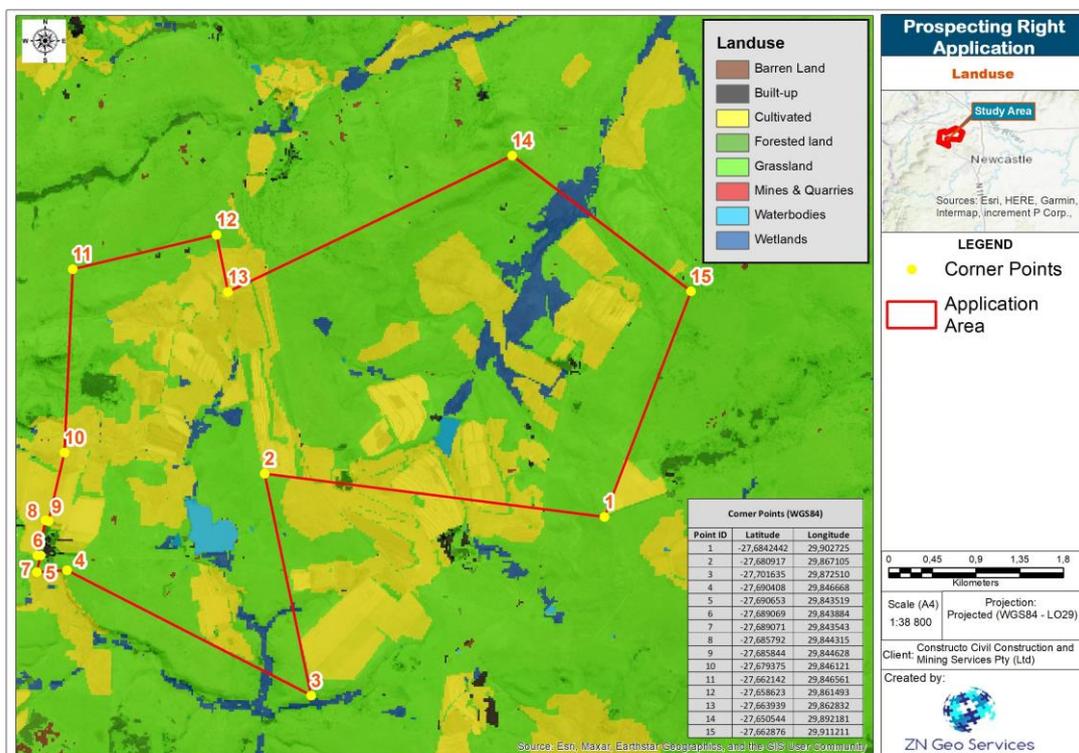


Figure 19 Land use.

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).

This section summarizes the potential impacts associated to the different phases of the proposed prospecting activities. Potential impacts and risks were explored by investigating each aspect associated with the proposed prospecting activities.

The different phases of the prospecting works include:

- Site planning & preparation: It involves, amongst others, site clearance to establish site camps and equipment onsite works, channel sampling. and finalising identification of target areas for prospecting (non-invasive). Site clearance will follow and establishment of site camps and equipment on site (invasive).
- Drilling, and logging (invasive)
- Alternative methods to be applied (non-invasive): surface mapping and applicable Geophysical methods (flying an aeroplane over the property to measure electromagnetic or sound anomalies, walking the areas)
- Decommissioning and Rehabilitation of prospecting infrastructure, excavations, and affected areas

Impacts identified below are identified after interaction of all activities of the project and the environment.

- Soil contamination through fuel spills. The soil can be contaminated during all the phases of the project, particularly during the refuel and maintenance of vehicles and other equipment on site.
- Noise generated from the drilling activities, and movement of vehicles, and other equipment.
- Loss and disturbance of vegetation, animals
- Loss of species (animals and plants) of important concern

- Soil erosion - Impact on the soil viability during digging.
- Air pollution through dust and diesel fumes from the machines.
- Poor waster generation (solid and liquid)
- Land uses change (Drilling as an activity may impact on the natural and socio-economic environment).
- Crime (the security of the landowner / occupier might be at stake).
- Erosion/ soil degradation; The stockpiling of soils from the excavation of the water sumps may impact soil viability.
- Potential visual impacts caused by drilling activities and associated infrastructure.
- Water contamination during borehole drilling.
- Clearing the drilling site during rehabilitation may impact on the natural vegetation of the area.
- Work and roads accidents
- Increasing in disease (sexually transmissible disease) due to foreign people/employees in the project site.
- Increase traffic
- Risks of confits between communities.
- Waterborne diseases, cancers, and respiratory diseases
- Job creation - The proposed operation requires skilled and experienced people to carry out the drilling programme. If the people with the required skill are available locally, they will be given preference.
- Change of topography and soil degradation.

See Risk Assessment table below.

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE					MITIGATION TYPE	SIGNIFICANCE				
				if not mitigated						if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					

The following impacts were identified for each phase of prospecting

Planning & Design (incl. site establishment)

- Compliance with relevant environmental legislation and policy
- Site establishment
- Socio-economic

Prospecting

- Compliance with relevant environmental legislation and policy
- Visual intrusion associated with mining activities
- Sanitation facilities
- Demarcation of drilling site
- Storm water and erosion
- Spillages of hazardous substances
- Dust control
- Noise
- Ground vibrations
- Waste management
- Socio-economic

Decommissioning & closure

- Final rehabilitation and decommissioning
- Closure

No-Go

- Socio-economic effects in terms of loss of potential temporal employment opportunities during prospecting activities
- Lower potential for positive competition within the coal mining industry, should the prospecting activities prove to be viable and thereafter a mining permit or mining right is applied for.
- No potential temporal employment opportunities during prospecting activities
- Communities will not benefit from the employment opportunities and royalties associated with development of a mine post positive prospecting results.

- The only land use option left for the community to pursue would be either agriculture, grazing or game farm ventures which may not be as prosperous as mining.
- There will be no detailed data to validate the economic feasibility to mine the available mineral resource. Therefore, no new mine will be established.
- Constructo would forfeit the opportunity to generate a prosperous income from a potential mining operation.

Refer to Table 4, Table 5, Table 6, Table 7, Table 8 and Table 9 below for a detailed impacts tables and descriptions. The significance rating was determined using the methodology as explained under vi) below —Methodology Used in Determining and Ranking the Significance. The impact rating was determined for each impact prior to bringing the proposed mitigation measures into consideration as well as after implementing the proposed mitigations.

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).

Impact methodology

This section details the methodology that was used when determining the significance of potential environmental impacts.

General Impact Assessment

A general impact assessment was conducted based on site visits, the EIA screening Tool and information relating to the planning and design, construction, operation and decommissioning/closure of the proposed prospecting activities.

Methodology for Assessing Impacts and Alternatives

Identified impacts will be assessed against the following criteria:

- Temporal scale
- Spatial scale
- Risk or likelihood
- Degree of confidence or certainty

- Severity or benefits
- Significance

The relationship of the issue to the temporal scale, spatial scale and the severity are combined to describe the overall importance rating, namely the significance of the assessed impact.

Description of criteria

Direct, indirect and cumulative impacts of the issues identified, as well as all other issues identified, in the Basic Assessment phase must be assessed. This methodology allows for the identified potential impacts to be analysed in a systematic manner, with significance rating (from insignificant to very high) assigned to each potential impact. The significance of an impact is defined as a combination of the consequence of the impact occurring and the probability that the impact will occur. The criteria used to determine impact consequence include extent, intensity and duration of the impact and are presented in the tables and descriptions below.

Table 4: Criteria used to determine the consequence of the impact

Rating	Definition of Rating	Score
A. EXTENT – the area in which the impact will be experienced		
Local	Confined to project or study area or part thereof (e.g. site)	1
Regional	The region, which may be defined in various ways, e.g. cadastral, catchment, topographic	2
Inter(national)	Nationally or beyond	3
B. INTENSITY – the magnitude or size of the impact		
Low	Site-specific and wider natural and / or social functions and processes are negligibly altered	1
Medium	Site-specific and wider natural and / or social functions and processes continue albeit in a modified way	2
High	Site-specific and wider natural and / or social functions or processes are severely altered	3
C. DURATION – the time frame for which the impact will be experienced		
Short-term	For the duration of project activities / up to 2 years	1
Medium-term	2 to 15 years	2
Long-term	More than 15 years	3

The combined score of these three criteria corresponds to a consequence rating, as set out in Table 2 (Note that the lowest possible consequence score is 3).

Table 5: Method used to determine the consequence score

Combined Score (A+B+C)	3 - 4	5	6	7	8 - 9
Consequence Rating	Very Low	Low	Medium	High	Very High

Once the consequence is derived, the probability of the impact occurring is considered, using the probability classifications presented in Table 3.

Table 6: Probability classification

Probability of impact – the likelihood of the impact occurring	
Improbable	< 40% chance of occurring
Possible	40% - 70% chance of occurring
Probable	> 70% - 90% chance of occurring
Definite	> 90% chance of occurring

The overall significance of impacts is determined by considering consequence and probability using the rating system prescribed in Table 4.

Table 7: Impact significance ratings

		Probability			
		Improbable	Possible	Probable	Definite
Consequence	Very Low	INSIGNIFICANT	INSIGNIFICANT	VERY LOW	VERY LOW
	Low	VERY LOW	VERY LOW	LOW	LOW
	Medium	LOW	LOW	MEDIUM	MEDIUM
	High	MEDIUM	MEDIUM	HIGH	HIGH
	Very High	HIGH	HIGH	VERYHIGH	VERY HIGH

Finally the impacts are considered in terms of their status (positive or negative) and the confidence in the ascribed impact significance rating is noted. The classification for considering the status of impacts and the confidence in assessment is laid out in Table 5.

Table 8: Impact Status and Confidence Classification

Status of Impact	
Indication whether the impact is adverse (negative) or beneficial (positive)	+ ve (positive – a 'benefit')
	– ve (negative – a 'cost')
	Neutral
The degree of confidence in predictions based on available information, the environmental consultant's judgment and / or specialist knowledge.	Low
	Medium
	High

Different types of impacts were also considered in the impact ratings, as listed in Table 6.

Table 9: Types of Impact

Direct – impacts that result from the direct interaction between a project activity and the receiving environment (e.g. dust generation which affects air quality).
Indirect – impacts that result from other (non-project) activities but which are facilitated as a result of the project or impacts that occur as a result of subsequent interaction of direct project impacts within the environment (e.g. reduced water supply that affects crop production and subsequently impacts on subsistence-based livelihoods).
Cumulative – impacts that act together with current or future potential impacts of other activities or proposed activities in the area / region that affect the same resources and / or receptors (e.g. combined effects of waste water discharges from more than one project into the same water resource, which may be acceptable individually, but cumulatively result in a reduction in water quality quality).

There is no statutory definition of 'significance' and its determination is therefore necessarily partially subjective. Criteria for assessing the significance of impacts arise from the following key elements:

Status of compliance with relevant local legislation, policies and plans, any relevant or industry policies, environmental standards or guidelines and internationally accepted best practice:

- » The consequence of the change to the biophysical or socio-economic environment (e.g. loss of habitats, decrease in water quality) expressed, wherever practicable, in quantitative terms. For socio-economic impacts, the consequence must be viewed from the perspective of those affected, by taking

into account the likely perceived importance of the impact and the ability of people to manage and adapt to the change;

- » The nature of the impact receptor (physical, biological, or human). Where the receptor is physical (e.g. a water resource) its quality, sensitivity to change and importance must be considered. Where the receptor is biological, its importance (e.g. its local, regional, national or international importance) and its sensitivity to the impact must be considered. For a human receptor, the sensitivity of the household, community or wider societal group must be considered along with their ability to adapt to and manage the effects of the impact; and
- » The probability that the identified impact will occur. This is estimated based upon experience and / or evidence that such an outcome has previously occurred.

