



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA



BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

FINAL

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

NAME OF APPLICANT: ILAHLE 4 KZN PTY LTD

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FILE REFERENCE NUMBER SAMRAD: KZN 30/5/1/1/2/10921 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 the these aspects to determine:
 - (i) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to;
and
 - (ii) the degree to which these impacts—
 - (aa) can be reversed;
 - (bb) may cause irreplaceable loss of resources; and
 - (cc) can be managed, avoided or mitigated;
- (e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—
 - (i) identify and motivate a preferred site, activity and technology alternative;
 - (ii) identify suitable measures to manage, avoid or mitigate identified impacts; and
 - (iii) identify residual risks that need to be managed and monitored.

PART A
SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

3. Contact Person and correspondence address

a) Details of

i) Details of the EAP

Name of The Practitioner: Trevor Hallat
Tel No.: 071 689 2229
Fax No. : 086 407 9911
e-mail address: trevor@exm.co.za

ii) Expertise of the EAP.

(1) The qualifications of the EAP
(with evidence).

The EAP has more than 10 years of environmental management experience in mining, power generating, industrial and local government sectors. His duties entail the planning and execution of projects related to environmental management, including ISO 14001: 2004 and legal compliance audits, Environmental Impact Assessments (EIA), Financial Provisioning, Compilation of Environmental Management Programmes, Environmental Risk Assessments and Environmental Management Systems. Trevor is also a registered Natural Science Professional with the South African Council for Natural Scientific Professions (Reg nr: 300123/15). The EAP has completed various qualifications of which the following degrees rank the highest:

- BSc Geography & Environmental Management (NWU)
- BA Hons Environmental Management (NWU)
- Masters Environmental Management (NWU) Please find attached as Appendix 1 a copy of the EAPs CV.

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

(In carrying out the Environmental Impact Assessment Procedure)

The EAP has completed numerous projects and impact assessments in line with the requirements of the EIA Regulations (GNR982, 2014). The list of recent projects includes:

- Vereeniging Refractories Hammanskraal Clay Quarry Waste Management Licence and EMPr amendment;
- Aquarella Investment Prospecting Right Application;
- Zinoju Coal Balgray Colliery Refurbishment Project (on-going);
- Sishen Mine Lylyveld Expansion EIA;
- ArcelorMittal full EIA and Scoping as well as BAR for the decommissioning of the Existing Metallurgical Disposal Site and the Construction of a New Class B Disposal Site;
- Independent EAP Review of Various Mining Prospecting Basic Assessment Applications;

- Basic Assessment for the Development of a Coal Siding near Bronkhorstspuit;
- Involved in 15 Waste Management Licence Applications for landfill sites across the North-West Province;
- Involved in 15 Waste Management Licence Applications for landfill sites across the North-West Province;
- Involved in the Atmospheric Emissions Licence Application and full EIA for a Medical Waste Incinerator in Waltloo, Pretoria.
- Columbus Stainless Basic Assessment for the Storage of Hazardous Substances (current); and
- SA Tank Terminals Waste Management Licence Application.
- Bumatech Expansion Project Basic Impact Assessment Process;
- TerraNova Ceramics Atmospheric Emissions Licence and full EIA;
- Ceramic Industries Warehouse Development Basic Impact Assessment;
- Ceramic Industries Phoenix Factory Atmospheric Emissions Licence and full EIA;
- ArcelorMittal Vanderbijlpark Galvanising Line Conversion to Combi-Line Basic Impact Assessment;
- Universal Oil Solutions Waste Management Licence Application;

Please refer to Appendix 1 for a detailed project experience list as part of a CV.

b) Location of the overall Activity.

Farm Name:	Portion 2 and the Remainder (Whole Area) of the Farm Tygerskloof No. 173- HU, A Portion of the Farm Demoina No. 830-HU, Portion 3, 4, 5 and 7 (Whole Area) of the Farm Wonderfontein No. 560-HU, Whole Area of the Farm Mariantha No. 845-HU, Whole Area of the Farm Welteverede 540-HU, A Portion Of the Farm Tierkloof 829-HU, Portions 4-7, 13, 16, Portions 2-17 of the Farm Spitzkop No. 70-HU
Application area (ha)	7 900 ha
Magisterial district:	Zululand Magisterial District
Distance and direction from nearest town	The area is about 41 km east of Vryheid
21-digit Surveyor General Code for each farm portion	N0HU0000000000400000 N0HU0000000007020000 N0HU0000000007770000 N0HU0000000007690000 N0HU0000000006890000 N0HU0000000005180005 N0HU0000000005180000 N0HU0000000005180004 N0HU0000000003010000 N0HU0000000005410001 N0HU0000000004270000

	N0HU00000000042700001
	N0HU00000000027700002
	N0HU00000000027700004
	N0HU00000000027700000
	N0HU0000000005200003

c) Locality map

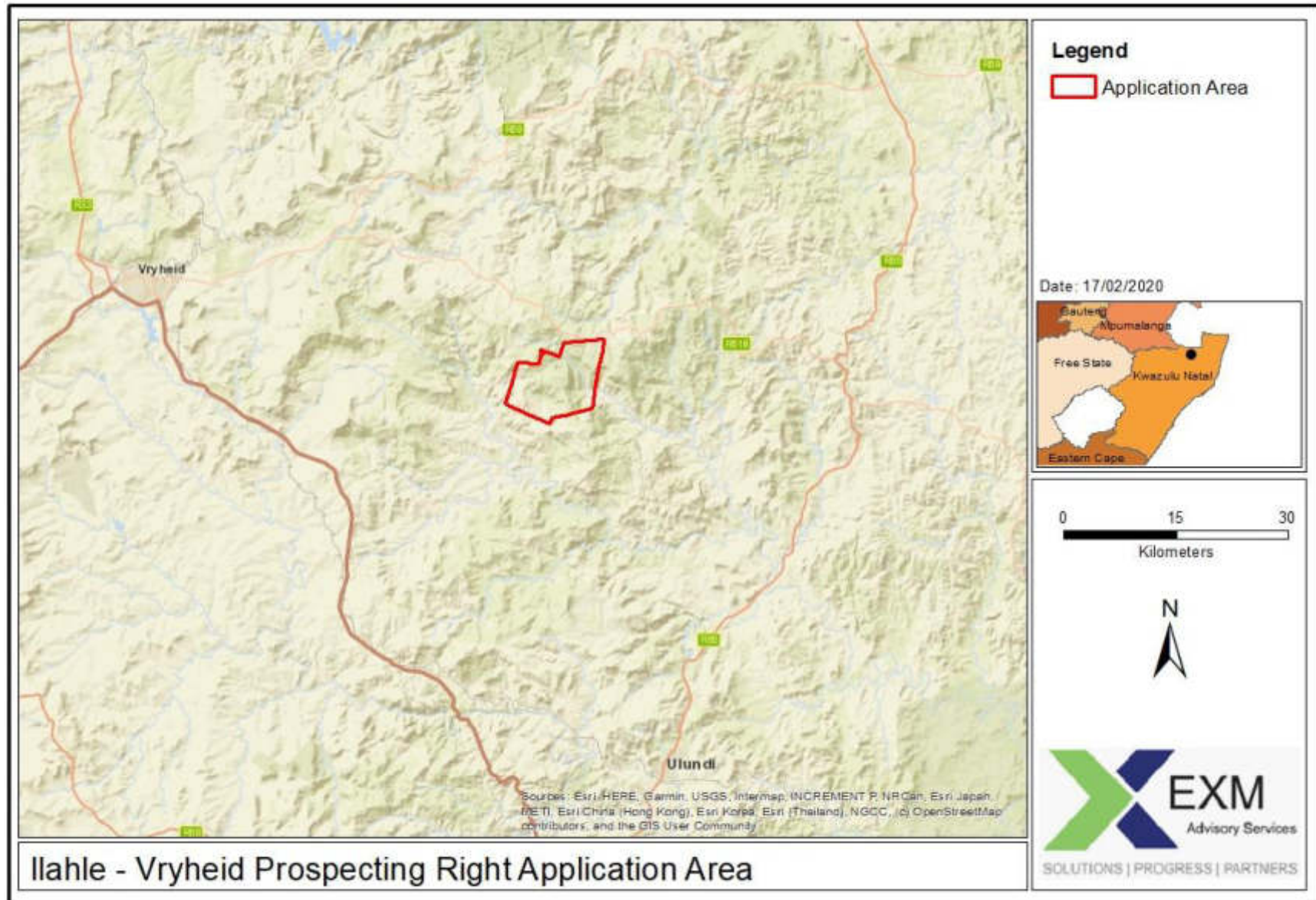


Figure 1 : Regional Locality Map

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

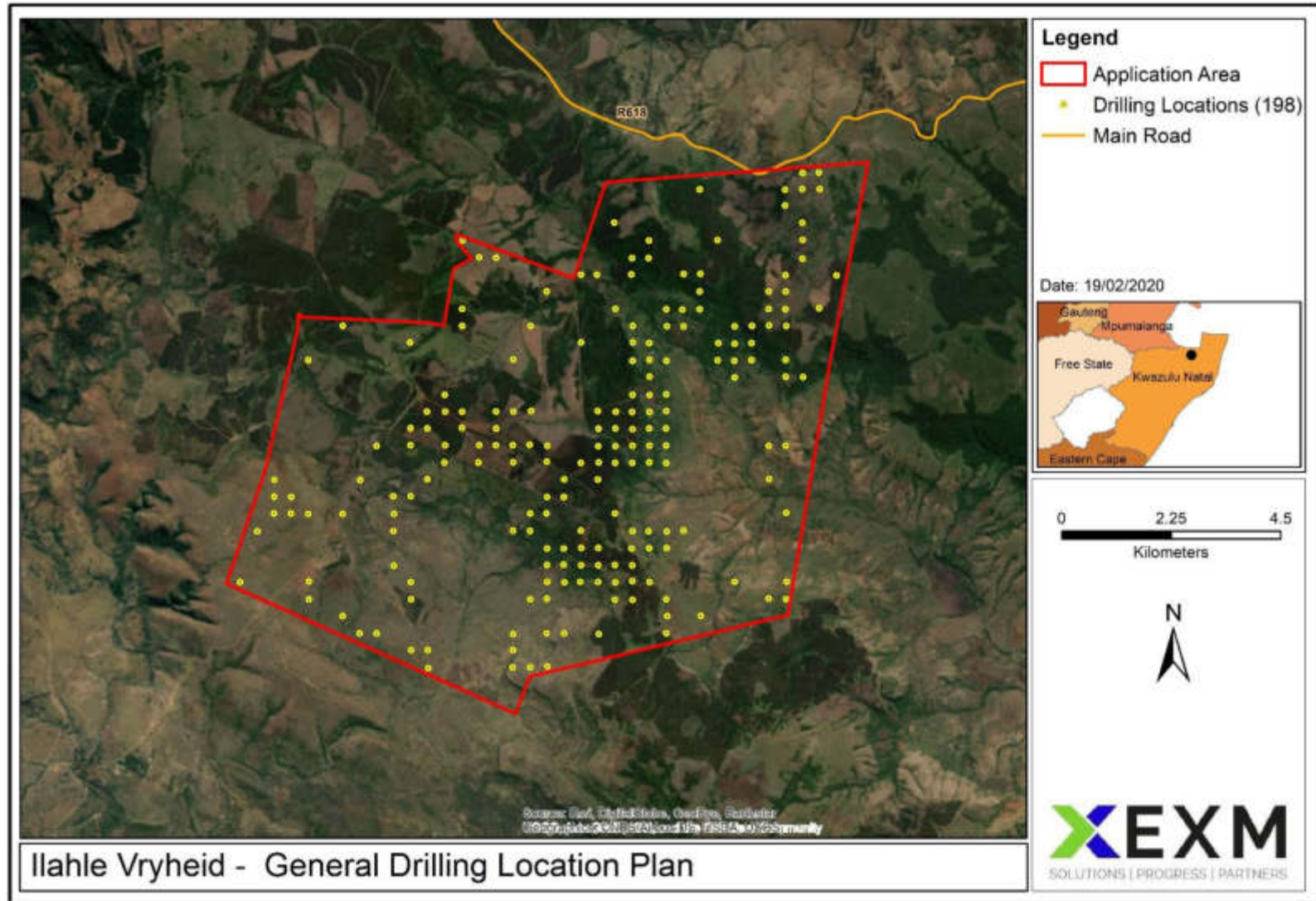


Figure 2 : Prospecting Area, indicating preliminary position of prospecting boreholes