The impact significance rating also reflects the need for mitigation. While low significance impacts may not require specific mitigation measures, high significance negative impacts demand that adequate measures be put in place, to reduce the residual significance (impact significance rating, after mitigation), as described below in Table 10.

Table 10: Definitions of Impact Significance

Insignificant: the potential impact is negligible and no mitigation measures or environmental management is required.
Very Low & Low: no specific mitigation measures required, beyond normal environmental good practices.
Medium - High: specific mitigation measures should be devised, to reduce the impact significance to an acceptable level. If mitigation is not possible, compensation measures should be considered.
Very High: specific mitigation measures should be identified and implemented, to reduce the impact significance to an acceptable level. If such mitigation is not possible, very high significance negative impacts should be considered in the project's authorisation process.

Note that impact significance will be rated in the prescribed way both without and with the effective implementation of the recommended mitigation measures.

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)

No concerns have been raised by any interested and affected parties. If any concerns are noted, they shall be noted and included in the final basic assessment report.

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).

No concerns have been raised by any interested and affected parties. If any concerns are noted, they shall be noted and included in the final basic assessment report.

ix) Motivation where no alternative sites were considered.

No concerns have been raised by any interested and affected parties. If any concerns are noted, they shall be noted and included in the final basic assessment report. No comments have been received from interested and affected parties (I&AP) thus far as the project is still at the draft basic assessment phase. Specific layouts cannot be determined as drill holes are to be located as per the suite of activities of the intended prospecting right. 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 will be identified after the geophysical surveys have confirmed the presence of the ore body. 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.

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

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

Specific layouts cannot be determined as drill holes are to be located as per the suite of activities of the intended prospecting right. 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 will be identified after the geophysical surveys have confirmed the presence of the ore body. 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.

i) Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site

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

The identified risks and impacts for this study, specifically the proposed site, were identified in terms of the site assessments, Screening Tool and GIS data for this site and the socio-economic need of the surrounding area. Desktop and geological reasoning suggests the existence of viable coal deposits within the proposed site. Prior Council for Geoscience boreholes also note the existence of coal within the earmarked study area. The area under application is approximately 2000 ($\pm 2020,80$) hectares. This is sufficient to ensure that salient environmentally sensitive features such as wetlands and/or watercourses are avoided and the recommended buffer of 500 m from each is maintained. The same shall apply to any heritage features which may be encountered within the study area.

During the impact assessment process, the following potential impacts were identified of each main activity in each phase. An initial significance rating (as per section V titled "Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts" above) was determined for each potential impact should the mitigation measures proposed in this document not be implemented on-site. The impact assessment process then continued in identifying mitigation measures to address the impact that the proposed mining activity may have on the surrounding environment. The significance rating was again determined for each impact using the methodology as explained within Section vi) methodology. The impact ratings listed below was determined for each impact after bringing the proposed mitigation measures into consideration and therefore represents the final layout/activity proposal.

(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). The supporting impact assessment conducted by the EAP must be attached as an appendix, marked **Appendix 8.**

DRAFT

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE					MITIGATION TYPE	SIGNIFICANCE				
				if not mitigated						if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
(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.)	(Including the potential impacts for cumulative impacts) (E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)		In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)						(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)					
Drill site establishment	Damage to heritage and/or palaeontological resources	No surface sites were identified	Pre-Construction and construction.	1	1	3	Low	Very Low	<ul style="list-style-type: none"> ▪ Chance find procedure for heritage resources such as graves ▪ Cease work as soon as such artefacts of other palaeontological material is encountered and contact a palaeontologist 	1	1	3	Low	Very Low
site establishment	<u>Direct impact</u> Destruction of natural vegetation on the site <u>Cumulative impact:</u> Loss of natural vegetation <u>Status of impact</u> Negative, High	Clearing of and damage to vegetation in the mining footprint, access roads, construction camps, vehicle/machinery traffic and trampling by workers.	Construction	2	3	3	Definite	Very high	<ul style="list-style-type: none"> • Before operations commences, the ECO or surveyor must clearly demarcate the footprint and the access road footprint. • No-go and sensitive areas must be clearly marked and avoided. • Disturbance of indigenous vegetation and the natural ecology in the surrounding areas must be avoided where possible. • Activities must be done with rehabilitation in mind. Removed vegetation must kept for rehabilitation. • Concurrent rehabilitation is also encouraged. • All drilled holes are to be sealed and rehabilitated. 	2	2	3	Definite	Medium

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<p>(E.g. For prospecting - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
Access roads clearing of vegetation	<p><u>Direct impacts:</u> Exposure of soil to erosion</p> <p><u>Status of impacts:</u> Negative, medium</p>	<p>The removal of vegetation will result in soil erosion because of rainfall, and high vehicular activity. The lack of or failure to properly rehabilitate the site will leave a scared</p>	Construction and operational	1	2	2	Definite	Low	<ul style="list-style-type: none"> Plan the development layout in such a way to prevent storm water and runoff from roads does not lead to excessive soil erosion. Do not allow erosion to develop on a large scale before acting. Roads on inclines should be overlain with rocks to prevent or reduce erosion. Remove only vegetation where essential for construction and mining and do not allow any disturbance to the adjoining natural vegetation cover. Protect all areas susceptible to erosion and ensure that there is no undue soil erosion 	1	2	2	Probable	Low

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<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)						(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)					
		environment							resultant from activities within and adjacent to the mine.					
Disturbance to soils, earthworks and use of machinery	<p><u>Direct impact:</u> Spread of alien invasive plant species</p> <p><u>Cumulative impact:</u> Negative, high</p>	The seed of alien invasive plant species that occur on and near the construction area the construction areas could	All phases	1	2	3	Possible	Medium	<ul style="list-style-type: none"> Alien invasive species, especially category 1b invaders that were identified within the mining site should be systematically removed. By removing these species, the spread of seeds will be prevented into disturbed soils which could thus have a positive impact on the surrounding natural vegetation. All alien seedling and saplings must be removed as they become evident. 	1	1	2	Possible	Very low

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<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
		<p>spread into the disturbed and stockpiled soil. Construction vehicles and equipment were likely used on various other sites and could introduce alien invasive</p>							<ul style="list-style-type: none"> Method used to clear these plants can either be manual/mechanical or chemical or a combination of these methods. If filling material is to be used, it should be sourced from areas free of invasive species. <p>Decommissioning and closure</p> <ul style="list-style-type: none"> Site should be monitored for the emergence of invasive species. These plants should be controlled. 					

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<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)						(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)					
		plant seeds or indigenous plants not belonging to the vegetation systems of the site.												
Excavation and borehole drilling	<p><u>Direct impact:</u> Reduce air quality</p> <p><u>Status of impact:</u> Negative, medium</p>	Natural environment, road users and nearby residents	Construction, commissioning, operational, decommissioning and closure	1	2	3	Probable	Medium	<ul style="list-style-type: none"> Reduce drop height of material to a minimum so as to minimise the amount of dust generated. A speed limit of 30km/hour will be displayed and enforced through the company's safety policies and systems. 	1	1	1	Probable	Very low

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									<ul style="list-style-type: none"> All vehicle drivers entering the site will be informed of the speed limit. Drilling should take place as required for prospecting activities to commence and continue. Drill rigs are to be fitted with chutes to reduce liberated dust Drilling is to be conducted during daylight hours. 					
Emissions (site camp and equipment storage)	<p><u>Direct impacts:</u> Reduce air quality</p> <p><u>Status of impact:</u> Negative, medium</p>	Natural resources	Construction, commissioning, operational, decommissioning and closure	1	2	3	Definite	Medium	<ul style="list-style-type: none"> Vehicles and machinery on the site will be monitored for excessive emissions. Vehicles and machinery will be maintained to minimise emissions. A log book will be used to keep records of maintenance and mitigation measures 	1	1	1	Possible	Very low

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									<p>implemented to resolve problems encountered.</p> <ul style="list-style-type: none"> • Vehicles and machinery emitting excessive emissions will be stopped immediately and not allowed to operate until the necessary repairs have been done. • Drilling should take place as required for prospecting. 					
All prospecting activities	<p><u>Direct impacts:</u> Pollution of soil and soil water</p> <p><u>Indirect impact:</u></p>	Spillage of construction material and harmful chemicals. Illegal disposal and dumping of	Construction and operational	1	3	3	Probable	High	<ul style="list-style-type: none"> • Prevent spillage of material, oils or other chemicals, strictly prohibit other pollution. Ensure there is a method statement in place to remedy any accidental spillage immediately. • Trucks and equipment should not be washed within the study area. 	1	2	2	Probable	Low

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<p>(E.g. For prospecting - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
	<p>Deterioration of soil health, and vegetation</p> <p><u>Cumulative impact:</u> Pollution of soil water in the area</p> <p><u>Status of impact:</u> Negative, medium</p>	<p>construction material such as cement or soil, as well as maintenance materials during construction and operational phases.</p>							<ul style="list-style-type: none"> The site staff should maintain a store of suitable absorbent material, suitable bioremediation substance and a spill kit. All incidents/spillages are to be recorded in an incident log book. Contaminated soil material be disposed at a proper site. 					

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Rehabilitation	<p><u>Direct impacts:</u> Failed rehabilitation</p> <p><u>Indirect impact:</u> Change vegetation community which can be dominated by alien invasive plant species</p> <p><u>Status of impact:</u> Negative, medium</p>	Lack of adequate rehabilitation of soils and vegetation	Closure	1	3	3	Probable	High	<ul style="list-style-type: none"> • Topsoil removed prior to or during prospecting should used in rehabilitation. • Indigenous vegetation on topsoil stockpiles should be used in the rehabilitation process. • The area should be re-landscaped and resemble the land form prior to the drilling activities as far as possible. • Vegetation rehabilitation plan should be implemented prior to prospecting and construction (during the planning phase), grass can be removed as sods and stored within transformed vegetation. • Only indigenous vegetation is to be utilised tor borehole rehabilitation • All drilled boreholes are to be sealed. 	1	2	2	Probable	Low

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<p>Site camp layout, site establishment (including access roads, berms, construction of infrastructure etc) and prospecting</p>	<p><u>Direct impact:</u> Minimal, as the site does not encroach within a wetland, but is rather located within 500m of such a feature</p> <p><u>Cumulative impact:</u> Construction and operational activities may result in cumulative impact</p>	<p>interaction of the site with the surrounding watercourse is to be minimised by adhering to the wetland specialist's recommendation of applicable buffers.</p>	<p>Construction and operational</p>	1	1	3	Low	Very Low	<ul style="list-style-type: none"> Effective stormwater management should be a priority during both construction and operational phase. This should be monitored as part of the EMP. The 500m buffer as recommended to be adhered to for the establishment of any infrastructure in the proximity of wetlands. 	1	1	1	Probable	Low

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	<p>to the water courses within the local catchments and beyond should the site boundary not be adhered to.</p> <p><u>Status of impact</u> Negative, very low</p>													

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<p>Site camp layout, site establishment (including access roads, berms, construction of infrastructure etc) and prospecting</p>	<p><u>Direct impact:</u> There are potential impacts as the topography is not entirely flat but gently undulating. This has connotations for storm water management. Soft berms are thus important.</p> <p><u>Cumulative impact:</u></p>	<p>Soft berms are to be well maintained at all times to ensure effective separation of clean and dirty water systems.</p>	<p>Construction and operational</p>	1	2	3	Medium	Low	<ul style="list-style-type: none"> Effective stormwater management should be a priority during both construction and operational phase. This should be monitored as part of the EMP. 	1	1	1	Probable	Low