(i) Listed and specified activities

<p>NAME OF ACTIVITY</p> <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...etc...etc.)</p>	<p>Aerial extent of the Activity</p> <p>Ha or m²</p>	<p>LISTED ACTIVITY</p> <p>Mark with an X where applicable or affected.</p>	<p>APPLICABLE LISTING NOTICE</p> <p>(GNR 544, GNR 545 or GNR 546)</p>
<p>Access routes</p>	<p>Farm tracks will be used as far as possible. No additional roads will be constructed – if not required.</p>		
<p>Drill site establishment</p>	<p>A drill site of approximately 300m² will be established that will require:</p> <ul style="list-style-type: none"> - Clearing of vegetation for sumps and the drill entrance point - earth sumps for water recycling - laydown area for drill rods, fuel and chemical storage - chemical toilets <p>Approximately 198 potential drill sites have been identified and will potentially cover +/- 5.9 hectares.</p>		<p>GNR 983: 20, 27</p>
<p>Drilling and removal of geological cores</p>	<p>Drilling a hole of approximately 110mm in diameter and removing of rock core. Number of boreholes will be finalised once non-invasive prospecting is completed.</p>		<p>GNR 983 Activity 20</p>
<p>Casing of boreholes</p>	<p>1m² per borehole. Number of boreholes will be finalised once non-invasive prospecting is completed.</p>		<p>GNR 983 Activity 20</p>
<p>Rehabilitation of drill sites</p>	<p>See above</p>		<p>GNR 983, 20 (application for closure i.t.o. activity 22 will be conducted after drilling)</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 prospecting activities are aimed at identifying potential **coal and pseudocoal** deposits. In order to identify the mineral targets a desktop review phase and invasive drilling phase will be undertaken.

Desktop Review Phase

The desktop studies will involve accessing all available public information on the geology, mineral occurrence and topography of the prospecting right application area, and all information on past work carried out in the area from geophysics, geochemistry, image interpretation, drilling and mining. Any literature accessed will be reviewed, collated and archived for reference. Key information during this phase will be data provided by the Council of Geoscience on historic drilling that has been undertaken within the prospecting area.

Spatial Database Compilation

Spatial information will be compiled into a GIS database for access, correlation and evaluation. The GIS system will be used and maintained for the period of the prospecting right exploration program and regularly updated as new information is generated by the exploration program. All spatial information accessed and collected in the field will be standardized using the WGS84 datum.

Remote sensing

As part of the initial review, public domain aerial photos will be acquired and a detailed geological and structural interpretation will be done on these to aid in identifying target areas that are not readily evident on the ground and to provide an independent interpretation of the geology of the area.

Satellite imagery will also be acquired to provide a more regional viewpoint of the area of interest. As before a detailed geological and structural interpretation will be done on these images to provide a more regional viewpoint on the target areas. Satellite imagery is used to complement the aerial photo interpretations as the combination of multi-spectral bands can be used to highlight certain lithology's, vegetation types, soil types, alteration minerals, etc.

Geophysical survey to be undertaken

Both airborne and ground geophysical surveys may be undertaken for the prospecting right area. This is dependent on the results of the desktop study. These surveys will be used in conjunction with the data available to the public from the Council for Geoscience.

A small airborne magnetic/radiometric survey may be carried out over the prospect and surrounding areas to map the structural geology of the area. Follow up ground geophysical surveys will then be carried out on coincident targets from the compilation of geological and geophysical data. These surveys may include ground gravity, ground electromagnetics, IP and controlled source audio magnetotellurics (CSAMT).

On completion of the desktop review a plan detailing the location of invasive drill sites will be completed allowing the holder to commence with borehole drilling to acquire core samples and delineate the minerals.

Establishment and operation of the drilling rigs will be undertaken and are the main activities associated with forming part of the invasive drilling phase. The following infrastructure or areas will be created at each drilling site: (also see Figure 3):

1. Access Road (if required)

Existing farm tracks and roads will be followed for entry and exit to all drill sites. Site locations will be determined to ensure short and easy access. All access on farms will be conducted in terms of a written agreement with the landowner. In instances where no access road is available to the site location a single track will be chosen on the basis of least environmental impact with natural habitat considered the last option. Only these tracks will be followed and will not be deviated from.

2. Parking for light vehicles

The parking area for light vehicles will be established adjacent to the drill site. The extent of this area will be kept to a minimum. Vehicles will only park in the designated area and make use of one turning track to minimise disturbance to the environment.

3. Chemical storage area

Storage and use of hydrocarbons and other chemicals may only take place on impermeable surfaces with bunds to contain any accidental spills. Hazardous material will be stored in appropriate containers and clearly marked. Drip trays and or impermeable surfaces with bunds must be placed under machinery that has the potential to leak. Material Safety Data Sheets will be available for all drilling and other chemicals kept on site.

4. Water delivery and settling sumps

When core drilling will be undertaken a number of settling sumps will be excavated and lined with impervious plastic sheets. The purpose of these sumps is to recycle water and drilling fluids by means of gravity causing heavier materials (e.g. drill cuttings) to settle and “clean” water being produced for re-use. The drill cuttings form a sludge which is collected in the sumps. These sumps will be fenced, where required, to prevent livestock and public access. The plastic sheets will be removed and sumps will be backfilled on completion of drilling. If required, the remaining sludge in sumps is to be treated with a suitable bio-remediation product prior to backfilling or disposal.

5. Drill rig

In most cases the drill rig will be a self-contained, truck-mounted unit that will be accompanied by a compressor and a generator. The drill rig will be driven to site and mobilised in the desired location, positioned over the hole site and will be stabilised. The footprint of disturbance for a prospecting rig and associated equipment is generally smaller than 300 m². Plastic sheets and drip trays will be placed underneath the rig for the duration of the drilling process at each site in order to avoid hydrocarbon spills and contamination. The full extent of the drill sites will be staked out and the drill crew will not operate beyond these boundaries. Depending on the locality, this perimeter may be fenced, marked with bunting or barricading. Please refer to Figure 3 for a layout plan of the drilling site.

6. Drill core storage area

During core drilling a laydown area for the extracted core samples will be established within the footprint of the drill site. This area is usually 10m × 2m and is used to place the extracted core in sequence (according to depth) for later analysis by an appointed geologist. Core trays will be used to contain the core samples.

7. Drill rod storage area

During the drilling process the drill rods are usually kept on tressels (specially built stands) or on the back of a truck for easy access or within the drill site area.

8. Vegetation and topsoil stockpile areas (if required)

Vegetation and topsoil will only be stockpiled in instances where settling sumps are required i.e. core drilling. During the excavation process the topsoil and available vegetation will be placed adjacent to the sumps. This will also serve as a stormwater diversion berm. The excavated material will be backfilled into the rehabilitated sumps on completion of the drilling process.

9. General and hazardous waste receptacles

Separate, marked receptacles (containers) will be provided for the storage and disposal of hazardous and general wastes at the waste generation points. The purpose of this is to ensure that general and hazardous waste be disposed of separately at a licenced facility.

10. Chemical toilet

Chemical toilets will be provided for the drilling crew. The toilets will be supplied and managed by a specialist contractor and the sewage disposed of at the nearest sewage farm, or as required by the local authority. The toilets will be cleaned on a weekly basis for the duration of the drilling programme.

11. Safety fencing / barricading

The full extent of the drill sites will be staked out and the drill crew will not operate beyond these boundaries. Depending on the locality, this perimeter may be fenced, marked with bunting or barricading signage to prevent public or livestock access. The drill sites will be clearly demarcated as a dangerous working area. The fences will remain until all hazardous machinery and material have been removed and the sumps (if any) have been backfilled.

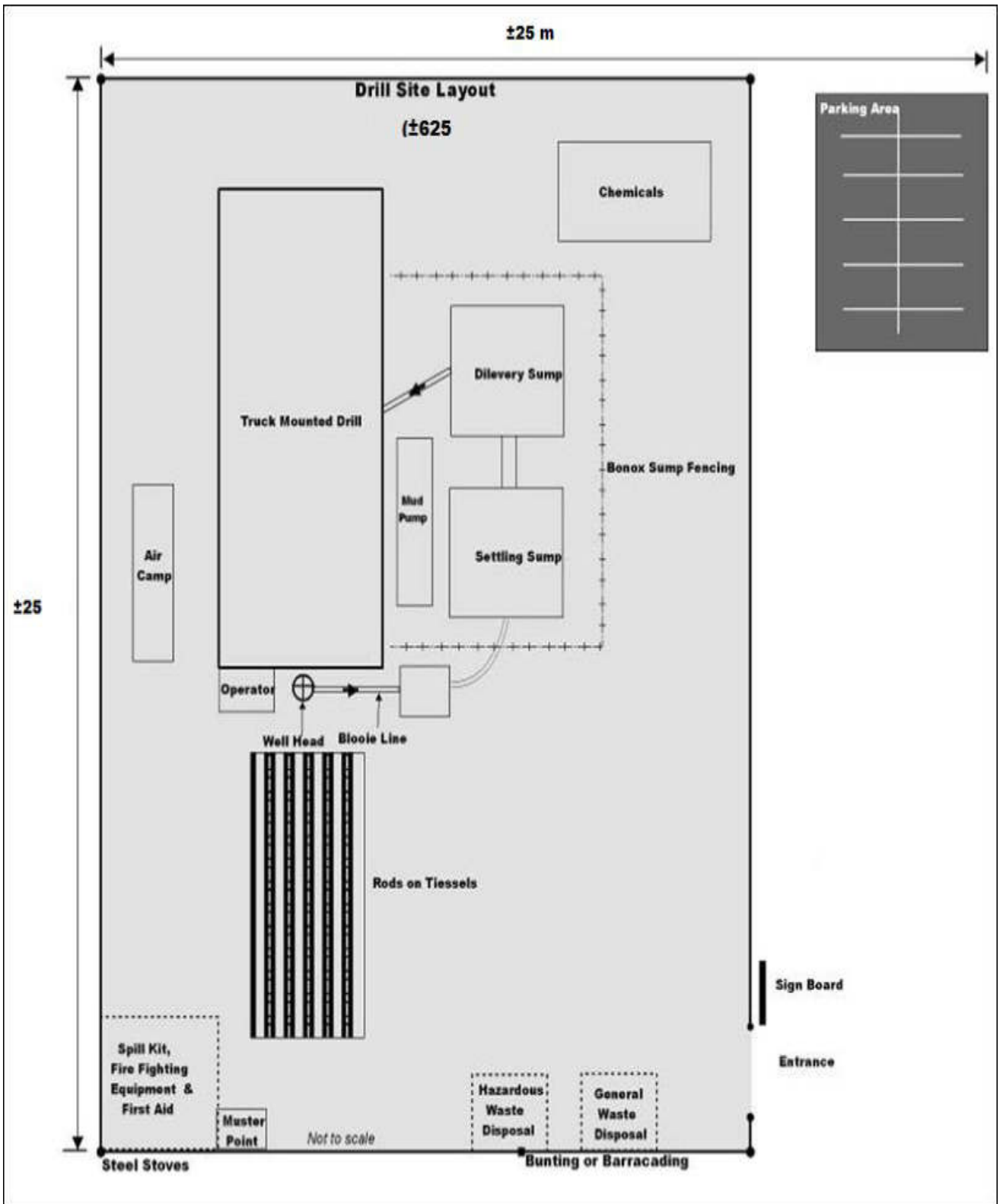


Figure 3 : Proposed drill rig layout

e) Policy and Legislative Context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process)	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT. (E.g. In terms of the National Water Act a Water Use License has/ has not been applied for)
National Environmental Management Biodiversity Act, no. 10 of 2004	Part B, EMPr	<u>Authorisations</u> No permit requirements Permits must be obtained if protected species are removed. <u>Management Actions</u> Protection of sensitive plant species Management of invasive plant species
Conservation of Agricultural Resources Act, no. 43 of 1983	Part B, EMPr	<u>Authorisations</u> No permit requirements <u>Management Actions</u> Management of invasive plant species and erosion.
National Water Act, no. 36 of 1998 and associated Regulations	Part A, Pre-mining environment & EIA Part B, EMPr	<u>Authorisations</u> No permit requirements Permits/licences must be obtained if any listed activities are triggered. <u>Management Actions</u> Protection of water resources Locality restrictions to watercourses
Mineral & Petroleum Resources Development Act, no. 28 of 2002	Part B, EMPr	<u>Authorisations</u> Application for a prospecting right submitted. <u>Management Actions</u> Closure costing updates and provisions Auditing and performance assessment.
Provisioning Regulations, 2015 Published under Government Notice R1147 in Government Gazette 39425 of 20 November 2015	Final rehabilitation and closure plan attached as Appendix 6.	<u>Final rehabilitation and closure plan attached as Appendix 6.</u>
National Environmental Management Act, no. 107 of 1998 and Regulations	Part B, EMPr	<u>Authorisations</u> Application for an Environmental Authorisation. <u>Management Actions</u> Adherence to the duty of care and other environmental management principles
National Environmental Management Air Quality Act, no. 39 of 2004 and Dust Control Regulations	Part B, EMPr	<u>Authorisations</u> No licence requirements <u>Management Actions</u> Control of fallout dust and emissions Minimise disturbance
Municipal Biodiversity Summaries Project: SANBI	Part A, Pre-mining environment & EIA	<u>Authorisations</u> No authorisation requirements <u>Management Actions</u>

		Drill site selection requires an environmental officer approval.
National Heritage Resources Act, no. 25 of 1999	Part A, Pre-mining environment & EIA Part B, EMPr	<u>Authorisations</u> No permit requirements. Permits must be obtained if heritage sites are located on proposed drilling sites <u>Management Actions</u> Conservation of heritage and cultural resources. Final rehabilitation and closure plan attached as Appendix 6.

f) Need and desirability of the proposed activities.

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

The activity of prospecting for coal creates the opportunity to develop the mineral resources of South Africa and is outlined in the national development frameworks and policies. The preferred location for the activity is in the KwaZulu Natal province. The prospecting activity has the potential to result in a Mining Right Application together with a Social & Labour Plan (S&LP) which will contribute to Local Economic Development in the area in general. The implementation of the S&LP will also benefit staff through training (skills development) and bursary programmes.

The proposed project has the potential to make a contribution to local taxes as well as the Gross Domestic Product GDP. Eventually the mining of minerals will allow for continued supply to other industries who also contribute to local taxes and GDP. The mining operations will provide coal to tile factories and is an essential input product for the tile manufacturing process. The tile factories provide employment opportunities to numerous employees and provide tiles to infrastructure and other developments in South Africa. The tile factories also export a portion of the tiles and contributes to the South African (GDP).

Although prospecting is not seen as an activity that significantly and sustainably contributes to an area's economy, it is a precursor to possible mining activities. The activity of mining has numerous social and economic benefits on a local, regional and national scale. These include:

1. Job creation
2. Skills development
3. Small Medium and Micro Enterprises (SMME) development
4. Local economic development
5. Contribution to local and national tax income (royalties, companies tax etc.)
6. Contribution to the national gross domestic product

The need to prospect is therefore a crucial step in being able to ascertain whether the geology and mineral reserves warrant further investigation for potential mining activities and in turn the benefits indicated in points 1-6.

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

The site location has been identified due to the underlying geology that has the potential to support coal bearing strata. The location of individual drill sites is however not fixed to a geographical element within the project location and alternative drill sites are available on consideration of

biodiversity, water, land use and cultural aspects.

The technology to be employed includes both invasive and non-invasive tasks. The invasive tasks (on site) include establishment of a drill rig and contractors camp. The drill rig technology is dependent on the geology, but alternatives are available for the use of drilling lubrication.

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

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

i) Details of the development footprint alternatives considered.

With reference to the site plan provided as Appendix 3 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 has been identified due to its geological significance and potential to produce coal or pseudocoal. Due to the nature and extent of the geology and mineral rights available in the area it is not possible to identify an alternative property as the geology is directly associated with the applied area. Numerous alternative drill sites are available and is dependent on the site conditions. The current layout is developed in-line with an economically acceptable grid (SAMREC). The SAMREC grid was amended in consideration of the drill sites relative location to water resources (all drill sites within 100m of a watercourse or drainage line was removed) and location of existing land uses.

(b) The activity to be undertaken is prospecting. Prospecting is an activity that is defined as a formalised process with a systematic approach to identify the presence of a mineral resource and includes invasive (drilling) and non-invasive (desktop studies) activities. Alternative activities that can be undertaken include:

- Percussion drilling
- Reverse circulation drilling
- Diamond core drilling
- Bulk sampling (including scraping and trenching)

The activity to be undertaken is not decided by the EAP but defined by the geology of the area. Prospecting for this project will involve drilling (percussion, RC or core) depending on the type of rock and samples required. The standard approach is to commence with percussion/ RC drilling as it is least costly to identify a possible target.

(c) The South African Code for the Reporting of Exploration Results, Mineral Resources & Mineral Reserves describes intervals of 350 m x 350 m as a resource that can be defined as measured and linked to a financial feasibility. Due to the extent of the properties applied for and the availability of existing drilling information it is envisaged that a reconnaissance level of drilling at intervals of 2 000 meters will be the initial requirement, but grid intervals can be at 350-meter intervals. From the

reconnaissance levels grid environmental sensitivities were included (water, topography, and land use) and drill sites that will intrude these sites were either removed or its locations changed.

- (d) No feasible alternative technologies are available to conduct the prospecting drilling due to the basic nature of the process. Alternative technologies with regard to the management of water, dust, and noise will be considered as mitigation measures in this report.
- (e) Operational alternatives are discussed in the environmental impact assessment and management plan depending on the impact significance and mitigation required.
- (f) The no-go alternative will impact on the potential development of mineral resources in South Africa. Mineral resource development results in direct employment and social development of an area and contributes to the GDP and taxes in South Africa. Should this project not go ahead the potential socio-economic benefits will not be realised as prospecting is a forerunner to mining. Of greater importance is the requirement to establish a supply of coal for electricity generation, with Eskom already under a supply shortfall. The project has the potential to identify potential sources of coal to be used in generating electricity in South Africa.

i. 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.

PUBLIC PARTICIPATION

Appendix 2.1: IAP Database

Appendix 2.2: Notification Letter of Project

Appendix 2.3: Proof of Site Notices

Appendix 2.4: Proof of Newspaper Advert

Appendix 2.5: Notification letter of BAR review (email, SMS and registered post)

Appendix 2.6: Proof of comments and responses

Appendix 2.7: Consultation with traditional authority

Appendix 2.8 Proof of notification of extended PPP period

Section 41 of NEMA Regulation 982 set out the Legal and Regulatory Requirements for Public Participation. The Public Participation Process (PPP) aims to involve the authorities and I&APs in the project process, and determines their needs, expectations and perceptions which in turn ensures a complete and comprehensive environmental study. An open and transparent process has and been followed at all times and is based on reciprocal dissemination of information.

Identification of Interested and Affected Parties (IAPs);

1. Notification of IAPs regarding the proposed project;

2. Gathering comments, issues and concerns from IAPs;
3. Responding to IAP comments, issues and concerns;
4. Providing IAPs with the opportunity to review and comment on the basic assessment report.

Each of the processes is described in detail in the sections 1-5 below.

1. Identification of Interested and Affected Parties

The application area extends over approximately 7900 hectares of mixed land uses. No local tribal authorities or land claims were identified within the project area and the properties are privately owned.

Interested and affected parties that were identified include the following:

- Landowners and legal occupiers within the project area
- Neighbouring landowners
- IAPs that registered as part of the advertisement and site notices
- District Municipality: Zululand District Municipality
- Local Municipalities: Abaqulusi Municipality
- Organs of State:
 - o Department of Water and Sanitation (KZN)
 - o AMAFA KZN Heritage
 - o Land Restitution Commission
 - o Department of Agriculture, Forestry and Fisheries (DAFF)
 - o KZN Conservancies
 - o Head of Department Kwa-Zulu Natal?
 - o Ezemvelo KZN Wildlife (EKZNW)
 - o KZN Department of Agriculture and Environmental Affairs
 - o DAEARD
 - o Department of Human Settlements
 - o Department of Cooperative Governance and Traditional Affairs (COGTA)
 - o Department of Rural Development & Land Reform
 - o Commission on restitution on Land Rights
 - o Transnet
 - o Eskom

The details of all interested and affected parties (IAPs) were compiled into an IAPs database that is included as Appendix 2.1.

2. Notification of Interested and Affected Parties

All IAPs was notified with an information letter that include a description of the project, the public participation process, potential environmental impacts and how they can get involved. The notification letter also include a comment sheet whereby all IAPs can respond with issues, concerns or comments. Due to the rural nature of the project area it was decided to provide postal, telephonic and email electronic methods of sending the notification letter as well as gathering responses. The notification letter is sent in English with no request for translation to other languages. Copies of the notification letter are provided in Appendix 2.2.

Other forms of notification included the placement of Site Notices (as per the Regulation required size) at various locations. Site notices (A2 and A3) were placed at various locations on 24 February 2020. The notices were placed in both English.

The site notices were available whereby IAPs could register to be provided with more information on the project. A copy of the site notice is provided in Appendix 2.3. An advert was published in the local Vryheid Gazette on 20th of February 2020. The advert included a brief project description, location of the project and methods to register as an IAP. Proof of placement will be included in the final BAR.

3. Gathering Comments, Issues and Concerns from IAPs

Refer to Table ii below for the comments and issues received as well as responses thereto. Proof of communication is attached as Appendix 2.6.

4. Responding to Comments, Issues and Concerns from IAPs

The responses are included in the BAR (Table ii below) that is provided to the respective IAPs for review as part of the extended public participation period. These responses are therefore provided to the commenting IAP as part of the draft BAR.

5. Review and Commenting on the Basic Environmental Impact Assessment Report (BAR)

All identified IAPs is provided access to the BAR for review and comment. The IAPs were informed via registered post, emails or an SMS of the availability of the BAR for review. Hard copies have been delivered to the DMR and DWS.

The draft BAR was initially available for review and comment from the 21st February 2020 – 22nd of March 2020 at the following locations:

- Electronic copies provided via Email and available on request from trevor@exm.co.za
- A hard copy is available at the Vryheid Library (76 Stella St, Vryburg)

Notification was by email and SMS. Please find attached as Appendix 2.5a) a copy of the SMS notification and Appendix 2.5b) contains proof of the circulation of the draft BAR (email).