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	<p>Construction and operational activities may result in cumulative impact to the water courses within the local catchments and beyond should the site boundary not be adhered to.</p> <p><u>Status of impact</u> Negative, medium</p>													

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<p>Site camp layout and site establishment</p>	<p><u>Direct impact</u> Destruction of natural and verthabitat</p> <p><u>Cumulative impact:</u> Loss of natural vertebrate habitat on site and beyond</p> <p><u>Status of impact</u> Negative, High</p>	<p>Clearing of and damage to vertebrate habitat and killing of terrestrial and fossorial small mammals and herpetofaunal in the mining footprint, access roads, construction</p>	<p>Construction</p>	<p>1</p>	<p>3</p>	<p>3</p>	<p>Definite</p>	<p>High</p>	<ul style="list-style-type: none"> Limit the creation of new roads, and try use the already existing ones. An independent Environmental Control Officer (ECO) should be appointed to oversee construction and operation. The ECO should be knowledgeable on the protected species that may occur within the development footprint. If any vertebrate especially herpetological species are encountered or exposed during the construction phase, they should be removed and relocated to natural areas in the vicinity. 	<p>1</p>	<p>2</p>	<p>3</p>	<p>Definite</p>	<p>Medium</p>

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<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)						(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)					
		camps, vehicle/machinery traffic and trampling by workers.												
Use of vehicles and machinery for loading, hauling and transport	<p><u>Direct impact:</u> Soil compaction and destruction of underground habitats</p> <p><u>Status of impact:</u> Negative, Medium</p>	<ul style="list-style-type: none"> Soil compaction will destroy underground tunnels and nests for rodents and other 	Construction and operational	1	2	3	Definite	Medium	<ul style="list-style-type: none"> Vehicles may not veer from the dedicated roads. Vehicles are to adhere to a speed limit of less than 30km/hr on site. Once operation is complete, unused roads should be closed and their surface be broken and revegetated with the locally occurring plants, as far as is practicably possible. 	1	1	3	Probable	Low

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated					MITIGATION TYPE	SIGNIFICANCE if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
		<p>fossorial species. Also movement of vehicles will cause vibrations that will scare and drive underground animals away from the site.</p>												

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated					MITIGATION TYPE	SIGNIFICANCE if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
All prospecting-related activities	<p><u>Direct impacts:</u> Noise, soil and water pollution.</p> <p><u>Indirect impacts:</u> Vegetation condition will deteriorate and animals will avoid this areas due to noise and the possible contamination of soil and soil water.</p>	<ul style="list-style-type: none"> Spillages of construction material and harmful chemicals. Illegal disposal and dumping of construction material such as cement or oil, as well as 	Construction and operational	2	2	3	Probable	High	<ul style="list-style-type: none"> Prevent spillage of material, oils or other chemicals, strictly prohibit other pollution. Ensure there is a method statement in place to remedy any accidental spillages immediately. Drill rigs, light delivery vehicles and other equipment should only be washed in dedicated areas and the dirty water is not allowed to discharge into the surrounding natural vegetation. This should be off site. 	2	2	2	Probable	Medium

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated					MITIGATION TYPE	SIGNIFICANCE if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
	<p><u>Status of impact:</u> Negative, High</p>	<p>maintenance materials during construction and operation.</p> <ul style="list-style-type: none"> Noise from vehicles will deter animals from using this site or area. 												

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated					MITIGATION TYPE	SIGNIFICANCE if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
Rehabilitation	<p><u>Direct impacts:</u> Failed rehabilitation</p> <p><u>Indirect impacts:</u> Scared landscape that is inhabitable by animals. Invasion of alien plant species that will change the original the biodiversity and ecology of the area.</p>	Lack of adequate rehabilitation of soils and vegetation	Closure	2	2	3	Probable	High	<ul style="list-style-type: none"> It is important that rehabilitation is not planned after mining activities have come to an end, it should be planned right at the beginning of the mining plans. Disturbance of vegetation and habitats outside of the mining site and where quarrying will take place should not wait till the end of mining activities but should be taken care of immediately. Rehabilitation activities should attempt to return the landscape functioning to its original state wherever possible. Monitoring of the landscape after rehabilitation should be conducted post closure. This will monitor the success of rehabilitation programme and check for 	1	1	2	Probable	Very low

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated					MITIGATION TYPE	SIGNIFICANCE if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
	<p><u>Cumulative impacts:</u> Spread of invasive plant species and encroacher species will change the local ecology</p> <p><u>Status of impact:</u> Negative, Medium</p>								<p>invasion of alien plant species and the local ecology.</p>					

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated					MITIGATION TYPE	SIGNIFICANCE if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
Excavation & Concurrent Rehabilitation Methods	<p><u>Direct impacts:</u> Failed mine planning</p> <p><u>Indirect impacts:</u> Scared landscape that is inhabitable by animals. Invasion of alien plant species that will change the original the biodiversity and ecology of the area as</p>	Lack of site planning and concurrent rehabilitation planning	Operational	2	2	3	Probable	High	<ul style="list-style-type: none"> A rehabilitation plan must be implemented and adhered to. The Environmental Control Officer is to consider adherence to or lack thereof in terms of these afore-mentioned plans. 	1	1	2	Probable	Very low

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated					MITIGATION TYPE	SIGNIFICANCE if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
	<p>prospecting will not be in accordance with the plan and rehabilitation efforts will be hindered as well.</p> <p><u>Status of impact:</u> Negative, Medium</p>													

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated					MITIGATION TYPE	SIGNIFICANCE if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
Air Emissions (dust)	<u>Status of impact:</u> Negative, Medium		Operational	2	2	2	Probable	Medium	<ul style="list-style-type: none"> Chutes/curtains to be utilised to reduce the liberated dust when the crushed material enters the screen/crusher. Road wetting where required to minimise liberated dust is recommended. 	1	1	2	Probable	Low
Noise	<u>Status of impact:</u> Negative, Medium		Construction, Operational and decommissioning	2	2	2	Probable	Medium	<ul style="list-style-type: none"> Drilling will only take place during stipulated daylight working hours Prospecting operations shall take place as per the required data. 	1	1	2	Probable	Low

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated					MITIGATION TYPE	SIGNIFICANCE if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
Fire	<p>There is the potential for fire to occur on the prospecting site.</p> <p><u>Status of impact:</u> Negative, high</p>	Natural and agricultural resources	Construction, Operational and decommissioning	2	2	3	Probable	High	<ul style="list-style-type: none"> All site staff or contractors will be inducted on general fire awareness. Anyone who observes a fire must report it immediately to the fire protection agency/ fire brigade and their supervisor/ mine manager. All drilling equipment and machinery is to be fitted with fire extinguishers. 	1	1	2	Probable	Low
Hydrocarbon spill	Surface water contamination and loss of natural and agricultural resources.	Natural and agricultural resources	Construction, Operational and decommissioning	2	2	3	Probable	High	<ul style="list-style-type: none"> Any vehicle or drill rig which is leaking hydrocarbons (e.g. petrol, diesel or oil) will be serviced in a concreted workshop to repair the leak off site. Hydrocarbon spillages are to be cleaned up immediately. The site staff or contractor will also maintain a store of suitable absorbent 	1	1	2	Probable	Low

NAME OF ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	SIGNIFICANCE if not mitigated					MITIGATION TYPE	SIGNIFICANCE if mitigated				
				EXTENT	INTENSITY	DURATION	PROBABILITY	RATING		EXTENT	INTENSITY	DURATION	PROBABILITY	RATING
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)</p> <p>(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.)</p>	<p>(Including the potential impacts for cumulative impacts)</p> <p>(E.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution, etc.)</p>		<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p>						<p>(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)</p>					
	<p><u>Status of impact:</u> Negative, High</p>								<p>material, suitable bioremediation substance and a spill kit.</p> <ul style="list-style-type: none"> All incidences/ spillages are to be recorded in an incident log book. Contaminated soil must be collected by a SAWIC registered contractor. 					
<p>Waste from chemical toilets and litter</p>	<p>Pollution and nuisance</p> <p><u>Status of impact:</u> Negative, Medium</p>	<p>Natural and agricultural resources</p>	<p>Construction, Operational and decommissioning</p>	2	2	3	Probable	High	<ul style="list-style-type: none"> The toilet is serviced when needed and emptied when almost full. If a leak occurs the correct emergency procedure is to be followed. Litter will be removed from site by the mine manager; as per the frequency and procedure to be developed on site as activities commence.. 	1	1	2	Probable	Low

Clearing of and damage to vegetation in the mining footprint, access roads, construction camps, vehicle/machinery traffic and trampling by workers.	Site layout and site establishment	<u>Direct impact</u> Destruction of natural vegetation on the site <u>Status of impact</u> Negative, High	Construction and operational	1	3	3	Definite	High	<ul style="list-style-type: none"> Any disturbances to the adjacent vegetation must be rehabilitated in accordance with a rehabilitation plan. This includes the infestation by alien and invasive plant species. Demarcate areas that are under rehabilitation as no-go areas using danger tape and steel droppers. If necessary, these areas should be fenced off to prevent vehicular, and people. 	1	3	2	Definite	Medium
	Site infrastructure and clearing of vegetation	<u>Direct impact</u> Exposure of soils to erosion <u>Indirect impacts:</u> Subsequent sedimentation of the Intact grassland <u>Status of impact:</u> Negative, Medium	Construction and operational	1	3	3	Definite	High	<ul style="list-style-type: none"> Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the mine. All roads and other hardened surface should have runoff control features (e.g. berms where applicable) which redirect water and dissipate any energy in the water which may pose an erosion risk. Do not allow erosion to develop on a large scale before acting. Remove only the vegetation where essential for construction and mining and do not allow any disturbance to the adjoining natural vegetation cover. Reduce dust where necessary by sprinkling soil with water. 	1	2	2	Possible	Low

	Use of vehicles and machinery for loading, hauling and transport	<p><u>Direct impact</u> Soil compaction</p> <p><u>Indirect impacts:</u> Indigenous vegetation does not colonise compacted soils. Water infiltration will be minimal.</p> <p><u>Status of impact:</u> Negative, Medium</p>	Construction and operational	1	2	3	Definite	Medium	<ul style="list-style-type: none"> Vehicles may not, as far as is practicably possible (e.g. where required for maintenance etc), veer from the dedicated roads. Once operation is complete, unused roads should be closed and their surface be broken and revegetated with the locally occurring plants. 	1	2	2	Probable	Low
Spillages of construction material and harmful chemicals. Illegal disposal and dumping of construction material such as cement or oil, as well as maintenance materials during construction and operation	Construction and operation	<p><u>Indirect impacts:</u> Pollution of soil and soil water</p> <p><u>Indirect impact:</u> deterioration of vegetation</p> <p><u>Cumulative impact:</u> Pollution of soil water in the area</p> <p><u>Status of impact</u></p>	All phases	1	3	2	possible	Medium	<ul style="list-style-type: none"> Prevent spillage of material, oils or other chemicals, strictly prohibit other pollution. Ensure there is a procedure in place to remedy any accidental spillages immediately. Trucks and equipment should only be washed in dedicated areas and the dirty water is not allowed to discharge into the surrounding natural vegetation. 	1	1	2	Improbable	Very Low