Due to the national lockdown in terms of the Disaster Management Act and subsequent directions issued by the Department of Environment, Forestry and Fisheries (DEFF), EXM has decided to provide the identified an addition 30 days to review the documents in support of the BA and to raise comments. Refer to Appendix 2.8 for proof of notification of extension of PPP commenting period. The Basic Assessment Report (BAR) is available for review at the following locations:

Dropbox electronic link:

<https://www.dropbox.com/sh/bn1rciotou0cgr7/AABvWG5UB2P5rZUsvfGCDNNYa?dl=0>

Onedrive electronic link: <https://exmadvisoryservices->

[my.sharepoint.com/:f/g/personal/trevor_exm_co_za/Epw24YyIWqBOvNpnuSw47DABurdtsKEOUztV/K4sZmiSEqw?e=ICsyBz](https://exmadvisoryservices-my.sharepoint.com/:f/g/personal/trevor_exm_co_za/Epw24YyIWqBOvNpnuSw47DABurdtsKEOUztV/K4sZmiSEqw?e=ICsyBz)

ii. **Summary of issues raised by I&APs**
 (Complete the table summarising comments and issues raised, and reaction to those responses)

Interested and Affected Parties		Date	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated.
List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.		Comments Received			
<u>AFFECTED PARTIES</u>					
Landowner/s	X				
IMPUMELELO COMMUNITY TRUST-TRUSTEES (Derrick Buthulezi)	X	10/12/2020			Section vii, Table 2, page 42-32
IMPUMELELO COMMUNITY TRUST-TRUSTEES (Sipho Khumalo)	X	-	No comments received	No comments received	
FOREST RESOURCES PTY LTD					
MAHLABANENI COMMUNAL PROPERTY ASSOC-TRUSTEES (Bongani Mdwande)					
IMFOLOZI TIMBERS PROPRIETARY LIMITED (Hayley)					
R S A					
EMPANGISWENI COMMUNITY TRUST-TRUSTEES					
CRAIG BAREND JACOBUS (Jacqs Craig)					
Nicole Limberis-Ritchie					
Nupen Staude de Vries Incorporated on behalf of NCT Forestry Co-Operative Limited	X	20 March 2020	2 NCT Forestry Co-operative Limited is the registered owner of Tygerskloof Portion 2 and Spitzkop Portion 3 and Forest Resources (Pty) Limited owns Wonderfontein Portion 3 and Spitzkop Portions 2, 4 – 12, 15, 17 and 19. Our clients' properties fall within the proposed project area and as such our clients duly registered as interested and affected parties ("I&APs") in respect of the application for environmental authorisation apparently submitted by	Noted	N/A

		llahle 4 KZN (Pty) Limited (“llahle”) in November 2019 (“the Application”) under Department of Mineral Resources and Energy (“DMRE”) reference KZN 30/5/1/1/2/10921 PR.		
X	20 March 2020	3 Our clients object to the Application for reasons more fully set out below.		
X	20 March 2020	Background		
X	20 March 2020	4 llahle, through their environmental consultants EXM Advisory Services (“EXM”) submitted an application for environmental authorisation to the DMRE in terms of the National Environmental Management Act, 1998 (“NEMA”) read with the Environmental Impact Assessment Regulations, 2014 (“the EIA Regulations”) for the prospecting of coal and pseudocoal and related listed activities.	Noted	N/A
X	20 March 2020	5 It appears that the application was submitted in November 2019, however, this is unclear and despite requesting these details from yourself, as the environmental assessment practitioner (“EAP”) leading the project, no response has been forthcoming.	The application was submitted on the 30 th of August 2019.	N/A
X	20 March 2020	6 The proposed project falls within the Zululand Magisterial District. Our clients’ properties mentioned above fall within the footprint of the proposed project area.	This comment is noted.	
		Procedural irregularities		
X	20 March 2020	7 As mentioned, it is unclear precisely when the Application was submitted. However, Appendix 2.2. to the Basic Assessment Report (“BAR”) contains a flow chart which indicates that the Application was submitted in November 2019.	The application was submitted on the 30 th of August 2019. The acceptance letter is dated 01/11/2019 which dictated the procedural requirements and timeframes for the BA process.	
		Failure to include the Screening Report		
X	20 March 2020	8 On 5 July 2019 and in GN 560, the Minister responsible for environmental affairs published notice of the requirement to submit a report generated by the national web-based environmental screening tool (“the Screening Report”) in terms of section 24(5)(h) of the NEMA read with regulation 16(1)(b)(v) of the EIA Regulations (“the Notice”).	The application was submitted on the 30 th of August 2019 prior to the requirement to submit a screening report.	
X	20 March 2020	9 The Notice reads as follows: “I, Barbara Dallas Creecy, Minister of Environment, Forestry and Fisheries, hereby give notice that the submission of a report generated from the national		

		web-based environmental screening tool, as contemplated in Regulation 16(1)(b)(v) of the Environmental Impact Assessment Regulations, 2014, published under Government Notice No. R982 in Government Gazette No. 38282 of 4 December 2014, as amended, will be compulsory when submitting an application for environmental authorisation in terms of regulation 19 and regulation 21 of the Environmental Impact Assessment Regulations, 2014 after 90 days from the date of publication of this Notice. Until such time, the screening tool will be available for voluntary use.”		
X	20 March 2020	10 The ninety-day period referred to in the Notice ended 3 October 2019 and accordingly all applications submitted on, or after, 4 October 2019 must be accompanied by a Screening Report.		
X	20 March 2020	11 Our clients therefore submit that, although the EAP eventually provided the Screening Report to our client on 4 March 2020 as we had requested same, the fact that it was not attached to the Application is a fatal flaw as it renders the Application non-compliant with the Notice. In addition, this impacts on I&APs ability properly and completely to comment on the Application, including the BAR, because as will become evident, there are unexplained discrepancies between the Screening Report and the BAR.		
X	20 March 2020	12 Accordingly, the Application as it stands is defective for non-compliance with the Notice and the public participation process has been compromised.		
X	20 March 2020	Possible Lapse of Application		
X	20 March 2020	13 Appendix 2.2. to the BAR purports to be notification of the Application given to IAPs on 18 February 2019. However, as discussed above, it appears that the application was submitted during November 2019. It is possible that the reference to 2019 should read 2020, but to the extent that the notification was provided during February 2019, our clients deny receiving same, and the Application would have since lapsed.	The comment is noted. The date has been amended to 2020. The acceptance letter is dated 01/11/2019 which dictated the procedural requirements and timeframes for the BA process.	
X	20 March 2020	14 For this reason alone, it is imperative that I&APs are provided with the date on which the Application was submitted. Without this date, I&APs are unable	The application was submitted on the 30 th of August 2019. The acceptance letter is dated 01/11/2019 which dictated the	

			to determine whether the Application is procedurally compliant.	procedural requirements and timeframes for the BA process.	
			Public Participation Process		
X	20 March 2020		15 Appendix 5 to the BAR is titled supplementary management plan. The project information sheet included within Appendix 5 states that the environmental management plan (“EMP”) included in the Application is final. It is unclear how this can be so, since the first time that the Application, including the EMP, has been subjected to public comment appears to be when an email was sent by the EAP to our clients on 21 February 2020.	The report status has been changed to “Draft for comment” and will be changed to a final version once the PPP has been concluded and all documents have been updated accordingly.	Appendix 5 - EMPr
X	20 March 2020		16 This must be explained, and to the extent that the EMP purports to be final it is submitted that this is procedurally flawed.		
			Failure to include specialist studies		
X	20 March 2020		17 The Screening Report identifies the following 9 specialist studies as being necessary due to the sensitivities detected within the proposed prospecting area: 17.1 Agricultural impact assessment; 17.2 Archaeological and cultural heritage impact assessment; 17.3 Palaeontology impact assessment; 17.4 Terrestrial biodiversity impact assessment; 17.5 Aquatic biodiversity impact assessment; 17.6 Noise impact assessment; 17.7 Radioactivity impact assessment; 17.8 Plant species assessment; and 17.9 Animal species assessment.	The non-invasive phase of the prospecting activities, including the geophysical survey to be undertaken, will determine which of the drilling sites initially identified are feasible for prospecting, taking into consideration the environmental buffers generated as part of this report. Ground truthing of individual site sensitivity will be conducted once the feasible drill site locations have been established. Preference will be given to sites that have been disturbed by anthropological activities.	Appendix 5 - EMPr
X	20 March 2020		18 Not one of these studies was conducted and the EAP provides no adequate motivation as to why they were deemed unnecessary. Indeed, it appears that absolutely no ground truthing was conducted to inform the EAP's statement at page 57 of the BAR in which he states as follows: “No specialist studies were undertaken as the EAP was confident in the status of the proposed site. The project team consists of qualified environmental assessment practitioners that have sufficient experience to inform the report on potential impacts and the baseline environment. The EAP also	No specialist studies needed as the implementation of the mitigation measures contained in the EMPr will successfully avoid and mitigate potential impacts. The focus will be to prevent impacts on sensitive areas and to implement a range of mitigation measures that will minimise potential other impacts. A suitably qualified Environmental Control Officer (ECO) will be appointed to check the feasible sites prior to commencement of drilling to verify any fatal flaws to prevent	

		considered the temporary nature and limited footprint of the proposed project drill sites."	impacts on sensitive environmental features.	
X	20 March 2020	19 With respect, this bald and unsubstituted statement holds no weight, and the EAP and his team's apparent experience is no substitute for ground truthing a particular site, particular where the site has been identified as having various significant sensitivities.	EXM has more than sufficient experience and expertise to ascertain that the EIA process is conducted in accordance with the relevant legal requirements and to ensure that the outcome of the baseline information and impact assessment is an accurate representation of the nature of the site and the proposed activities.	
X	20 March 2020	20 Our clients accordingly contend that the BAR is flawed as it lacks the required specialist studies.		
		Proposed prospecting method/ bulk sampling		
X	20 March 2020	21 It is unclear from the BAR whether the applicant intends to use trenching as a method of bulk sampling. This must be clarified. Insofar as trenching is intended, our clients vehemently oppose this method and contend that the risks of trenching have not been assessed.	No trenching will be conducted. Prospecting for this project will involve drilling (percussion, RC or core) depending on the type of rock and samples required.	Page 16
		Environmental sensitivities		
		Climate change impact assessment		
X	20 March 2020	22 To the extent that the BAR discusses the climate (see page 23), in the absence of a climate change impact assessment our client submits that this information is meaningless.	The project will only entail emissions from vehicles and machinery, which is very insignificant. It is not anticipated that the project will result in any impacts related to climate change and therefore has not been included in the EIA or EMP. Only relevant aspects, impacts and mitigation has been considered that are applicable to prospecting.	
X	20 March 2020	23 Insofar as the EAP may contend that no climate change impact assessment is required in respect of prospecting applications, it must be stressed that prospecting paves the way to mining and it cannot therefore be considered in isolation. This was recognised in Save the Vaal Environment and Others [1999] 2 All SA 381 (A) wherein, in relation to the granting of a mineral right under the predecessor of the MPRDA, the Minerals Act, 1991 the court said that "the grant of the mineral right which precedes the application for a mining licence and then the preparation of an environmental management plan "sets in motion a chain of events which can, and in the ordinary course of events might well, lead to the commencement of mining operations. It is settled law that a mere preliminary decision can have serious consequences in particular cases, inter alia where it	The application only pertains to a prospecting right. A separate EIA and public consultation process must be undertaken if a mining right application is ever undertaken which will deal with associated impacts and concerns. The comment related to the requirement for a climate change impact assessment is noted.	Appendix 5 – EMP Appendix 3 – Impact Assessment

			lays ..."the necessary foundation for a possible decision ... ' which may have grave results."		
X	20 March 2020		24 In fact, the EAP deemed it appropriate to take the eventual mining activities into account when dealing with the need and desirability thereby acknowledging the chain of events. Our client submits that the EAP cannot use the mining activities where it strengthens the BAR and ignore these activities where it would weaken it.		
X	20 March 2020		25 Accordingly, our clients submit that a climate change impact assessment is required in respect of both the impacts of the proposed project on the climate as well as the impacts of climate change on the proposed project. This should permeate the BAR.		
			Impacts on water resources		
X	20 March 2020		26 The BAR recognises that the proposed prospecting area comprises several wetlands including Valley Floor, Bench wetlands and Slope wetlands (see for example, figure 9 and pages 29 – 30). This is according to the National Freshwater Priority Areas ("NFEPA") database.	<p>Appropriate buffers have been established to prevent any impacts on wetlands. Refer to Figure 14.</p> <p>100 meter buffer zones from any water courses will strictly be implemented to prevent impacts on water courses as indicated in Figure 14 of the BAR. Measures will further be implemented for the containment of all waste water generated on site.</p> <p>It should be emphasised that the individual drill sites will cover approximately 300m² (0.03 ha or 15x20 meters) as indicated on page 9 and Figure 3. The total area will cover 12.84 hectares with all the drill sites combined.</p> <p>A hierarchy approach will be implemented to mitigate potential impacts, therefore the 100 meter buffers will be implemented to prevent any disturbance.</p>	Figure 14
X	20 March 2020		27 According to the BAR, the area is also recognised as part of the Thukela River Water Management Area (see for example page 30), which has been recognised as one of nine water management areas	The correct Water Management Area and catchment has been included in the baseline environment description and taken into account as part of the assessment. An	Section h (iii)

		in South Africa (see GN 1056 of 16 September 2016). However, it is our clients' submission that the proposed prospecting area falls within the Umfolozi catchment and not the Thukela catchment and that it is within the headwaters of this catchment, meaning that if pollution to this watercourse occurs, this will negatively impact many downstream users. Please see attached marked "A", a map of indicating this.	additional 30 day commenting period has been allocated to all IAPs to allow sufficient time to review the BAR and EMPr	
X	20 March 2020	28 Accordingly, the incorrect catchment has been assessed. This is a critical error because the impacts on the Umfolozi catchment have not been considered. This being so, many of the conclusions in the BAR will be incorrect.		
X	20 March 2020	29 It is imperative that this error is rectified, and thereafter our client must be provided with a further opportunity to comment.		
X	20 March 2020	30 If regard is had to page 12 of the Screening Report, the sensitivity of the proposed prospecting area from a water resource perspective becomes clear. The Screening Report clearly shows the proposed mining area is of high sensitivity, inter alia, because it is within 500m of an important river and within an important wetland. Mention is made on page 11 of the Screening Report of the area comprising a strategic water source area.	Appropriate buffers have been established to prevent any impacts on wetlands. Refer to Figure 14. 100 meter buffer zones from any water courses will strictly be implemented to prevent impacts on water courses as indicated in Figure 14 of the BAR. Measures will further be implemented for the containment of all waste water generated on site.	Figure 14 Appendix 5 – EMPr Appendix 3 – Impact Assessment
X	20 March 2020	31 Notwithstanding this wealth of information depicting the importance of the area and despite the direction in the Screening Report, no wetland assessment or any hydrological studies have been carried out. This is a serious flaw in the BAR.	It should be emphasised that the individual drill sites will cover approximately 300m ² (0.03 ha or 15x20 meters) as indicated on page 9 and Figure 3. The total area will cover 12.84 hectares with all the drill sites combined.	
X	20 March 2020	32 Insofar as paragraph (c) at page 37 states that "Prospecting sites will be located to avoid wetlands, dams and associated buffer zones" without ground-truthing the precise location of these sensitive areas and conducting a specialists studies, it is impossible to know whether the proposed 100m buffer (see page 44) is sufficient to minimise and guard against negative impacts in an important catchment area.	A hierarchy approach will be implemented to mitigate potential impacts, therefore the 100 meter buffers will be implemented to prevent any disturbance.	
X	20 March 2020	33 Accordingly, it is submitted that these statements in respect of mitigation are meaningless.	The non-invasive phase of the prospecting activities, including the geophysical survey	

				<p>to be undertaken, will determine which of the drilling sites initially identified are feasible for prospecting, taking into consideration the environmental buffers generated as part of this report. Ground truthing of individual site sensitivity will be conducted once the feasible drill site locations have been established. Preference will be given to sites that have been disturbed by anthropological activities.</p> <p>A suitably qualified Environmental Control Officer (ECO) will be appointed to check the feasible sites prior to commencement of drilling to verify any fatal flaws to prevent impacts on sensitive environmental features.</p>	
			Biodiversity		
	X	20 March 2020	<p>34 The BAR notes (on page 33) that the following fall within the proposed prospecting area:</p> <p>34.1 Ngoma Mistbelt Grassland and Forest threatened ecosystem covers a large portion of the site, but most of the area has been transformed by forestry; and</p> <p>34.2 certain areas are classified as critical biodiversity areas ("CBAs") (both optimal and irreplaceable).</p>	<p>The comment is noted. The sensitivity of the area has been documented in the BAR.</p> <p>It should be emphasised that the individual drill sites will cover approximately 300m² (0.03 ha or 15x20 meters). The application area covers 7 900 ha and the maximum total area that will be disturbed by the prospecting activities will cover approximately 5.9 hectares with all the drill sites combined.</p> <p>Therefore only 0.06 % of the entire area may potentially be disturbed. The drilling operations will focus, as far as possible, on areas that have been already disturbed by anthropogenic activities. Sensitive areas such as ridges (as stipulated in the EMPr) will be avoided.</p>	Appendix 5 – EMPr Project description
	X	20 March 2020	<p>35 Recommendations in the BAR are made to the effect that that no activities take place within irreplaceable CBAs, nothing is said in respect of the</p>	<p>Ground truthing of individual site sensitivity will be conducted once the feasible drill site</p>	

			optimal CBAs (i.e. no mitigation whatsoever is proposed).	locations have been established. An Environmental Control Officer (ECO) will be appointed to ensure that no protected plant species are removed. No-go areas will be determined by the buffers already established as well as by the qualified ECO.	
X	20 March 2020		<p>36 Again, the Screening Report identifies the proposed prospecting area as an area of very high aquatic biodiversity importance (page 11) and high sensitivity in respect of animal and plant species present in the area (pages 10 and 15.) Accordingly, the Screening Report calls for the relevant specialist studies to be done (i.e. terrestrial and aquatic biodiversity impact assessments). Such assessments are required to understand the fauna and flora which may be, or are, present and to determine what the impacts of the proposed prospecting may be on the affected species.</p> <p>37 These specialist studies have not been conducted.</p> <p>38 Our client submits that BAR is defective on this basis alone and it would be impossible to purport to include mitigation and management measures when impacts have not been assessed. In addition, our client points out that absolutely no measures have been put in place in respect of optimal CBAs.</p>	<p>The areas covered by the drill sites will be kept to a minimum especially in densely vegetated areas.</p> <p>The following mitigation has been included to minimise impacts on biodiversity.</p> <ul style="list-style-type: none"> - Preference should be given to already disturbed areas, if possible. - No-go areas to be identified by the ECO. - No prospecting to be conducted on ridges or valleys. - Environmental awareness training of all employees responsible for drilling. - Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. - No activities to be conducted within the 100m buffer zones around water courses. - Site selection aimed at minimising disturbance to natural vegetation. 	
			Air Quality and Noise		
X	20 March 2020		<p>39 The statement made by the EAP on page 34 of the BAR, that the air quality is good is again baseless; there is absolutely nothing to support this statement.</p> <p>40 The same applies in respect of noise. As mentioned above, the Screening Report directed that a noise impact assessment be carried out. The fact</p>	It is not anticipated that the drilling operations will result in noise or air quality impacts. Appropriate buffers will be established from residential units.	N/A

			that this was not conducted is again a fatal flaw in the BAR.		
			Archaeological and cultural		
X	20 March 2020		41 At page 34 of the BAR it states as follows: "It is possible that some graves and graveyards occur in the general area. It is likely that some historical buildings may occur in the area from the site survey. 50m buffers must be established around the sites." In addition, the table at page 65 of the BAR reflects various unknowns, as no ground truthing or specialist studies have been conducted.	<p>The non-invasive phase of the prospecting activities, including the geophysical survey to be undertaken, will determine which of the drilling sites initially identified are feasible for prospecting, taking into consideration the environmental buffers generated as part of this report. Ground truthing of individual site sensitivity will be conducted once the feasible drill site locations have been established. Preference will be given to sites that have been disturbed by anthropological activities.</p> <p>Any heritage sites will be avoided and 50m buffers will be implemented if such resources are detected by the qualified ECO.</p>	
X	20 March 2020	42 Yet again the Screening Report states that an archaeological and cultural and heritage impact assessment is required. If one has regard to the map on page 12 of the Screening Report, it is clear that the proposed prospecting area contains large areas of medium and high archaeological and cultural heritage sensitivity due, among others, to the fact that the proposed prospecting area falls within 500m of a heritage site, within 1km of a protected area and within a mountain or ridge. None of these impacts have been assessed. Accordingly, it is unclear where the buffers will be placed, and it is also unclear whether a 50m buffer is sufficient.			
X	20 March 2020	43 It is submitted that the BAR is defective on this basis alone.			
X	20 March 2020		44 The Screening Report identified agriculture to be of very high sensitivity (i.e. the highest sensitivity rating). No assessment has done in respect of how the proposed activities will impact on the agricultural potential of, or current agricultural activities taking place within, the proposed prospecting area.	<p>The drilling operations will focus on areas already disturbed. The drilling operations will avoid cultivated land such as crops, plantation and orchards and any other farming infrastructure such as buildings. Where economic land use such as crops or plantations will be affected, the land owners will be consulted prior to the commencement of drilling. Compensation for potential disturbance of crops will be discussed as part of the consultation.</p>	Appendix 5 - EMPr
X	20 March 2020		45 Without this specialist study required by the Screening Report, the BAR is fatally flawed.		
			General		
X	20 March 2020		46 The EAP appears to look for a way around complying with the legal requirements. That this is so appears from a statement on page 45 of the BAR to the effect that the environmental control officer,	<p>This comments is noted.</p> <p>EXM has more than sufficient experience and expertise to ascertain that the EIA</p>	

		appointed once authorisation has been obtained, will consider the various aspects prior to approving drilling locations. This is not, and can never be, a proper interpretation of the law. The sensitivities must properly be considered at the outset in order holistically to ascertain the viability of the project taking all risks into account.	process is conducted in accordance with the relevant legal requirements and to ensure that the outcome of the baseline information and impact assessment is an accurate representation of the nature of the site and the proposed activities.	
		Socio-economic impact assessment		
X	20 March 2020	47 This assessment barely scratches the surface. Job creation will be low (page 64), there is also no indication of the community's reliance on the affected land and water resources and how this may be affected by the proposed prospecting (and potentially future mining) activities.	The application only pertains to a prospecting right. A separate EIA and public consultation process must be undertaken if a mining right application is ever undertaken which will deal with associated impacts and concerns. Social contribution of the project will mainly relate to the purchasing of local goods and services such as accommodation, food, fuel etc.	
		48 Again, a proper assessment in this regard is required.		
		Need and desirability		
X	20 March 2020	49 Under this heading, and on page 15 of the BAR, the EAP refers to future mining operations when considering the need and desirability of the proposed prospecting activities. Indeed, the possible future mining operations are considered in respect of socio-economic arguments put forward in favour of mining. Why then are the impacts of mining on the environment, as well as the negative impacts on those reliant on the land and water resources that may be affected, not considered at all elsewhere in the BAR?	The application only pertains to a prospecting right. A separate EIA and public consultation process must be undertaken if a mining right application is ever undertaken which will deal with associated impacts and concerns. The impact assessment however has looked at future social impacts due to anticipated mining activities.	
X	20 March 2020	50 Our client submits that this is a fatal flaw and that the BAR should be revised to consider the potential negative impacts of future mining activities on affected communities and their environmental resources.		
		Potential listed activities that may be triggered and have not been identified		
X	20 March 2020	51 Kindly consider the following listed activities set out in Listing Notice 1 of 2014 (GNR 983) which may be applicable in addition to those activities identified: 51.1 Activity 12; and 51.2 Activity 19.	No activities will be conducted in water courses – 100 meter buffers will be implemented.	N/A

			Financial Provision		
X	20 March 2020		<p>52 Given that the impacts of the activities are in fact unknown due to the lack of specialist input, it follows that the financial provision cannot be said to be accurate.</p> <p>53 Furthermore, it does not follow, as contended in the BAR, that because only six boreholes will be disturbed at any given time, financial provision can be made only in respect of those 6. On the contrary, the applicant is required to put up financial provision for intended disturbance or the entire project.</p> <p>54 The financial provision calculations must therefore be reworked, and the proposed financial provision increased.</p>	<p>According to the Final Rehabilitation and Closure Plan (Appendix 6), Ilahle plans to implement concurrent rehabilitation as the prospecting activities continue which will reduce future risks at the prospecting areas.</p> <p>Concurrent rehabilitation will be based on the principle that no more than six boreholes will be active at any time. Once Ilahle has finalised drilling at two boreholes, they will commence with rehabilitation and move on to the next two sites. Once drilling is finalised at these sites the operations will move to the next two sites and rehabilitation will commence on the previous two sites after the first two sites are finalised.</p> <p>Therefore, the cost estimates were calculated for the rehabilitation of six boreholes which will be disturbed at any one time.</p> <p>The cost estimate will be updated annually in terms of the Financial Provision Regulations of 2015 (GN R.1147 of 2015), published in terms of the National Environmental Management Act (No. 107 of 1998) and will be based on the progress of concurrent rehabilitation.</p>	Appendix 6 – final rehabilitation plan
			Environmental Management Plan		
X	20 March 2020		55 No comment on the EMPr has been provided, this is because without the relevant studies no appropriate management measures can be determined as the impacts themselves have not properly been determined.	The mitigation measures focus on the prevention of potential impacts i.e. establishment of buffers and the mitigation measures are sufficient to prevent or minimise potential environmental impacts.	
			Impact of the proposed activities on our clients' business Forest Stewardship Council Requirements		
X	20 March 2020		56 Our clients are committed to responsible environmental management and its plantations have	The document has been reviewed and will be communicated to the applicant for their	