Lack of adequate rehabilitation of soils and vegetation	Rehabilitation	<p>Direct impacts: Failed rehabilitation</p> <p>Indirect impact: Results in vegetation with a low basal cover, prone to erosion and invasion by exotic and invasive plant species.</p> <p>Cumulative impacts: Spread of invasive vegetation and encroacher species, loss of grazing potential</p> <p>Status of impact: Negative, medium</p>	Closure	1	2	3	Probable	Medium	<ul style="list-style-type: none"> The site as it is disturbed due to current agricultural activities, when the proposed prospecting has been completed, the landscape should be rehabilitated and resemble the natural landscape as far as possible. 	1	1	2	Probable	Very Low
Clearing of and damage to vegetation in the mining footprint, access roads, may destroy habitats and corridor that animals to move between habitats.	Site layout and site establishment	<p><u>Direct impact</u> Destruction of natural vegetation on the site</p> <p><u>Status of impact</u> Negative, High</p>	Planning, Construction and Operational	1	3	3	Definite	High	<p>Planning</p> <ul style="list-style-type: none"> Plan activities as much as is practicably possible on already disturbed areas (Fallow Ground and Sugarcane Plantation vegetation types). Make use of existing access roads, and limit the creation of new roads. Planning of the mine must incorporate the rehabilitation of areas destroyed. The rehabilitation plan must also make provision for accidental damage to adjacent vegetation. <p>Construction & Operational</p>	1	3	2	Definite	Medium

									<ul style="list-style-type: none"> An independent Environmental Control Officer (ECO) should be appointed to oversee construction and operation. The ECO should be knowledgeable on the animal species that may occur within the development footprint. If any vertebrate especially herpetological species are encountered or exposed during the construction phase, they should be removed and relocated to natural areas in the vicinity. All construction vehicles should adhere to a low speed limit to avoid collisions with susceptible species such as snakes. 						
Site layout and site establishment	<p><u>Direct impact</u> Exposure of soils to erosion and potentially killing fossorial herpetofauna and rodents.</p> <p><u>Indirect impacts:</u> Subsequent sedimentation of and covering of plant by which will affect animals especially arboreal animals.</p> <p><u>Status of impact:</u> Negative, Medium</p>	Planning, Construction and Operational	1	3	3	Definite	High	<ul style="list-style-type: none"> Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the mine. All roads and other hardened surface should have runoff control features which redirect water and dissipate any energy in the water which may pose an erosion risk. Do not allow erosion to develop on a large scale before acting. Remove only the vegetation where essential for construction and mining and do not allow any disturbance to the adjoining natural vegetation cover. 	1	2	2	Possible	Low		

	Use of vehicles and machinery for loading, hauling and transport	<p><u>Direct impact</u> Soil compaction</p> <p><u>Indirect impacts:</u> Indigenous vegetation does not colonise compacted soils. Water infiltration will be minimal.</p> <p><u>Status of impact:</u> Negative, Medium</p>	Compaction of soils using vehicles and machinery	1	2	3	Definite	Medium	<ul style="list-style-type: none"> Vehicles may not veer from the dedicated roads, unless required for maintenance and other necessary situations. Once operation is complete, unused roads should be closed and their surface be broken and revegetated with the locally occurring plants. 	1	2	2	Probable	Low
Animals will be frightened by the drilling activities. Animals especially birds and mammals might leave area, either temporarily or permanently.	Prospecting (operational)	<p><u>Direct impact</u> Sound explosion and seismic waves will scare and displace animals even beyond the mining buffer zone.</p> <p><u>Status of impact</u> Negative, High</p>	Operational	1	2	3	Definite	Medium	<ul style="list-style-type: none"> Drilling is to be conducted during daylight hours and only as required. 	1	2	3	Definite	Medium

<p>Lack of adequate rehabilitation of soils and vegetation will transform the local naturally occurring plants which will not support indigenous animal species of this area</p>	<p>Rehabilitation</p>	<p>Direct impacts: Failed rehabilitation</p> <p>Indirect impact: Results in vegetation with a low basal cover, prone to erosion and invasion by exotic and invasive plant species.</p> <p>Cumulative impacts: Spread of invasive vegetation and encroacher species, loss of browse potential</p> <p>Status of impact: Negative, medium</p>	<p>.Closure</p>	<p>1</p>	<p>2</p>	<p>3</p>	<p>Probable</p>	<p>Medium</p>	<ul style="list-style-type: none"> The site is already disturbed due to current agricultural activities, when the proposed prospecting has been completed, the landscape should be rehabilitated and resemble the natural landscape as far as possible. 	<p>1</p>	<p>1</p>	<p>2</p>	<p>Probable</p>	<p>Very Low</p>
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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):-

No specialist studies have been undertaken for the prospecting right application. However, site assessments, GIDS data, and outcomes of the Screening Tool were taken into consideration. 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 study area covers an expanse of some 2000 (i.e., ±2020,80) hectares, and only some ten (10) boreholes are earmarked to be drilled. The drill points and hence access roads, will be identified after the geophysical surveys have confirmed the presence of the ore body.

DRAFT

I) Environmental impact statement

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

This Basic Assessment illustrates that there are various potential negative and positive impacts that may arise as a result of the proposed coal prospecting on portions 0 and 1 of the farm Brack Hoek 2271 HS, and portion 0 of the farm Lentevlei 16542 HS, which may have an effect on the following environmental components:

- Terrestrial ecology;
- Air quality;
- Noise generation;
- Soils and land capability;
- Water resources
- Social environment; and
- Temporary Visual aesthetics

The identified study area encompasses the portions 0 and 1 of the farm Brack Hoek 2271 HS, and portion 0 of the farm Lentevlei 16542 HS situated some 5 kilometres northwest of Newcastle. Assessment of the geological data available; derived from the Council for geoscience borehole archives (Figure 4) has determined that the area in question may have coal mineral reserves. In order to ascertain the above and determine the nature, location and extent of the coal mineral reserves within the proposed area, it will be necessary that prospecting activities be undertaken. The prospecting activities will also determine if there are any features that may have an impact on the economic extraction of these minerals.

The data obtained from the prospecting of coal (if sufficient reserves are discovered) will be necessary to determine how and where the coal will be extracted and how much economically viable reserves are available within the proposed prospecting area. Should sufficient coal be found in the project area, Constructo would, only then, be in a position to apply for a mining right or mining permit.

No alternative activity was assessed as coal prospecting is the target mineral and activity. The No-Go option will result in the site remaining as it is presently and not realising the potential economic and social benefits of coal mining; should prospecting activities prove to be favourable. The benefits of the project can be divided into social and economic classifications. The prospecting activities will provide direct, though temporal, employment to local persons.

The objective of Basic Assessment and Environmental management programme, in this case a basic assessment is to find the alternative having the least negative environmental impact and which best benefits society. The assessment and evaluation of potential impacts associated with the proposed development was undertaken in an iterative manner, to inform proactively the 'shaping' of the most favourable development proposal.

The proposed site is considered suitable provided that all the mitigation measures contained in this report are applied.

The construction phase and operational phase have very similar negative impacts. However, the potential impacts identified will be adequately managed and effectively mitigated through the implementation of the recommendations outlined in this report as well as the proposed Environmental Management Programme (EMPr).

Major environmental findings

The following aspects require attention from an environmental management point of view were identified, and are addressed in this document:

Fire

- Fire is a real threat thus no open space fires are to be permitted or indeed necessary on site.

Animals

- No introduced animals of any kind are permitted on site. Hunting or trapping or interfering with any wildlife is again contractually prohibited.
- No hunting will be allowed.

A monitoring programme will be implemented for the duration of the construction phase of the project. This programme will include:

- Monthly audits will be conducted by the Environmental Control Officer, which are according to the EMP and conditions of the Environmental Authorisation.
- Compilation of an audit report with a rating of the compliance with the EMP. This report will be submitted to the relevant authorities (DMRE).
- Proper and continuous liaison between developing contractors, the applicant and other stakeholders and members of the public (where necessary) to ensure all parties are appropriately informed at all times.
- The impact will not have an influence on the decision for the mitigation.

(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. Attached as an Appendix 3

No environmental constraints which would prevent the proposed prospecting activities from being authorised have been identified within the proposed development footprint from an environmental sensitivity point.

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

Positive impacts associated with the project include:

- Job opportunities
- An economic use for the proposed project site as it is currently an abandoned sugarcane field and is largely already disturbed
- The applicant shall utilise its financial and other related resources to rehabilitate the proposed project site once mining activities have been completed (and during operational phase, as concurrent rehabilitation). This is advantageous as otherwise the project site would have been infested with weeds and illegal activities
- Access control measures to be employed by the applicant in the event that the authorisation is granted, shall assist in deterring any would-be loiterers who may have been involved in the illegal dumping on the project site
- The proposed mine has the potential to contribute to the maintenance of infrastructure in and around the local area.
- No mining will not be mined from within a watercourse.

Negative Impact associated with the project include:

- The mining activities will cause noise and dust issues; however this is easily mitigated by strategically planting indigenous vegetation as a screen and frequent road wetting (where necessary; as one should note that the mining permit area is already deeply nestled within sugarcane fields).
- Negative impacts with regards to the biophysical environment include potential contamination of the area due to spillage by hydrocarbon products
- Loss of soil resources

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.

The EMPr addresses the environmental impacts associated with the project during Construction, Operation, Decommissioning and Post Closure Phases of the proposed project. The objectives of the EMPr will be to provide detailed information that will advise the planning design of prospecting activities in order to avoid and/or reduce impacts that may be detrimental to the environment. The following environmental management objectives are recommended for the proposed mining development.

- Development planning must restrict the area of impact to a minimum and designated area only.
- Monitor and prevent contamination and undertake appropriate remedial actions.
- Limit the visual and noise impact on receptors.
- Avoid impact on possible heritage finds.
- Promote health and safety of workers.
- Limit dust and other emissions to within allowable limits.
- Manage soils to prevent erosion.

Impact	Relevant phase	Responsibility	Mitigation
Compliance with relevant environmental legislation and policy	Planning & Design	Applicant	All relevant legislation and policy must be consulted and the proponent must ensure that the project is compliant with such legislation and policy. These should include (but are not restricted to): MPRDA, NWA, NEMA, Local and District Spatial Development Frameworks, Provincial Environmental Frameworks, Local Municipal bylaws.

Design of the mine site	Planning & Design	Applicant	Mine planning must be implemented in such a way that the three natural forest clumps are not hindered and demarcated accordingly
Socio-economic	Planning & Design	Applicant	The Applicant must engage with all relevant I&AP and as far as is practicably possible; address their concerns prior to mining activities commencing. A complaints register must be maintained onsite.
Visual intrusion associated with mining activities	Operation	Site/Mine Manager	Mining activities should only take place as per sales and production targets and thus no restrictions on operating time shall be imposed. But try as far as reasonably possible to work within day light hours. (7am to 6pm). Sales will only take place during daylight hours. Sunday Labour Permission from the DMRE will need to be sought should maintenance work need to be undertaken on a Sunday. Mining activities must be limited to the designated area and not encroach into surrounding areas.
Sanitation facilities	Operation	Site/Mine Manager	Sanitation facilities must NOT be located within 50m of water drainage areas. The facilities must be regularly serviced to reduce the risk of surface or groundwater pollution.