		international certification under the Forest Stewardship Council ("FSC"), which requires that it strictly controls all activities on its land in an environmentally responsible and lawful manner. To be certified means that all generic forestry activities have been classified in a risk assessment matrix developed in the FSC Forest Management standard for South Africa, where the impact of the forestry activities on the environmental values have been assessed. FSC is a performance-based standard which requires that our clients ensure compliance with FSC Principles and Criteria. Accordingly, our clients must demonstrate that other persons or entities that are permitted on our clients' property does so for the benefit of the management unit in compliance with the requirements of the FSC Principles and Criteria. Our clients' implement sustainable forest management practices, to ensure both environmental preservation and the long-term sustainability of its business.	<p>considerations. As previously mentioned the drilling operations will be conducted in accordance with the requirements of the EMPr and relevant environmental legislation. The sites will cover a very small footprint (5.9 hectares with all the drill sites combined) in relation to the application area which covers 7900 hectares).</p> <p>The drilling operations will focus on areas already disturbed. The drilling operations will avoid cultivated land such as crops, plantation and orchards and any other farming infrastructure such as buildings. Where economic land use such as crops or plantations will be affected, the land owners will be consulted prior to the commencement of drilling.</p> <p>The drilling operations will focus, as far as possible, on areas that have been already disturbed by anthropogenic activities. Ridges (as stipulated in the EMPr) will be avoided. A mitigation has been added to the EMPr to limit disturbance in sensitive or densely vegetated areas and no vegetation clearance except for borehole access point in these sites. The seed mix used for rehabilitation must take into account the dominant plant species of the area.</p>	
X	20 March 2020	57 The impacts of the proposed activities on our client's FSC certification has not been considered. Such consideration is required and for these purposes we have attached the FSC performance standards. We have also attached, for your convenience, the related management system that NCT Forestry Co-operative Limited requires its members to follow. If you use the FSC standards directly you would need to work through the document (there are 10 principles which inform 100+ criteria and these criteria are developed into 200+ indicators against which NCT is audited). NCT's members generally find it easier to follow the NCT management system which we have included for convenience.		
X	20 March 2020	<p>Fire insurance</p> <p>58 Our client requires that the applicant holds public liability insurance to cover, among others, the spread of fire, in the sum of fifty million Rand.</p>	<p>This comment is noted and will be communicated to the applicant. A fire emergency procedure has been included in Section 1.2.1 of the EMPr. The following mitigation has been included in the EMPr.</p> <ul style="list-style-type: none"> - Drilling code of conduct to include measures for the prevention of fires. 	Appendix 5 - EMPr

				<ul style="list-style-type: none"> - Emergency equipment and procedures for fire fighting to be in place. - Adhere to emergency procedures. 	
X	20 March 2020	<p>Drilling sites</p> <p>59 Page 13 of the BAR contains the drill site layout plan. It indicates that 625m² will be required per drill hole. Given the large surface area required, our clients' tree planting spacing will not accommodate any drilling within timber compartments and drill sites must therefore take this into account.</p>		A drill site will cover approximately 300m ² .	Project description – Page 13
X	20 March 2020	<p>60 In addition, our clients' properties contain many open areas which are managed as conservation sites, these areas must be avoided by any drilling activities. See attached map marked "B".</p>		<p>The comment is noted and the map has been reviewed.</p> <p>It should be emphasised that the individual drill sites will cover approximately 300m² (0.03 ha or 15x20 meters). The application area covers 7 900 ha and the maximum total area that will be disturbed by the prospecting activities will cover approximately 5.9 hectares with all the drill sites combined.</p> <p>Therefore only 0.06 % of the entire area may potentially be disturbed. The drilling operations will focus, as far as possible, on areas that have been already disturbed by anthropogenic activities. Sensitive areas such as ridges (as stipulated in the EMPr) will be avoided.</p> <p>The areas covered by the drill sites will be kept to a minimum especially in densely vegetated areas.</p> <p>The following mitigation has been included to minimise impacts on biodiversity.</p> <ul style="list-style-type: none"> - Preference should be given to already disturbed areas, if possible. 	Appendix 5 - EMPr

				<ul style="list-style-type: none"> - No-go areas to be identified by the ECO. - No prospecting to be conducted on ridges or valleys. - Environmental awareness training of all employees responsible for drilling. - Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. - No activities to be conducted within the 100m buffer zones around water courses. - Site selection aimed at minimising disturbance to natural vegetation. 	
	X	20 March 2020	<p>Conclusion</p> <p>61 Our client submits that due to the lack of necessary information, particularly in the form of ground-truthing and specialist reports, the BAR in its current form fails to meet the legal requirements as it is not an accurate reflection of the impacts that the proposed activities are likely to have. The financial provision in turn cannot be viewed as accurate since the true impacts remain unknown.</p>	This comment is noted. Please refer to the responses above.	
Nicole Limberis-Ritchie	X	14 September 2020	1 As you are aware, we represent NCT Forestry Co-operative Limited and Forest Resources (Pty) Limited ("our clients").	Noted	N/A
Nupen Staude de Vries Incorporated on behalf of NCT Forestry Co-Operative Limited	X	14 September 2020	2 NCT Forestry Co-operative Limited is the registered owner of Tygerskloof Portion 2 and Spitzkop Portion 3; and Forest Resources (Pty) Limited owns Wonderfontein Portion 3 and Spitzkop Portions 2, 4 – 12, 15, 17 and 19 ("the Properties"). The Properties fall within the proposed project area and as such our clients duly registered as interested and affected parties in respect of the application for environmental authorisation apparently submitted by Ilahle 4 KZN Limited ("Ilahle") on 30 August 2019 ("the Application") under Department of Mineral Resources	Noted	N/A

			and Energy (“DMRE”) reference KZN 30/5/1/1/2/10921 PR.		
X	14 September 2020		3 Our clients submitted comments in respect of the Application on 20 March 2020 during the first public participation process (“Previous Comments”). The draft Basic Assessment Report (“BAR”) was thereafter apparently revised to incorporate certain comments and to include a comments and responses table. A further public comment period was then opened from 14 August 2020 to 14 September 2020.	Noted.	N/A
X	14 September 2020		4 Our clients have elected to submit comments during this further review period because they are of the view that the responses to the Previous Comments are largely inadequate and the concerns which they raised have not sufficiently been incorporated into the revised Basic Assessment Report (“BAR”).	Noted.	N/A
X	14 September 2020		Procedural irregularities 5 The EAP has advised that the application was submitted on 30 August 2019 ¹ but that the acceptance letter, which apparently dictated the procedural requirements and timeframes for the basic assessment process, is dated 1 November 2019 (“Acceptance Letter”).	The application was submitted on the 30 th of August 2019 and the acceptance letter is dated 1 November 2019 as communicated.	N/A
X	14 September 2020		6 On 1 September 2020, we addressed correspondence to yourself in which we requested a copy of the Acceptance Letter. On 7 September 2020 you replied and advised that you have requested the Applicant to provide us with a copy of the Acceptance Letter.	The information required by the National Environmental Management Act has been provided to the I&APs for comment. The application would automatically be rejected by the Competent Authority if the timeframes are not adhered to. The Department has acknowledged the request to extend the Basic Assessment (BA) process and all reports must be submitted on or before the 15 th of September (as per email from CA). The application has not lapsed.	N/A
X	14 September 2020	7 Given that comments are due on Monday 14 September 2020, on 9 September the writer called and advised you that a copy of the Acceptance Letter was required to ascertain whether or not the Application had lapsed. You responded that it was the DMRE’s job to ensure that the Application met the prescribed timeframes and advised that extensions had been granted. However, you similarly refused to provide us with a copy of such extension letters.	N/A		
X	14 September 2020		8 Regulation 40(2) of the Environmental Impact Assessment Regulations, 2014 provides that “the public participation process contemplated in this regulation must provide access to all information that		N/A

			reasonably has or may have the potential to influence any decision with regard to an application unless access to that information is protected by law.” Given that an application lapses if a timeframe has not been met, it is imperative that interested and affected parties are provided with information which may impact on such timeframes.		
X	14 September 2020	6	Accordingly, the public participation process is defective in that our clients, who are registered interested and affected parties, have not been provided with all information as required.		N/A
X	14 September 2020	7	In our clients’ view, and in the absence of information to the contrary, the BAR has not been submitted in the required timeframes and the Application has thus lapsed.		N/A
X	14 September 2020		<p>Failure to include specialist studies</p> <p>8 The Screening Report identifies the following 9 specialist studies as being necessary due to the sensitivities detected within the proposed prospecting area:</p> <p>8.1 Agricultural impact assessment; 8.2 Archaeological and cultural heritage impact assessment; 8.3 Palaeontology impact assessment; 8.4 Terrestrial biodiversity impact assessment; 8.5 Aquatic biodiversity impact assessment; 8.6 Noise impact assessment; 8.7 Radioactivity impact assessment; 8.8 Plant species assessment; and 8.9 Animal species assessment.</p>	These comments have been addressed in the previous responses provided. Refer to Appendix 2.6 for the full objections/comments raised.	Page 20 of the BAR: Summary of issues raised by I&APs Appendix 2.6 proof of comments received.
X	14 September 2020	9	Not one of these studies was conducted and the EAP persists in his failure to provide an adequate motivation as to why they were deemed unnecessary. Indeed, absolutely no ground truthing was conducted to inform the EAP’s statement at page 57 of the BAR in which he states as follows: “ No specialist studies were undertaken as the EAP was confident in the status of the proposed site. The project team consists of qualified environmental assessment practitioners that have sufficient experience to inform the report on potential impacts and the baseline environment. The EAP also	These comments have been addressed in the previous responses provided. Refer to Appendix 2.6 for the full objections/comments raised.	Page 20 of the BAR: Summary of issues raised by I&APs Appendix 2.6 proof of comments received.

			considered the temporary nature and limited footprint of the proposed project drill sites.”		
X	14 September 2020		10 With respect, this bald and unsubstituted statement holds no weight, and the EAP and his team’s apparent experience is no substitute for ground truthing of a particular site, especially where the site has been identified as having various significant sensitivities.	These comments have been addressed in the previous responses provided. Refer to Appendix 2.6 for the full objections/comments raised.	Page 20 of the BAR: Summary of issues raised by I&APs Appendix 2.6 proof of comments received.
X	14 September 2020		<p>11 In the EAP’s responses to our clients’ concern in the revised BAR, the EAP states as follows:</p> <p>“The non-invasive phase of the prospecting activities, including the geophysical survey to be undertaken, will determine which of the drilling sites initially identified are feasible for prospecting, taking into consideration the environmental buffers generated as part of this report. Ground truthing of individual site sensitivity will be conducted once the feasible drill sites have been established. Preference will be given to sites that have been disturbed by anthropological activities.</p> <p>No specialist studies needed as the implementation of the mitigation measures contained in the EMPr will successfully avoid and mitigate potential impacts. The focus will be to prevent impacts on sensitive areas and to implement a range of mitigation measures that will minimise potential other impacts.</p> <p>A suitably qualified Environmental Control Officer (ECO) will be appointed to check the feasible sites prior to commencement of drilling to verify any fatal flaws to prevent impacts on sensitive environmental features.” [Underlining provided.]</p>	These comments have been addressed in the previous responses provided. Refer to Appendix 2.6 for the full objections/comments raised.	Page 20 of the BAR: Summary of issues raised by I&APs Appendix 2.6 proof of comments received.
X	14 September 2020		<p>12 The EAP’s response entirely fails to address our clients’ concern.</p> <p>12.1 It is clear from the response that no ground truthing whatsoever will be done by the necessary specialists prior to a decision on the Application being taken by the DMRE and accordingly prior to the proposed environmental authorisation (“EA”) being granted (or refused). This is simply unacceptable in circumstances where the Screening Report has</p>		Page 20 of the BAR: Summary of issues raised by I&APs Appendix 2.6 proof of comments received.