Demarcation of mining site	Operation	Site/Mine Manager	The boundaries of the mining site must be adequately demarcated to restrict mining and other (eating, washing and ablution) activities. All plant, equipment and other materials must remain within the demarcated boundaries. Signage must be placed where applicable.
Storm water and erosion	Operation	Site/Mine Manager	Soft berms must be well maintained, and water used sparingly.
Spillage of hazardous substances	Operation	Site/Mine Manager	All oils, fuel and other maintenance equipment and supplies must be stored in a bunded and/or concrete lined area with fire extinguishers nearby. The wash bay is the designated area for washing machinery and vehicles. The oil trap must be serviced or emptied at regular intervals. Spill kits must be kept on-site and maintained.
Dust control	Operation	Site Manager	Mining activities should only take place during agreed working times and permitting weather conditions to avoid drifting of fine material and dust into neighbouring areas. A speed limit of 30km/h must not be exceeded on dirt roads. Any complaints or claims emanating from dust issues must be attended to immediately. During windy periods un-surfaced and un-vegetated areas

			should be dampened down if necessary.
Noise	Operation	Site/Mine Manager	A complaints register must be maintained onsite. Vegetation to screen off the noise should be planted where practicably possible.
Waste management	Operation	Site/Mine Manager	Sufficient waste containers must be available. No waste must be buried or burned on site. Waste must be collected on a regular basis and disposed of at a licensed landfill site.
Final rehabilitation and decommissioning	Decommissioning and Closure	Chief Executive Officer (Employer Representative)	Any remaining muckpiles and stockpiles must be removed or levelled. Site clean-up must be done. Waste material of any description, including receptacles, scrap, rubble and tyres, will be removed entirely from the mining area and disposed of at a registered landfill site. It will not be permitted to be buried or burned on the site. Mined out areas must be stabilised and profiled (if necessary). Weeds/alien plants growing on site must be manually removed

			<p>or herbicide applied and deposited at a registered landfill site where applicable. All equipment and other items used during the mining period must be removed from site. Rehabilitation must be completed in such a manner that the land can be optimally used post-mining. It should be kept in mind however that the area is already significantly disturbed by prior sugarcane cultivation. Final rehabilitation shall be completed within a period specified by the Regional Manager.</p>
Closure	Decommissioning and Closure	Mine Manager / Chief Executive Officer	<p>Closure must comply with the MPRDA (Act 28 of 2002), NEMA (Act 107 of 1998) and the NEMA Regulations (as amended). requirements for mine closure.</p> <p>The closed site must pose no safety risks.</p> <p>A closure plan must be compiled using the guidelines described in Appendix 5 of the NEMA Regulations (2014) and submitted to DMRE.</p>

			A closure certificate must be obtained from the DMRE Minister.
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n) Aspects for inclusion as conditions of Authorisation.

Any aspects which must be made conditions of the Environmental Authorisation The following aspects are proposed to be included as conditions in the Environmental Authorisation:

- Vegetation clearing should be restricted to the footprint of the site under construction as far as possible;
- All construction areas should be demarcated prior to construction, to ensure that the footprint of the impacts is limited;
- Movement of vehicles and workers is to be restricted from areas outside of the boundaries of the demarcated construction areas;
- The construction staff should be educated about the value of environmental sensitivity;
- Stockpiling of topsoil should be according to the ECO recommendations;
- Should a grave or any other historically significant feature or artefact be identified in the construction footprint, the feature may not be removed, and a heritage/palaeontology specialist must be contacted immediately;
- Appropriate dust abatement measures must be implemented in areas where required;
- Regular dust suppression/road -wetting should occur as required
- Invasive and/or alien plant species should not be allowed to establish during and after the construction phase and It is imperative that an effective management plan is implemented to ensure that all mitigation measures discussed in the report are adhered to. The project proposal will be permissible if all the conditions, mitigation measures and environmental impact regulations are implemented.
- The appointed site supervisor or contractor must adhere to the day-to-day environmental aspects.
- The applicant must appoint an independent environmental control officer (ECO) who will be responsible for monitoring, reviewing and verifying compliance with the EMPr and to ensure that the conditions of the environmental assessment mitigation are abided with. He/she will verifying that environmental impacts are kept to a minimum and assist the Contractor in finding environmentally responsible solutions to problem. Annual EMPr performance assessment audits are to be undertaken. Monthly audits must be conducted by the ECO to assess compliance.

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

(Which relate to the assessment and mitigation measures proposed) The assumptions made in this document related to the assessment and mitigation measures proposed, stem from site specific information gathered from the applicant, local community, site inspections and background information gathering.

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

i) Reasons why the activity should be authorized or not

It is recommended that the application be granted. The granting of an authorisation for the prospecting activities should be subject to the following:

In terms of the Appendix 3 of the EIA Regulations of 2014 the EAP is to provide a reasoned opinion as to whether the activity should or should not be authorised. If it should be authorised state any conditions that should be made with respect of that authorisation.

ZN Geo Services is of the submission that due process has been followed to form the findings of the EIA study in accordance with the EIA Regulations of 2014 (amended in 2017 and 2021). The EIA process undertaken, includes an assessment of potential impacts identified, and desktop studies. Public Participation (continue during the whole EIA process) has been undertaken with interested and affected parties in accordance with the EIA Regulations of 2014 Regulations 40-44.

Potentially significant impacts have been identified, ranked and mitigation measures are proposed for its management and monitoring. Several potential high and medium impacts have been identified associated with invasive prospecting and decommissioning of the activities. Based on the characteristics of the site risks of mention include impacts on fauna and flora, aquatic ecosystems, heritage resources, land use, safety risk as well as surface and groundwater. After applying the mitigation measures as proposed in the Risk Assessment majority of the impacts can either be controlled or remedied to low significance.

Prospecting at the site is feasible from a biophysical and social perspective. The predicted negative impacts can be minimized by implementation of recommended mitigation measures. Mitigation measures are formalised in the EMP. Strict control measures are also to be implemented to key environmentally sensitive areas delineated on site.

In terms of the collective impacts considered the economic development is justifiable if prospecting activities prove that the mineral deposit can be optimally mined, then it becomes a viable land use option for the community and a new mine may/could be developed with the potential to contribute to the provincial and local economy as well as generate employment for the local communities.

Hence, after considering the positive and negative implications of approving the project and or going for the no-go option, the environmental assessment team is of the view that the issuing of a prospecting right to Constructo would enable Newcastle community, through Constructo to explore

the land use option of mining. If the prospecting programme yields positive results, it will bring forth much need economic development in the Newcastle community area. Nevertheless, legal provisions in terms of the Protected Areas Act of 2003 prohibit prospecting activities at the study site due to its being a declared protected area as it is located within an important river.

ii) Conditions that must be included in the authorisation

The management objectives listed in this report under m) should be considered for inclusion in the environmental authorisation. The EMPr of this proposed project must form part of the contractual agreement and be adhered to by both the contractors and the applicant. The applicant must also ascertain that there is representation of the applicant on site, at all times of the project, ensuring compliance with the conditions of the EMPr. Speed limits must be maintained.

- Consent must be obtained from the MEC of KwaZulu-Natal Department of Economic Development Environment & Tourism in order to undertake prospecting within any protected areas.
- A 500-metre buffer zone is to be upheld to wetland and riparian zones to be regarded as no-go zones for invasive prospecting activities and fenced off with appropriate material during the prospecting phase if nearby;
- Limit prospecting footprint areas to a narrow strip to have the least possible edge effects on ecosystems and limit footprint areas to a minimum at rocky ridges;
- The presence / absence of protected tree species. Avoid removal of large individuals of protected tree species at any prospecting site, where it cannot be avoided; a permit for removal needs to be obtained from DAFF under Section 15 (1) of the National Forest Act no 84 of 1998. No person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate in any manner acquire or dispose of any protected tree, except under a license granted by the Minister.
- Planning of invasive prospecting target sites including design and siting of access routes at all other target areas must avoid heritage sites.
- General waste generated during prospecting must be disposed of at a registered landfill site. The applicant must confirm its general waste disposal methods with the Newcastle Local Municipality.
- The EMPr should be implemented by a senior qualified environmental practitioner credible to interpret the EIR & EMPr;
- The project must remain in full compliance with the requirements of the EMPr;
- Prospecting may only commence on approval of the Prospecting Right;

- Stakeholder engagement must be maintained throughout site planning & preparation, invasive and non-invasive prospecting and closure & rehabilitation phase.

q) Period for which the Environmental Authorisation is required.

The prospecting programme would require 24 months to complete. Rehabilitation activities would be conducted concurrently where possible, but due to legislative issues that still need to be address, final rehabilitation and removal of prospecting infrastructure additional time may be required. The period for which the environmental authorisation should be valid is 5 years allowing for unexpected issues, rehabilitation, and closure activities.

DRAFT

r) Undertaking

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

s) Financial Provision

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

The closure liability was calculated at R 76 521,22 (including VAT). The financial provision for the prospecting activities was determined based on information currently available. An assessment was conducted of all the activities taking place on site that fall within the properties associated to the mining permit application. R 76 521,22 (including VAT) for the biophysical components associated with the current activities.

DRAFT

Financial Provisions Calculations:

See **Appendix 5** for the financial provisions.

i) Explain how the aforesaid amount was derived.

The financial provisions calculation is based on the DMRE-supplied Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision Provided by a Mine, published in 2005 (**Appendix 5** and Table 11).

The DMRE Guideline format makes use of a set template for which defined rates and multiplication factors are used. The multiplication and weighting factors which ultimately define the rate to be used are determined by amongst others the topography, classification of the mine according to the mineral mined, the risk class of the mine and its proximity to built-up or urban areas.

The calculations of closure cost issued by DMRE were used to support the calculation of the closure cost.

The tariffs used included:

- Sealing of drilled holes and dismantling fencing
- General surface rehabilitation and re-vegetation
- 2-3 years of maintenance and aftercare

Table 11 Procedure for determining the quantum for financial provision (as per the DMRE guideline document, 2005).

Calculation of the Quantum							
Current							
Mine: Constructo Civil Construction And Mining Services (11512 PR)						Location: Near Newcastle	
Evaluators: Hloniphile Dlamini						Date: for October 2023	
No	Description	Unit	Quantity	Master Rate	Multiplication Factor	Weighting Factor 1	E = A*B*C*D Rands
1	Dismantling of process plant and structures (including overland conveyors and powerlines)	m3	0,00	19,14	1	1,1	R -
2A	Demolition of steel buildings and structures (including floor slabs)	m2	0,00	266,67	1	1,1	R -
2B	Demolition of reinforced concrete buildings and structures	m2	0,00	392,98	1	1,1	R -
3	Rehabilitation of access roads	m2	30,00	47,72	1	1,1	R 1 574,76
4A	Demolition and rehabilitation of electrified railway lines	m	0,00	463,16	1	1,1	R -
4B	Demolition and rehabilitation of non - electrified railway lines	m	0,00	236,33	1	1,1	R -
5	Demolition of housing and/or administration facilities	m2	50,00	533,33	1	1,1	R 29 333,15
6	Opencast rehabilitation including final voids and ramps	ha	0,00	271438,81	1	1,1	R -
7	Sealing of shafts, adits and inclines	m3	0,00	143,16	1	1,1	R -
8A	Rehabilitation of overburden and spoils (waste deposit)	ha	0,00	186386,11	1	1,1	R -
8B	Rehabilitation of processing waste deposits & evaporation ponds (basic salt producing waste)	ha	0,00	232140,53	1	1,1	R -
8C	Rehabilitation of processing waste deposits & evaporation ponds (acidic metal - rich waste)	ha	0,00	674246,13	1	1,1	R -
9	Rehabilitation of subsided areas	ha	0,00	156070,3	1	1,1	R -
10	General surface rehabilitation	ha	0,15	147649,24	1	1,1	R 24 362,12
11	River diversions	ha	0,00	147649,24	1	1,1	R -
12	Fencing	m	20,00	168,42	1	1,1	R 3 705,24
13	Water management	ha	0,00	56140,39	1	1,1	R -
14	2/3 years of maintenance and aftercare	ha	0,50	19649,14	1	1,1	R 7 564,92
	Sub-Total						R 66 540,19
	VAT (15%)						R 9 981,03
	Grand Total						R 76 521,22

ii) 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 maybe).

The project shall be self-funded by the applicant; Constructo Civil Construction And Mining Services (Pty) Ltd. This serves as confirmation that the required financial provisions shall be made available to the Department of Mineral Resources (DMRE) on finalisation of the prospecting right.

Please refer to **Appendix 6** for the prospecting works programme (PWP). This outlines the prospecting activities.

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 2.

The prospecting activities are not foreseen to have a negative socio-economic impact on the local communities. Currently the socio-economic impact felt in the local area is unemployment due to no economic base. A full consultation process is being implemented during the environmental authorisation process. The purpose of the consultation is to provide affected persons the opportunity to raise any potential concerns. As part of the consultation process the land claims commissioner will be contacted to identify if there are any claims on land covered by this application. Concerns raised will be captured and addressed within the public participation section of this report once finalised and submitted to the authorities. As the final positioning of the drill sites cannot be confirmed without completion of phase 1 of the prospecting programme, a recommendation has been made to ensure that the directly affected landowners are re-consulted prior to implementing invasive activities (drilling). The purpose of the re-consultation is to ensure that socio-economic impacts on directly affected persons can be raised and where possible addressed.

The project is still at the draft basic assessment phase and no official comments have been received. The operation of the mine will however also have a number of positive impacts such as job creation and other social economic benefits (should the prospecting activities yield favourable results). It is the intention of the applicant to thereafter apply for either a mining permit or mining right.

(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).

No graves or any other significant heritage or paleontological resources were noted as being present within the project site. No drilling or any other related activities shall interfere with any heritage or paleontological resources should they be identified or noted in the vicinity. This is pertinent as the exact drill hole locations have not been determined to allow for flexibility in such cases. Significant impacts are thus not expected.

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

This application is for a prospecting right, and as such it is unlikely to be able to have alternative sites. Drill hole locations are however not steadfast, and shall be determined as activities progress. This is outlined in the section covering alternative sites as per Section "(g) Motivation for the overall preferred site, activities and technology alternative" above.

PART B:

ENVIRONMENTAL MANAGEMENT PROGRAMME

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).

Details of the EAP are included in Part A of this report. The CV is attached in Appendix 1.

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

c) Composite Map

(Provide a map **(Attached as an Appendix 3)** 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).

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 will be identified after the geophysical surveys have confirmed the presence of the ore body. 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. Please refer to appendix 3 (also see Figure 3).

d) Description of Impact management objectives including management statements

i) Determination of closure objectives.

(Ensure that the closure objectives are informed by the type of environment described)

The closure objectives are:

- The main objective is to ensure that the existing ecosystem and current land use continue and function normally.
- Removal of the drilling rig, fencing and equipment, and cleaning up the site.
- Remove any safety risk that is associated with drill holes and sumps by backfilling, compacting and topdressing the water sumps as well as filling the cored borehole with concrete to approximately 300 mm from surface and top-dress to provide a level surface.
- Restore disturbed areas and re-vegetate these areas with grass naturally occurring in the area.

The applicant will comply with the minimum closure objectives as prescribed by DMRE and detailed below.

Closure:

In compliance to GN R. 1147 of 20 November 2015, a number of closure objectives have been determined. The closure objectives, identified in the Mine Rehabilitation and Closure and which will drive the closure criteria and which have been developed to support the closure vision are:

- Any remaining equipment must be removed.
- Site clean-up must be done.
- Erosion must be minimised on the site and access roads.
- Waste material of any description, including receptacles, scrap, rubble, etc. must be removed from the mining area and disposed of at a registered landfill site. It will not be permitted to be buried or burned on site.
- All equipment and other items used during the prospecting period must be removed from site.
- At closure the internal haul road must be left in a good and non-eroded state
- The closed site must pose no safety risks.
- Rehabilitation must be completed in such a manner that the land can be optimally used post-prospecting.
- Closure must comply with the MPRDA (Act 28 of 2002), NEMA (Act 107 of 1998) and the NEMA Regulations requirements for mine closure.
- A closure plan must be compiled using the guidelines described in Appendix 5 of the NEMA Regulations (2021) and submitted to DMRE.

- A closure certificate must be obtained from the Minister of Mineral Resources & Energy.

Environmental Management Approach

Globally, there are a number of tools or guideline documents available to assist or describe environmental management. The purpose of an EMP (Part B of this report) is to describe the process of managing the identified potential environmental impacts or risks described in Part A of this report throughout the entire life cycle (from design, to implementation, operation, and decommissioning) of the proposed prospecting project. The IEM (Integrated Environmental Management) tool used for managing the identified environmental impacts by the EAP in this document is the Environmental Management System (EMS). This approach will assist the prospecting project to achieve continual improvement in environmental performance. The EMP in essence will be adopting the approach of the internationally recognised ISO 14001 Environmental Management System (EMS) standard that is essentially based on the Deming Cycle rationale which is a simplified continuous improvement model consisting of four main iterative steps. These steps are described as follows:

- Plan – Establish objectives and processes necessary to deliver results in accordance with the developed organisational environmental policy.
- Do – Implement the process.
- Check – Monitor and measure processes against environmental policy, objectives, legal and other requirements and report the results.
- Act – Take action to continually improve environmental performance.

Continual improvement is achieved by periodically monitoring and reviewing the EMP and the subsequent implementation of corrective actions when required. Therefore, this document should be considered as a living document which should be continuously updated and possibly improved. This approach taken in the development of the EMP is in line with the requirements stipulated in EIA Regulations (2014) (amended in 2021).

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

During drilling, water is injected into the drill pipe, to wash out the rock cuttings produced by the bit. Process water supply for the operation will be sourced from an existing artificial dam near the study site and will be carted onto the site in a tanker. A 4000-liter water cart will be adequate for the size of this operation. Dust suppression will be conducted when necessary.

Potable water required for the proposed operation is approximately 40 litres per day (ℓ/day). The water will be used for drinking purposes and will be sourced from local water vendors within Newcastle community. The water will be supplied in applicable receptacles.

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

No. A water use licence is not required. Water shall be purchased and brought onto site to sustain the prospecting activities. Water would be required for domestic use and during phase two, the drilling phase. It is estimated that less than eight (8) people will be on the drill site at any given point of operation. Water would be obtained from a water service provider or from a legal site, during that phase where a service level agreement will be signed between the client and the Service Provider.

iv) Impacts to be mitigated in their respective phases

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

Measures for inclusion in the Environmental Management Programme for **Impact Mitigation and Rehabilitation** must be laid out as detailed below:

ACTIVITIES	PHASE	SIZE AND SCALE	MITIGATION MEASURES	COMPLIANCE WITH STANDARDS	TIME PERIOD FOR IMPLEMENTATION
<p>(E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc</p> <p>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,</p>	<p>(of operation in which activity will take place. State; Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure).</p>	<p>of disturbance (volumes, tonnages and hectares or m²)</p>	<p>(describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)</p>	<p>(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)</p>	<p>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</p>

processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)					prospecting as the case may be.
<ul style="list-style-type: none"> • Drill hole locations • Access roads • Temporary ablutions • light delivery vehicles • Drill Rig(s) 	Planning & Design (including site establishment)	±10 ha	A chance find procedure should be implemented for the project and this will ensure that if heritage resources are uncovered potential impact on these resources is minimised.	NHRA (Act 25 of 1999)	The Chance find procedure should be applied for the life of the project.
<ul style="list-style-type: none"> • Planning and design 	Planning & Design	±10 ha	<ul style="list-style-type: none"> • All relevant legislation and policy must be consulted and the proponent must ensure that the project is compliant with such legislation and policy. • These should include (but are not restricted to): MPRDA, NWA, NEMA, Local and District Spatial Development Frameworks, Provincial legislation, 	NWA; MPRDA; NEMA, etc.	Prior to commencement of activities and during prospecting

			guidelines and Biodiversity Conservation Plan, Local Municipal by-laws.		
<ul style="list-style-type: none"> • Drilling • Sample Storage • Accommodation 	Prospecting	±10 ha	<ul style="list-style-type: none"> • All relevant legislation and policy must be consulted and the proponent must ensure that the project is compliant with such legislation and policy. <p>These should include (but are not restricted to): MPRDA, NWA, NEMA, Local and District Spatial Development Frameworks, Provincial legislation, Local Municipal bylaws.</p> <ul style="list-style-type: none"> • Activities should only take place only as per the proposed works programme and should take complaints (should they arise) into consideration. • Activities must be limited to the designated area and not encroach into surrounding areas. • The boundaries of the site must be adequately 	Health & Safety Act NWA NEMA Regulations MPRDA NEM: AQA	Operational

			<p>demarcated or pegged.</p> <ul style="list-style-type: none"> • All plant, equipment and other materials must remain within the demarcated boundaries. • Sanitation waste is to be well maintained and collected regularly. • A complaints register must be kept on site. • A rehabilitation plan is to be implemented and maintained. • Hazardous waste is to be collected by a SAWIC registered contractor. • A speed limit of 30km/hr is to be maintained onsite. • All drilled holes are to be sealed and rehabilitated accordingly with indigenous vegetation. • All samples shall be stored onto the designated trays and laboratory bags for further analysis. • The contractors shall be accommodated off-site. 		
<ul style="list-style-type: none"> • Access Roads 	Operational	±10 ha	<ul style="list-style-type: none"> • Dust suppression • Minimisation of vehicle and drill rig(s) movement to only when necessary. 	Conduct dust suppression techniques, such as dust chutes fitted to drill rigs, to mitigate liberated dust	Site establishment and operational phases

			<ul style="list-style-type: none"> • Fit drill rigs with dust chutes to minimise the liberated dust 		
<ul style="list-style-type: none"> • Access Roads 	Operational	±10 ha	<ul style="list-style-type: none"> • Endeavour to undertake prospecting activities as much as possible in the already disturbed areas. • Implement of storm water management measures. • Treat contaminated soils with spill kits and/or as per contractor procedures. 	Meet rehabilitation standards/objectives	Site establishment and operational phases
<ul style="list-style-type: none"> • Closure and decommissioning 	Decommissioning	±10 ha	<ul style="list-style-type: none"> • Site clean-up must be done. • Waste material of any description, including receptacles, scrap, rubble and tyres, will be removed entirely from the study area and disposed of at a registered landfill site. It will not be permitted to be buried or burned on the site. • All equipment and other items used during the mining period must be removed from site. • All drilled boreholes are to be sealed accordingly. • Rehabilitation must be completed in such a manner that the land can be optimally used post-prospecting. 	NEMA NEMBA MPRDA NWA	During decommissioning

			<ul style="list-style-type: none">• Final rehabilitation shall be completed within a period specified by the Regional Manager.• Closure must comply with the MPRDA (Act 28 of 2002), NEMA (Act 107 of 1998) and the NEMA Regulations (as amended).		
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e) Impact Management Outcomes

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

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ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	MITIGATION TYPE	STANDARD TO BE ACHIEVED
<p>(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.).</p> <ul style="list-style-type: none"> • Access road to the main road; • Drill Rig(s) • Ablutions (temporary) 	<p>(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...)</p> <p>No sites were noted but there is a chance that completely buried sites would</p>	<p>Chance Find Procedure</p>	<p>In which impact is anticipated (E.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)</p> <p>Life of the project</p>	<p>(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)</p> <p>Avoid damage to heritage resources</p>	<p>(Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.</p> <ul style="list-style-type: none"> • Drilling • Access road to the main road; • Site Office

	still be impacted but this cannot be quantified.				<ul style="list-style-type: none"> • Drill Rig(s) • Ablutions
Operational	Visual intrusion associated with the prospecting activities	The activities could result in a negative impact on the aesthetic value of the study area and immediate surrounds.	Prospecting	Control: Implementation of proper site management	This impact is only temporary or intermittent, as the drill rig(s) operate.
Operational	Sanitation issues	Inappropriate siting and servicing of sanitation facilities could result in contamination of surface and ground water.	Prospecting	Control: implementation of mitigation measures, management	Impact on the surrounding environment mitigated through proper management and management of sanitation facilities. No ablution facilities (even though all shall be temporary), are to be placed within 500 metres of a wetland and/or watercourse.
Operational	Demarcation of the prospecting site	Encroachment of prospecting activities onto areas outside	Prospecting	Control: proper demarcation of site, management	Impact on the surrounding environment mitigated through proper management and demarcation of site.