			identified that the proposed prospecting area is environmentally sensitive and requires nine (9) different specialist studies to determine the feasibility of the proposed project in line with these sensitivities. The decision maker simply will not have the requisite information required to take a decision;		
X	14 September 2020		12.2 given that no specialist studies have been conducted, the accuracy with which the environmental buffers have been determined is questionable. For example, the EAP states that buffers will be placed around wetlands, but without a wetland delineation study, how will these buffers adequately be determined given that a desktop screening is only a guide? In this regard, the EAP refers our clients to "Figure 14" which does not exist in the revised BAR. Insofar as the EAP intends to refer to "Figure 4" at page 77, we note that the entire proposed prospecting area contains numerous NEPA wetlands and watercourses. If these are to be avoided proper delineation must be completed through specialist studies, a desktop study is simply insufficient, as is confirmed by the screening report;	These comments have been addressed in the previous responses provided. Refer to Appendix 2.6 for the full objections/comments raised.	Page 20 of the BAR: Summary of issues raised by I&APs Appendix 2.6 proof of comments received.
X	14 September 2020		12.3 it is entirely unclear how an Environmental Management Programme ("EMPr") can contain mitigation measures in circumstances where possible impacts have not adequately been identified and assessed through the requisite specialist studies;	These comments have been addressed in the previous responses provided. Refer to Appendix 2.6 for the full objections/comments raised.	Page 20 of the BAR: Summary of issues raised by I&APs Appendix 2.6 proof of comments received.
X	14 September 2020		12.4 the EAP suggests that the Environmental Control Officer ("ECO") will be responsible, after the grant of the EA, to determine no go areas and to identify fatal flaws. ² However, the role of an ECO is not to undertake ex post facto studies once the activities in question have been authorised, but rather to ensure compliance with the conditions of the EA, and which would include ensuring that the sensitivity on the ground is in line with the findings of the environmental impact assessment as the activities progress, but not to the degree proposed by the EAP.	These comments have been addressed in the previous responses provided. Refer to Appendix 2.6 for the full objections/comments raised.	Page 20 of the BAR: Summary of issues raised by I&APs Appendix 2.6 proof of comments received.
X	14 September 2020		13 Our clients therefore persist in their submission that the BAR is fatally flawed as it lacks the required specialist studies. As set out above, the EAP has	This comment is noted	N/A

			provided no adequate justification as to why none of the identified studies should be undertaken.		
X	14 September 2020		<p>Environmental sensitivities</p> <p>14 Our clients repeat paragraphs 22 to 46 of the Previous Comments.</p> <p>15 The proposed project will take place in an area with:</p> <p>15.1 Very high agricultural sensitivity;</p> <p>15.2 high sensitivity in terms of animal species present;</p> <p>15.3 very high aquatic sensitivity;</p> <p>15.4 high archaeological sensitivity;</p> <p>15.5 high palaeontology sensitivity;</p> <p>15.6 high plant species sensitivity; and</p> <p>15.7 very high terrestrial sensitivity,</p> <p>yet the EAP has decided that no specialist studies are required because the EMPr includes adequate safeguards to mitigate these impacts; the EAP is suitably qualified and an ECO will be appointed to check the feasible sites prior to commencement of drilling to verify any fatal flaws to prevent impacts on sensitive environmental features. For reasons detailed above, this is no answer.</p>	These comments have been addressed in the previous responses provided. Refer to Appendix 2.6 for the full objections/comments raised.	Page 20 of the BAR: Summary of issues raised by I&APs Appendix 2.6 proof of comments received.
X	14 September 2020		<p>Final Rehabilitation, Decommissioning and Mine Closure Plan - Appendix 6</p> <p>16 In the Previous Comments our clients advised the EAP that the incorrect catchment had been assessed. Our clients note that while the correct Mfolozi catchment has now been referred to in the BAR, the Thukela catchment is still referred to in the Final Rehabilitation, Decommissioning and Mine Closure Plan - Appendix 6 - which renders it defective.</p>	The final Rehabilitation, Decommissioning and Mine Closure Plan has been amended to include the correct Catchment.	Appendix 6
X	14 September 2020		<p>Financial Provision</p> <p>17 We reiterate that the applicant is required to put in place financial provision for intended disturbance of the entire project.</p>	The approval of the Final Rehabilitation and Closure Plan as part of this EA process, will automatically make it mandatory to implement the measures stipulated in the plan.	Appendix 6
X	14 September 2020	<p>18 Although our clients do not concede that it would be lawful to do so, to the extent that financial provision is approved on the basis that only six boreholes will be active and/ or unrehabilitated at any given time, our clients submit that this must be included as a condition of the EA.</p>	The cost estimate will be updated annually in terms of the Financial Provision Regulations of 2015 (GN R.1147 of 2015), published in terms of the National		Appendix 6

	X	14 September 2020	19 The condition should also require that rehabilitation of each borehole is signed off by the competent authority prior to a new borehole being drilled.	Environmental Management Act (No. 107 of 1998) and will be based on the progress of concurrent rehabilitation. Additional resources will have to be made available if the annual update finds that concurrent rehabilitation has not been conducted.	Appendix 6
	X	14 September 2020	20 If the condition is not inserted into the EA, there is no safeguard for the proposal that only six boreholes will be active at any one time and accordingly, the financial provision proposed will be wholly inadequate.	<p>According to the Final Rehabilitation and Closure Plan (Appendix 6), Ilahle plans to implement concurrent rehabilitation as the prospecting activities continue which will reduce future risks at the prospecting areas.</p> <p>Concurrent rehabilitation will be based on the principle that no more than six boreholes will be active at any time. Once Ilahle has finalised drilling at two boreholes, they will commence with rehabilitation and move on to the next two sites. Once drilling is finalised at these sites the operations will move to the next two sites and rehabilitation will commence on the previous two sites after the first two sites are finalised.</p> <p>Therefore, the cost estimates were calculated for the rehabilitation of six boreholes which will be disturbed at any one time.</p>	Appendix 6
	X	14 September 2020	Environmental Management Programme 21 Our clients reiterate that it is nonsensical to be expected to provide comment on an EMP, which talks to the management of environmental impacts in circumstances where the relevant studies have not been undertaken and the impacts are therefore largely unknown.	Mitigation measures stipulated in the EMP focuses on the prevention of impacts and contains sufficient controls to adequately manage the proposed activities in a manner to minimise potential environmental impacts.	N/A
	X	14 September 2020	Impact of the proposed activities on our clients' business Forest Stewardship Council Requirements	These comments have been addressed in the previous responses provided. Refer to Appendix 2.6 for the full objections raised.	<p>Page 20 of the BAR: Summary of issues raised by I&APs</p> <p>Appendix 2.6 proof of comments received.</p>

		22 Our clients repeat paragraphs 56 and 57 of the Previous Submission and continue to await the applicant's response.		
X	14 September 2020	Applicant's response. 23 Our client requires that the Applicant holds public liability insurance to cover, among others, the spread of fire, in the sum of fifty million Rand (R50 000 000). This must be included as a condition of the EA.	This comment is noted and will be communicated to the Applicant.	N/A
X	14 September 2020	Drilling sites 24 Kindly clarify the proposed sites on our clients' Properties where drilling is expected to take place.	Figure 13 (Land Ownership Map) has been updated to include the preliminary borehole sites identified per property.	Figure 13
X	14 September 2020	Conditions 25 In the event that an EA is granted, our clients submit that it is imperative that the following conditions are included in the EA:	<p>The following mitigation measures have been included in the EMPr:</p> <ul style="list-style-type: none"> • Mitigation will entail the use of biodegradable or eco friendly drilling liquid • Buffer zones have been included for residential areas and riparian zones/water courses. • Existing farm tracks will be used as far as possible. • No permanent structures will be established on site. • An access agreement is to be drafted and implemented once the EA has been issued. • The requirements of the Vryheid Fire Protection Association must be adhered to during the prospecting activities, where applicable to the specific activities. 	Appendix 5
X	14 September 2020	25.1 a buffer of 100 meters from riparian zone fire-belts and a buffer of 500 metres from any housing owned or utilised by our clients on the Properties must be in place;		
X	14 September 2020	25.2 no roads or permanent structures (including but not limited to bund walls) may be constructed on the Properties;		
X	14 September 2020	25.3 the Applicant must register with the Council for Geoscience and provide our clients, as landowners, with a copy of such results and proof of such registration;		
X	14 September 2020	25.4 the Applicant shall comply with the Forest Stewardship Council requirements in respect of the Properties;		
X	14 September 2020	25.5 all drilling lubricants used by the Applicant, its representatives and contractors must be biodegradable; and		
X	14 September 2020	25.6 the Applicant may not drill on predicted orange or red fire danger index days or during the fire season as determined by the Vryheid Fire Protection Association.		
X	14 September 2020	25.7 The above conditions, amongst others are, also contained in an access agreement which must be		

			signed upon the granting of the EA. A draft copy is attached for consideration.		
	X	14 September 2020	Conclusion 26 Our clients submit that due to the lack of necessary information, particularly in the form of ground-truthing and specialist reports, the BAR in its current form fails to meet the legal requirements as it is not an accurate reflection of the impacts that the proposed activities are likely to have. The financial provision in turn cannot be viewed as accurate since the true impacts remain unknown.	The comments are noted.	N/A
Lawful occupier/s of the land		-	-	-	
	X	-	No comments received	No comments received	-
Landowners or lawful occupiers on adjacent properties	X				
RSA Government	X	-	No comments received	No comments received	-
Sihlengeni Plase Edms Bpk					
Esihlengeni Trust-Trustees					
Impumelelo Community Trust					
Empangisweni Trust-Trustees					
Imfolozi Timbers					
Bloswetea Proprietary Limited					
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA e					
Transnet	-	-	-	-	-
Eskom	-	-	-	-	-
Communities					
-	-	-	-	-	
Dept. Land Affairs					
Land Restitution Commission	X		Dear Sir/Madam REQUEST INFORMATION ON PROPERTY: LAND CLAIM	The traditional authority Prince Sibuso Zulu has been contacted to introduce the project and to obtain comments. Further consultation by the Applicant will be conducted as required.	Appendix 2.7

		<p>We acknowledge receipt of your enquiry received on 30 April 2020 and advise that our records indicate that no claims for restitution in terms of the provisions of the Restitution of Land Rights Act, 22 of 1994 (as amended) have been lodged in respect of the properties described as;</p> <ol style="list-style-type: none"> 1. Portion 4, 5 and 7 (Whole Area) of the Farm Wonderfontein No. 560; and 2. Portions 2-17 of the Farm Spitzkop No. 70. <p>Whilst great care is taken to verify the accuracy of the information regarding all claims, the Regional Land Claims Commission will not be held responsible for any damage or loss suffered as a result of information furnished in this regard as there are claims lodged with the Commission which are not yet captured in our database as they are not yet published in the relevant government gazette.</p> <p>However, our records indicate that claims have been lodged on the properties described as:</p> <ol style="list-style-type: none"> 1. Portion 2 and the Remainder (Whole Area) of the Farm Tygerskloof No. 173; 2. Whole Area of the Farm Welteverede 540 (Ptn 1 of/arm claimed); 3. A Portion of the Farm Demoina No. 830; 4. A Portion of the Farm Tierkloof 829, Portions 4-7, 13, 16 (whole farm claimed); 5. Portion 3 of the Farm Wonderfontein No. 560; and 6. Whole Area of the Farm Mariantha No. 845. <p>These properties fall under the Bathenjini Community claim, the Bhukhubu Community claim and the Empangisweni Community claim respectively. The notice of the Bathenjini claim was subsequently amended to exclude Portion 3 of the</p>		
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			Farm Wonderfontein No. 560. Please find attached the relevant gazette notices for ease of reference.		
Traditional Leaders					
-	-	-	-	-	-
Dept. Environmental Affairs					
Department of Economic Development, Tourism and Environmental Affairs	X	-	No comments have been received	No comments have been received	-
A Gamede	X	-	-	-	-
Other Competent Authorities affected					
Department of Agriculture, Forestry and Fisheries (DAFF)	X	24 February 2020	<p>Attention: Mr. Trevor Hallat</p> <p>DRAFT BASIC ASSESSMENT REPORT (BAR) AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT (EMPR) FOR PROSPECTING RIGHT APPLICATION ILAHLE PORTION 2 AND THE REMAINDER (WHOLE AREA) OF THE FARM TYGERSKLOOF NO. 173-HU, A PORTION OF THE FARM DEMOINA NO. 830-HU, PORTION 3, 4, 5 AND 7 (WHOLE AREA) OF THE FARM WONDERFONTEIN NO. 560-HU, WHOLE AREA OF THE FARM MARIANTHA NO. 845-HU, WHOLE AREA OF THE FARM WELTEVEREDE 540-HU, A PORTION OF THE FARM TIERKLOOF 829- HU, PORTIONS 4-7, 13, 16, PORTIONS 2-17 AND 19 OF THE FARM SPITZKOP NO. 70-HU, ZULULAND DISTRICT MUNICIPALITY, KWAZULU- NATAL.</p> <p>This letter serves as a notice of receipt for the above document received on the 21 February 2020. Kindly note that the document will be processed within 30 days from the date of receipt, provided that all requested information is submitted to the department timeously. Should any further information be required, please do not hesitate to contact this office.</p>	No further comments received.	