		the authorised prospecting footprint			
Operational	Storm water and erosion	Inadequate stormwater and erosion control could result in soil erosion and impact surface water quality.	Prospecting	Control: stormwater management when required	Impact on the surrounding environment mitigated through proper management and stormwater control (when/if required). Adherence to the 500 metre buffer from wetlands and watercourses to be maintained.
Operational	Spillage of hazardous substances	Spillage of any hazardous substances such as fuel, chemicals, etc. could result in ground and surface water contamination.	Prospecting	Control: management of hazardous substances, spill kits	Impact on the surrounding environment mitigated through proper management and stormwater control (when/if required)
Operational	Dust nuisance	Dust (generated from prospecting	Prospecting	Control: dust management	Impact on the surrounding environment mitigated through proper dust management (NEM: AQA, 2004)

		and/or drilling activities, and from vehicles traveling on dirt roads) could be a nuisance during windy conditions.			
Operational	Waste management	Littering on site may attract pests.	Prospecting	Control: waste management	Impact on environment mitigated through Ideal waste management. (NEMWA, 2008)
Operational	No sites were recorded but there is a chance that completely buried sites would still be impacted but this cannot be quantified.	No surface sites were identified.	Prospecting	Chance Find Procedure	Avoid damage to heritage resources.
Operational	Noise nuisance	Prospecting activities (including drilling), and movement of heavy vehicles	Prospecting	Control: noise management	Impact on surrounding environment mitigated through proper noise management and only prospecting (drilling especially) within daylight hours and within the legal by-law

		could result in an increase in ambient noise levels on site and on surrounding area.			times. However, the location of the prospecting right application area is nestled with large tracts of agricultural land.
Closure & Decommissioning	Final rehabilitation and decommissioning	Failure to decommission and rehabilitate the drill holes properly could result in soil erosion and vegetation loss	Decommissioning	<ul style="list-style-type: none"> Control: removal of all equipment from site. 	Impact on surrounding environment can be mitigated through proper decommissioning and rehabilitation (MPRDA, 2002, NEMA, 1998).
Closure & Decommissioning	Closure	Failure to comply with the closure requirements could result in unnecessary environmental degradation and failure to obtain a closure	Closure	<ul style="list-style-type: none"> Control: comply with the MPRDA and NEMA mine closure requirements, submission of closure plan. 	Impact on environment mitigated through proper mine closure (MPRDA, 2002, NEMA, 1998).

		certificate from DMRE.			
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f) 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).

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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 (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...)	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. <input type="checkbox"/> Modify through alternative method. <input type="checkbox"/> Control through noise control <input type="checkbox"/> 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)
Vegetation clearance for establishment of proposed mine site.	Removal of / damage to natural vegetation	Control through limiting area. Revegetation encouraged as soon as drill holes are sealed.	<ul style="list-style-type: none"> ▪ During site establishment 	Concurrent rehabilitation in line with sustainable development practices. This entails planting indigenous vegetation on the drill hole sites.
Vegetation clearance for establishment of proposed mine site. (Dust)	Air quality impact (Dust)	Control through dust suppression and management options	<ul style="list-style-type: none"> ▪ During site establishment & prospecting operations 	National Dust Control Regulations GN 827 (2013)
Drilling activities (Dust)	Air quality impact (Dust)	Control through dust suppression and management options	<ul style="list-style-type: none"> ▪ During drilling boreholes. 	National Dust Control Regulations GN 827 (2013)
Drilling activities (Noise)	Noise pollution (Noise)	Control through dust suppression and management options	<ul style="list-style-type: none"> ▪ During site establishment & drilling boreholes 	Drilling procedures, legislation, and

<p align="center">ACTIVITY</p> <p>(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.).</p>	<p align="center">POTENTIAL IMPACT</p> <p>(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...)</p>	<p align="center">MITIGATION TYPE</p> <p>(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)</p> <p>E.g.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Modify through alternative method. <input type="checkbox"/> Control through noise control <input type="checkbox"/> Control through management and monitoring <p align="center">Remedy through rehabilitation..</p>	<p align="center">TIME PERIOD FOR IMPLEMENTATION</p> <p>Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required.</p> <p>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.</p>	<p align="center">COMPLIANCE WITH STANDARDS</p> <p>(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)</p>
				<p align="center">industry best practices</p>
<p>Hauling and transport during operations</p>	<p align="center">Dust pollution</p>	<ul style="list-style-type: none"> • Control through dust suppression • Control through minimisation of vehicle movement • Control through monitoring of dustfall to determine if measures are effective. 	<ul style="list-style-type: none"> ▪ During site establishment & prospecting operations 	<p>Conduct dust suppression techniques such as the fitment of dust chutes on drill rigs.</p>
<p>Vegetation clearance for establishment of proposed project site. (Biodiversity impact)</p>	<p>Permanently alter biodiversity areas (ecological support area)</p>	<p>Avoid through identification of areas and remedied through rehabilitation as required</p>	<ul style="list-style-type: none"> ▪ Prior to site establishment 	<p>Avoidance in line with National Biodiversity Act (10 of 2004)</p>

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 (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...)	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. <input type="checkbox"/> Modify through alternative method. <input type="checkbox"/> Control through noise control <input type="checkbox"/> 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)
Vegetation clearance for establishment of proposed mine site. (Dust)	Air quality impact (Dust)	Control through dust suppression and management options	<ul style="list-style-type: none"> ▪ During site establishment & prospecting operations 	National Dust Control Regulations GN 827 (2013)
Waste management	Contamination of soils through spills from sanitation facilities & litter	Control through placement of facility and regular maintenance. Collection and safe disposal of waste	<ul style="list-style-type: none"> ▪ For duration of prospecting activities on site 	Waste collection and disposal in terms of Regulation 69 of GN 527 of 2004 of National Environmental Management: Waste Act (59 of 2008)
Faunal Species-No poaching	Poaching	Control through supervision, training and operational hours on site	<ul style="list-style-type: none"> ▪ For duration of activities on site 	No poaching in line with Animals Protection Act (No. 71 of 1962)
Fire control	Fire	Avoid through Training, Code of Conduct & Control through Fire Breaks	<ul style="list-style-type: none"> ▪ For duration of activities on site 	Fire prevention in line with Regulation 65 of GN 527 (2004) and National Veld

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 (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...)	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. <input type="checkbox"/> Modify through alternative method. <input type="checkbox"/> Control through noise control <input type="checkbox"/> 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)
				and Forest Fire Act (Act no 101 of 1998)
Employment	Contribution to the economy through employment	Employment of local people and businesses where possible	<ul style="list-style-type: none"> ▪ For duration of activities on site 	Contractual agreements between the service provider and the applicant
Contractor induction	General awareness	Control through awareness	<ul style="list-style-type: none"> ▪ For duration of activities on site 	Drilling activities and procedures and site boundaries
Use of heavy machinery & vehicles on site - Maintain vehicles	Resource consumption (diesel - non-renewable resource)	Control through maintenance	<ul style="list-style-type: none"> ▪ For duration of activities on site 	Maintenance of vehicles and equipment in line with responsible environmental management practice
Use of heavy machinery & vehicles on site –no storage of chemicals	Contamination of soils through	Avoid through engineering controls.	<ul style="list-style-type: none"> ▪ For duration of activities on site 	Prevention of soil pollution in line with

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 (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...)	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. <input type="checkbox"/> Modify through alternative method. <input type="checkbox"/> Control through noise control <input type="checkbox"/> 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)
	hydrocarbon leaks and spills from machinery & equipment.	Remedy through clean-up		Regulation 70 of GN 527 (2004)
Use of heavy machinery & vehicles on site - Clean up spills	Contamination of groundwater through hydrocarbon leaks and spills from machinery & equipment	Avoidance through engineering controls and clean-up	<ul style="list-style-type: none"> ▪ For duration of activities on site 	Prevention of groundwater pollution in line with National Water Act (36 of 1998)
Use of heavy machinery & vehicles on site– Soil compaction	Compaction of soils through movement of heavy vehicles and machinery on site	Avoid through limiting area. Remedy through concurrent rehabilitation	<ul style="list-style-type: none"> ▪ Concurrently on completion of activities at site 	Concurrent rehabilitation in line with sustainable development practices
Use of heavy machinery & vehicles on site	Release of gaseous emissions	Control through maintenance	<ul style="list-style-type: none"> ▪ For duration of activities onsite 	Maintenance of vehicles and equipment in line with responsible

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 (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...)	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. <input type="checkbox"/> Modify through alternative method. <input type="checkbox"/> Control through noise control <input type="checkbox"/> 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)
				environmental management practice
Dust	Dust fallout	Control through speed limit & dust suppression	<ul style="list-style-type: none"> ▪ During site establishment & prospecting operations 	National Dust Control Regulations GN 827 (2013)
Use of heavy machinery & vehicles main gravel road (Dust)	Dust nuisance - use of gravel roads	Control through speed limit	<ul style="list-style-type: none"> ▪ For duration of activities on site 	National Dust Control Regulations GN 827 (2013)
Noise	Increase in ambient noise levels	Control through speed limit & operational times	<ul style="list-style-type: none"> ▪ For duration of activities on site 	Noise Standards-SANS10103:2008

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.

Indigenous trees and grasses will be sown in the area as part of the rehabilitation (i.e. the drill holes which will be sealed off accordingly). The applicant will rehabilitate areas impacted on by its activities as much as is reasonably practicable. The closure objectives and rehabilitation measures for the prospecting activities will include the following:

- The prospecting right operation is to restore the site as much as is reasonably possible.
- To manage and limit the impact to the surface and groundwater aquifers by not drilling holes within at least 500 metres from any watercourse (including wetlands).
- The mining operation also has the objective to establish a stable and self-sustainable vegetation cover in areas affected by the prospecting activities.
- To limit and rehabilitate any erosion features caused by the activities and prevent any permanent impact to the soil capability thereof.
- To safeguard the safety and health of humans and animals (where encountered) on the site.
- To run the drilling/prospecting operations efficiently, cost effectively and in accordance with applicable legislation.
- The closure objectives are to minimise disturbance wherever possible so that normal land use can continue after closure.

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

The project is still at the draft basic assessment phase. There is an upcoming public meeting scheduled for the 9th of November 2023 at the NOFTA Hall (address is 7B Nightingale Street in Lennoxton, Newcastle). Communication relating to possible one-on-one meetings if required by the landowners have been extended. Furthermore, a hardcopy of the draft basic assessment report (DBAR) shall be made available for the public to

peruse at the Lennoxton Public Library in Newcastle situated at 16 St Brunos Street. The public participation phase spans the 27th of October 2023 to the 27th of November 2023.

(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 requested rehabilitation plan is explained below. Upon closure of the mine all machinery and equipment will be removed. Topsoil will be utilised to plant indigenous vegetation we. The quarry area will be rehabilitated to ensure safety and prevent erosion as far as is practicably possible. No permanent structures will remain upon closure of the site. The rehabilitated area will be the affected area within which drilling and ancillary activities have taken place.

Rehabilitation actions for the proposed prospecting activities would be undertaken in two-fold namely concurrent rehabilitation and afterwards final decommissioning and rehabilitation. Concurrent rehabilitation would include:

- Drill holes will be sealed with cement and surface cap/covered;
- All excavations will be backfilled with overburden and topsoil and re-vegetated
- All disturbed areas and its direct surroundings will be cleaned up from pollution and waste materials
- Contaminated soil by fuel or oil will be removed to a depth of contamination and disposed of at a registered landfill site.
- Overburden and topsoil will be spread evenly over disturbed areas and re-vegetate to finalise the rehabilitation
- Areas prone to erosion will be appropriately shaped to mimic the surrounding landscape
- Rehabilitated areas will be inspected to monitor re-vegetation rate and alien invader species that may have establish in the area will be removed.

Final decommissioning and rehabilitation:

- All temporary infrastructure will be removed from the study site.
- Any access tracks created during prospecting (if any) will be rehabilitated
- Disturbed areas will be ripped and seeded

- Grazers will be kept out of the rehabilitated areas until suitable vegetation cover has established
- Rehabilitated areas will be inspected to monitor re-vegetation rate as well as an alien invader species will be removed if any established.
- Areas where erosion has occurred soil will be sourced and replaced and shaped to reduce the reoccurrence of erosion.

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

The decommissioning phase comprises dismantling infrastructure and rehabilitation. Upon cessation of the mining activities, the area will be rehabilitated accordingly. The rehabilitation of the mining area will comply with the closure objectives as prescribed by DMRE.

Rehabilitation

- All drilled holes are to be plugged and closed off accordingly.
- Vegetation must be transplanted were possible.
- Vegetation clearance must be limited to those areas where prospecting activities must take place (i.e. such as drill hole locations).

Final rehabilitation and closure

- The affected rehabilitation area will be prospecting area as indicated in the Regulations
- Any remaining equipment must be removed from site.
- All waste receptacles, sanitation facilities are to be removed from site at the end of prospecting activities.
- Site clean-up must be done.
- Waste material of any description, including receptacles, scrap, rubble and tyres, will be removed entirely from the mining area and disposed of at a registered landfill site. It will not be permitted to be buried or burned on the site.
- All drilled holes are to be plugged and closed off accordingly.
- Vegetation clearance must be limited to those areas where prospecting activities must take place (i.e. such as drill hole locations).

- All equipment and other items used during the prospecting period must be removed from site.
- At closure the internal roadways must be left in a good and non-eroded state (as it was prior to prospecting activities).
- The closed site must pose no safety risks.
- Rehabilitation must be completed in such a manner that the land can be optimally used post-mining.
- Final rehabilitation must be completed within a period specified by the Regional Manager.
- Closure must comply with the MPRDA (Act 28 of 2002), NEMA (Act 107 of 1998; as amended) and the NEMA Regulations (as amended) requirements for mine closure.
- A closure plan must be compiled using the guidelines described in Appendix 5 of the NEMA Regulations and submitted to DMRE.
- A closure certificate must be obtained from the Minister of the DMRE.

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

This calculation is based on the DMRE Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision Provided by a Mine, published in 2005.

See Section S “Financial Provision” above which makes reference to the financial provisions. **See Appendix 5.**

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

Herewith I, the person, whose name is stated below confirm that I am the person authorised to act as representative of the applicant. I herewith confirm that the applicant will provide the amount that will be determined by the Regional Manager in accordance with the prescribed guidelines.

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

g) Monitoring of Impact Management Actions

h) Monitoring and reporting frequency

i) Responsible persons

j) Time period for implementing impact management actions

k) 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
Excavation & Site Establishment	Visual intrusion: Prospecting activities could result in a negative impact on the aesthetic value of the study area and immediate surrounds.	<ul style="list-style-type: none"> Monitoring that activities are only limited to the designated area and not encroach into surrounding areas. 	Role and responsibility: <ul style="list-style-type: none"> Site Supervisor / Contractor is to ensure compliance with the guidelines as stipulated in the EMPr. Annual audits by an independent person with the relevant environmental expertise. 	To be implemented throughout the operational phase. Annual audits.
Drilling (Operational Phase)	<ul style="list-style-type: none"> Inappropriate siting and servicing of sanitation 	<ul style="list-style-type: none"> Monitoring that sanitation facilities are in a suitable position and regularly maintained. 	Role and responsibility: <ul style="list-style-type: none"> Site Supervisor to ensure compliance with the 	To be implemented throughout the operational phase. Annual audits.

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
	<p>facilities could result in contamination of surface and ground water if not properly managed.</p>		<p>guidelines as stipulated in the EMPr.</p> <ul style="list-style-type: none"> Annual audits by an independent person with the relevant environmental expertise. 	
	<ul style="list-style-type: none"> Encroachment of prospecting activities onto areas outside the intended footprint could have detrimental environmental impacts. 	<ul style="list-style-type: none"> Monitoring that boundaries stay clearly demarcated, and no prospecting activities encroach into the surrounding areas. Survey pegs can be placed to note boundaries. 	<p>Role and responsibility:</p> <ul style="list-style-type: none"> Site Supervisor to ensure compliance with the guidelines as stipulated in the EMPr. Annual audits by an independent practitioner. 	<p>To be implemented throughout the operational phase. Annual audits.</p>
Prospecting (operational)	<ul style="list-style-type: none"> Spillage of any hazardous substances such as fuel, chemicals, etc. could result in ground and surface water contamination. 	<ul style="list-style-type: none"> Monitoring of hazardous substances, vehicle maintenance and spill kits. Applicable waste receptacles are to be utilised. 	<p>Role and responsibility:</p> <ul style="list-style-type: none"> Site Manager to ensure compliance with the guidelines as stipulated in the EMPr. Annual audits by an independent person with the relevant environmental expertise. 	<p>To be implemented throughout the operational phase. Annual audits.</p>

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
Prospecting (operational)	<ul style="list-style-type: none"> Dust (generated from drilling activities and from vehicles traveling on dirt roads) could be a nuisance during windy conditions. 	<ul style="list-style-type: none"> Monitoring of dust and complaints related to dust. Drill rigs are to be fitted with dust chutes to reduce the amount of liberated dust. 	Role and responsibility: <ul style="list-style-type: none"> Site Supervisor to ensure compliance with the guidelines as stipulated in the EMPr. Annual audits by an independent person with the relevant environmental expertise. 	To be implemented throughout the operational phase. Annual audits.
Prospecting (operational)	<ul style="list-style-type: none"> Littering on site may attract vermin, detract from the visual appeal of the area and pollute the surrounding areas. 	<ul style="list-style-type: none"> Monitoring and management of waste on site. 	Role and responsibility: <ul style="list-style-type: none"> Site Supervisor to ensure compliance with the guidelines as stipulated in the EMPr. Annual audits by an independent person with the relevant environmental expertise. 	To be implemented throughout the operational phase. Annual audits.
Closure & Decommissioning	<ul style="list-style-type: none"> Failure to decommission and rehabilitate the prospecting site properly could result in soil erosion, 	Monitoring of decommissioning/rehabilitation activities.	Role and responsibility: <ul style="list-style-type: none"> Site Supervisor to ensure compliance with the guidelines as stipulated in the EMPr. Final audit by an independent person with the relevant environmental expertise. 	To be implemented throughout the decommissioning phase.

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
	<p>storm water issues, safety risks and invasion of alien plant species.</p>			
<p>Closure & Decommissioning</p>	<ul style="list-style-type: none"> ● Failure to comply with the closure requirements could result in unnecessary environmental degradation and 	<ul style="list-style-type: none"> ▪ Monitoring of effective mine closure. 	<p>Role and responsibility:</p> <ul style="list-style-type: none"> ● Site Supervisor to ensure compliance with the guidelines as stipulated in the EMPr. ● Final audit by an independent person with the relevant environmental expertise. 	<p>To be implemented at closure.</p>

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

A performance assessment on this EMP will be conducted every year by an external independent auditor and the results of the audit will be provided to the Regional Manager. The prospecting programme would require 24 months to complete. Rehabilitation activities would be conducted concurrently where possible, but due to legislative issues that still need to be address, final rehabilitation and removal of prospecting infrastructure additional time may be required. The period for which the environmental authorisation should be valid is 5 years allowing for unexpected issues, rehabilitation, and closure activities.

DRAFT

m) Environmental Awareness Plan

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

Approval of the prospecting right; and prior to mining, a hardcopy of the Environmental Management Programme report must be kept at the site all times. Induction must be conducted prior to employment of contractors or before employment of personnel. This induction must contain information relating to aspects dealt with in the EMPr, safety and health legislation. Daily toolbox talks, outlining the latest safety, health and environmental issues must be held prior to the shift commencing.

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

The appointed contractor(s) for drilling, geological assessments etc. must ensure that he/she understands the EMPr document and its requirements and commitments before any mining takes place. The site supervisor must continuously monitor compliance with the EMPr. An independent person with the relevant environmental experience must audit compliance with the EMPr at least annually. All the mitigation measures listed in the Impact Assessment and EMPr must be adhered to in order to prevent environmental degradation. The following list represents the basic steps towards environmental awareness, which all mining employees should consider when carrying out their tasks.

All the risks will be reported to the Environmental Control Officer (ECO) immediately. The ECO will report it to the relevant personnel within 24 hours who are able to control the situation i.e. the spills will be reported to the contractors who deals with spills.

- Establish the context
 - Strategic
 - Organisational
 - Risk management
- Identify risks
- Analyse risks
 - Consequences
 - Likelihood
- Assess and prioritise risks

- Acceptability
- Priorities for treatment
- Treat risks
- Eliminate
- Reduce
- Transfer
- Manage
- Monitor and review.

In additional to the above, kindly refer to the impact assessment.

Site Management:

- Stay within boundaries of site – do not enter adjacent properties.
- Keep tools and material securely stored offsite.
- Use toilets provided – report full or leaking toilets.

Water Management and Erosion:

- Report any erosion.
- Maintain soft berms
- Check that no equipment is causing hydrocarbon spills.
- Do not swim in or drink from the river.

Waste Management:

- Take care of your own waste.
- Place waste in containers and always close lid.
- Don't burn waste.
- Pick-up any litter.

Hazardous Waste Management (Petrol, Oil, Diesel, Grease):

- Never mix general waste with hazardous waste.
- Use only sealed, non-leaking containers.
- Keep all containers closed and store only in approved areas.

- Stop leaks and spills, if safe.
- Immediately report the spill to the site manager/supervision.
- Locate spill kit/supplies and use to clean-up, if safe.
- Place spill clean-up waste in proper containers.
- Label containers and move to approved storage area to be disposed at a registered landfill site.

Discoveries:

- Includes – Archaeological finds, Cultural artefacts, Contaminated water, Pipes, Containers, Tanks and drums, any buried structures.
- Stop work immediately.
- Notify appointed driller/geologist/supervisor.

Air Quality:

- Wear protection when working in very dusty areas.
- Drill rigs are to be fitted with dust chutes to minimise the amount of liberated dust during drilling

Implement dust control measures:

- Water roads and work areas during excessively windy days (if required).
- Obey speed limit.

Driving and Noise:

- Use only approved access roads
- Respect speed limits (30km/hr)
- Only use turn-around areas – no crisscrossing through undisturbed areas.
- Avoid causing unnecessary loud noises.
- Report or repair noisy vehicles or broken equipment.

Vegetation and Animal life:

- Do not remove any plants or trees unless required for prospecting activities to continue
- Do not collect fire wood.
- Do not catch, kill, harm, sell or play with any animal, reptile, bird or amphibian on site.
- Report any animal trapped in the work area.
- Do not set snares or raid nests for eggs or young.

Fire Management:

- Do not light any fires on site.
- Put cigarette butts in a rubbish bin.
- Do not smoke near any fuel or chemicals.
- Know the position of firefighting equipment.
- Report all fires.
- Don't burn waste or vegetation.

n) Specific information required by the Competent Authority

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

The applicant undertakes to annually review and update (if necessary or required) of the financial provision calculation, for review and approval by the DMRE competent authority.

2) 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; To be included in Final BAR
- 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:

ZN Geo Services (Pty) Ltd

Name of company:

26 October 2023

Date:

-END-