Department of Agriculture, Forestry and Fisheries (DAFF)	X	14 July 2020	<p>The Department of Agriculture, Forestry and Fisheries (DAFF) appreciates the opportunity to register as an interested and affected party for the above-mentioned project. DAFF, through the sub-directorate Forestry Regulations and Support, is the authority mandated to implement the National Forest Act, (Act No. 84 of 1998) by regulating the use of natural forests¹ and protected</p> <p>1 1 "Natural forest" means a group of indigenous trees-</p> <p>(a) whose crowns are largely contiguous; or</p> <p>(b) which have been declared by the Minister to be a natural forest under section 7(2); (xxviii)</p> <p>tree species in terms of the said Act.</p> <p>With reference to the above-mentioned document received (dated 21/02/2020), the proposed project wishes to prospect minerals such as coal and pseudocoal on various farms located within the Zululand Magisterial District, KwaZulu-Natal.</p> <p>The proposed site is located approximately 41 km east of Vryheid and the study area is found within three vegetation types, including Southern Misbelt Forest, Northern Zululand Misbelt Grassland and Northern Zululand Sourveld. The site area is dominated by wooded grassland, pure sour grasslands and a few dense bushveld thickets, however, the area is woody and grassy with no natural forest(s) or protected tree species in terms of the NFA. Therefore, it is brought to your attention that DAFF's concerns pertain to the potential of the proposed project impacting on existing natural forest(s) as well as protected tree species in terms of the NFA. Therefore the department recommend that thickest within the study area should be delineated and not disturbed. Furthermore, the Department has no objections towards the proposed development.</p>	<p>The sensitivity of the area has been documented in the BAR.</p> <p>It should be emphasised that the individual drill sites will cover approximately 300m² (0.03 ha or 15x20 meters). The application area covers 15 981 ha and the maximum total area that will be disturbed by the prospecting activities will cover approximately 12.84 hectares with all the drill sites combined. Therefore only 0.08 (0.1) % of the entire area may potentially be disturbed.</p> <p>The drilling operations will focus, as far as possible, on areas that have been already disturbed by anthropogenic activities. Ridges (as stipulated in the EMP_r) will be avoided. A mitigation has been added to the EMP_r to limit disturbance in sensitive or densely vegetated areas and no vegetation clearance except for borehole access point in these sites. The seed mix used for rehabilitation must take into account the dominant plant species of the area.</p> <p>An Environmental Control Officer (ECO) will be appointed to ensure that no protected plant species are removed.</p> <p>The areas covered by the drill sites will be kept to a minimum especially in densely vegetated areas.</p>	EMP _r
AbaQulusi Local Municipality	X	-	No comments have been received	No comments have been received	-
Zululand District Municipality	X				

Department of Water and Sanitation (KZN)	X				
AMAFA KZN Heritage	X				
Land Restitution Commission	X				
	X				
KZN Conservancies	X				
Head of Department Kwazulu Natal?	X				
Ezemvelo KZN Wildlife	X				
KZN Department of Agriculture and Environmental Affairs	X				
DAEARD	X				
Assistant Director?	X				
Department of Human Settlement	X				
Department of Cooperative Governance and Traditional Affairs	X				
Department of Rural Development & Land Reform	X				
<u>OTHER AFFECTED PARTIES</u>					
-	-	-	-	-	-
<u>INTERESTED PARTIES</u>					

iii. **The Environmental attributes associated with the alternative**
(1) Baseline Environment
(a) Type of environment affected by the proposed activity.

Physical Environment

General Location:

The prospecting right area covers approximately 7 900 ha in extent. The proposed Prospecting Right is located within the AbaQulusi Local Municipality and is located 41 km east of Vryheid in KwaZulu-Natal. The Prospecting Right application has been submitted to prospect for coal and pseudocoal in respect to the following properties:

- Portion 2 and the Remainder (Whole Area) of the Farm Tygerskloof No. 173- HU
- A Portion of the Farm Demoina No. 830-HU
- Portion 3, 4, 5 and 7 (Whole Area) of the Farm Wonderfontein No. 560-HU
- Whole Area of the Farm Mariantha No. 845-HU
- Whole Area of the Farm Welteverede 540-HU
- A Portion Of the Farm Tierkloof 829-HU
- Portions 4-7, 13, 16, Portions 2-17 of the Farm Spitzkop No. 70-HU

Climate

The project area has an altitude of approximately 1154 metres above sea level. The project area falls in a summer rainfall region with an expected average rainfall of 589mm. Thunderstorms and showers constitute the majority of the summer rainfall. The annual average high in terms of temperature is 21°C, while the annual average low is 12.8°C. Refer to Figure below.

As illustrated in Figure 4, precipitation occurs as showers and thunderstorms and falls mainly from September to March with the maximum precipitation occurring in December, and January. Rainstorms are often accompanied by severe lightning, strong winds and hail. The winter months are mostly dry, but the occasional winter shower does happen from time to time.

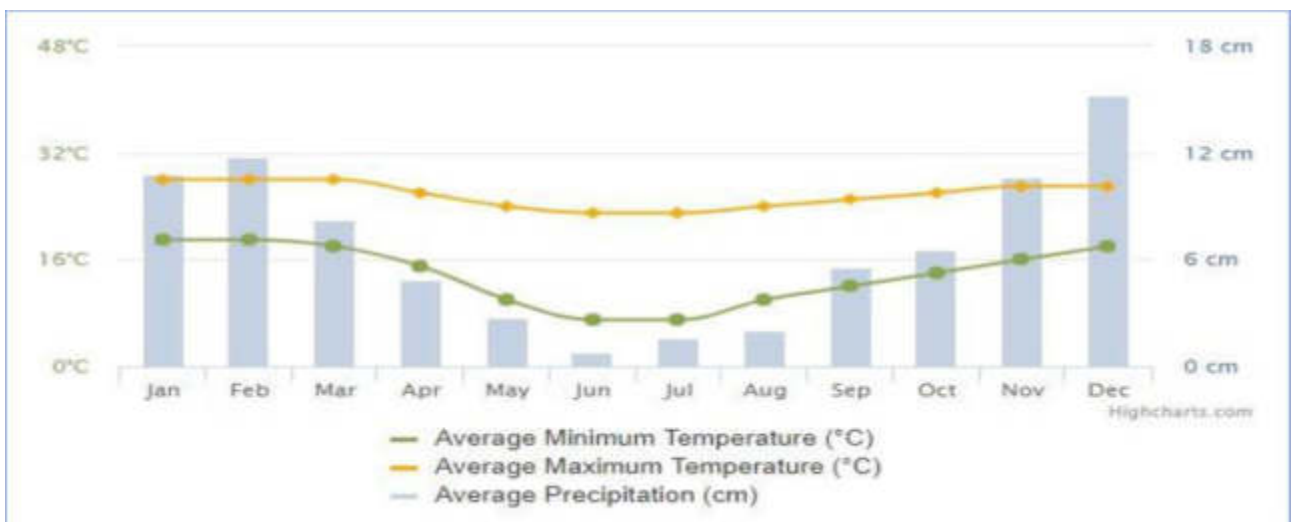


Figure 4: Average monthly Rainfall for the Vryheid area.

Geology:

Regional Geology

The proposed project falls within the bedrock units of the Vryheid Formation which forms part of the Beaufort Group and Karoo Supergroup. These sedimentary rock units have been intruded by Jurassic aged dolerite dykes and sills which are preserved in the southern and western portions of the study site. The Vryheid Formation is represented by dark-brown in the Figure below with subordinate siltstone and sandstone.



Figure 5: Regional Geology

Local Geology

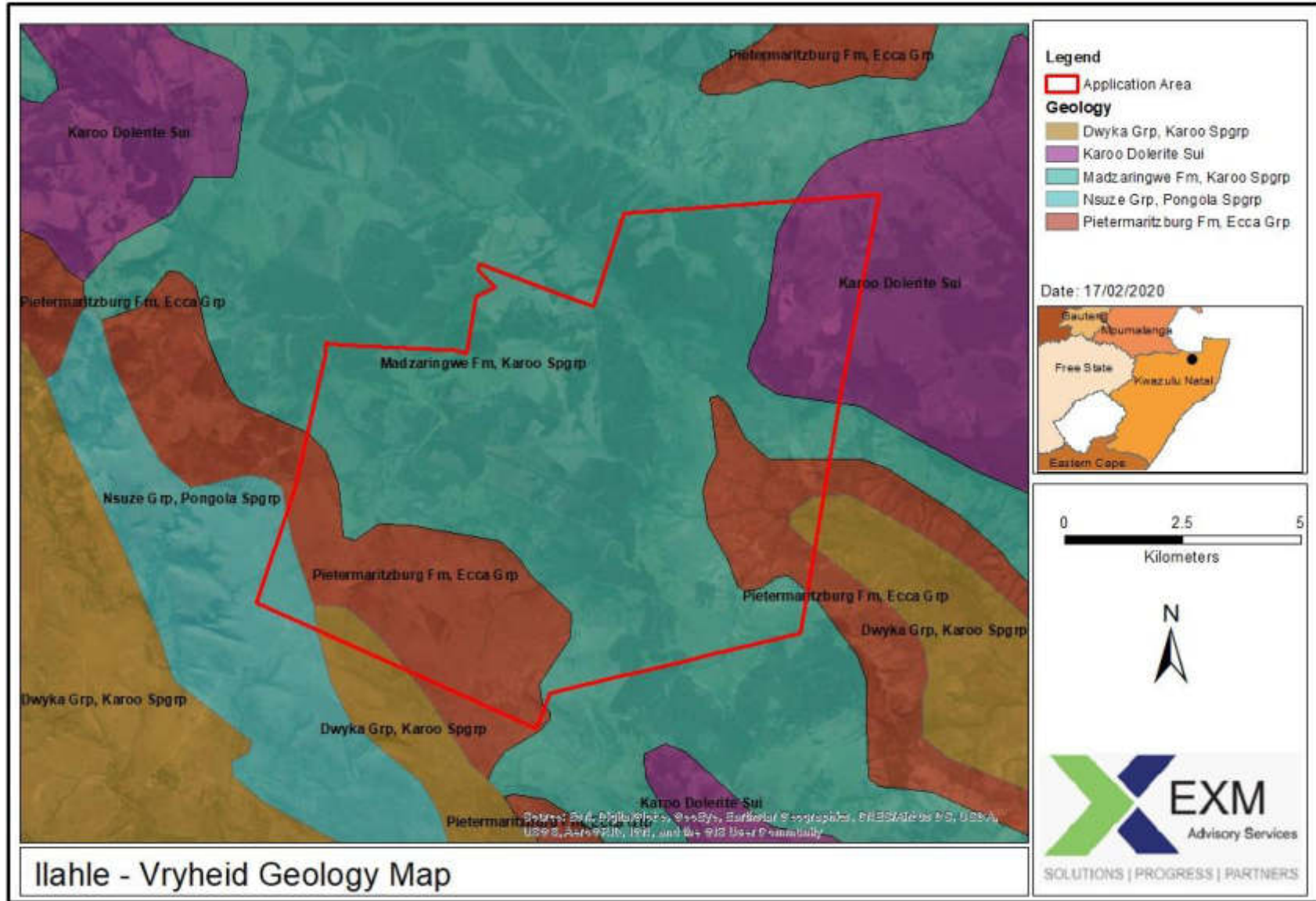


Figure 6: Geology Map

Topography

The study area is mountainous on the north eastern side with flatter areas towards the south western eastern section with natural surface topography ranging from 1330 masl in the plains to 847 masl on the outcrops and mountain ranges. The site is situated on a water divide, the eastern section drains south east and the western section drains south west. The study area has an average slope of 11.8%-12%. The Topography of the study area, shown in **Figure 7**, is typical of a Drakensburg area, with close contouring around the mountain valleys and more flat contouring at the valley bottoms.

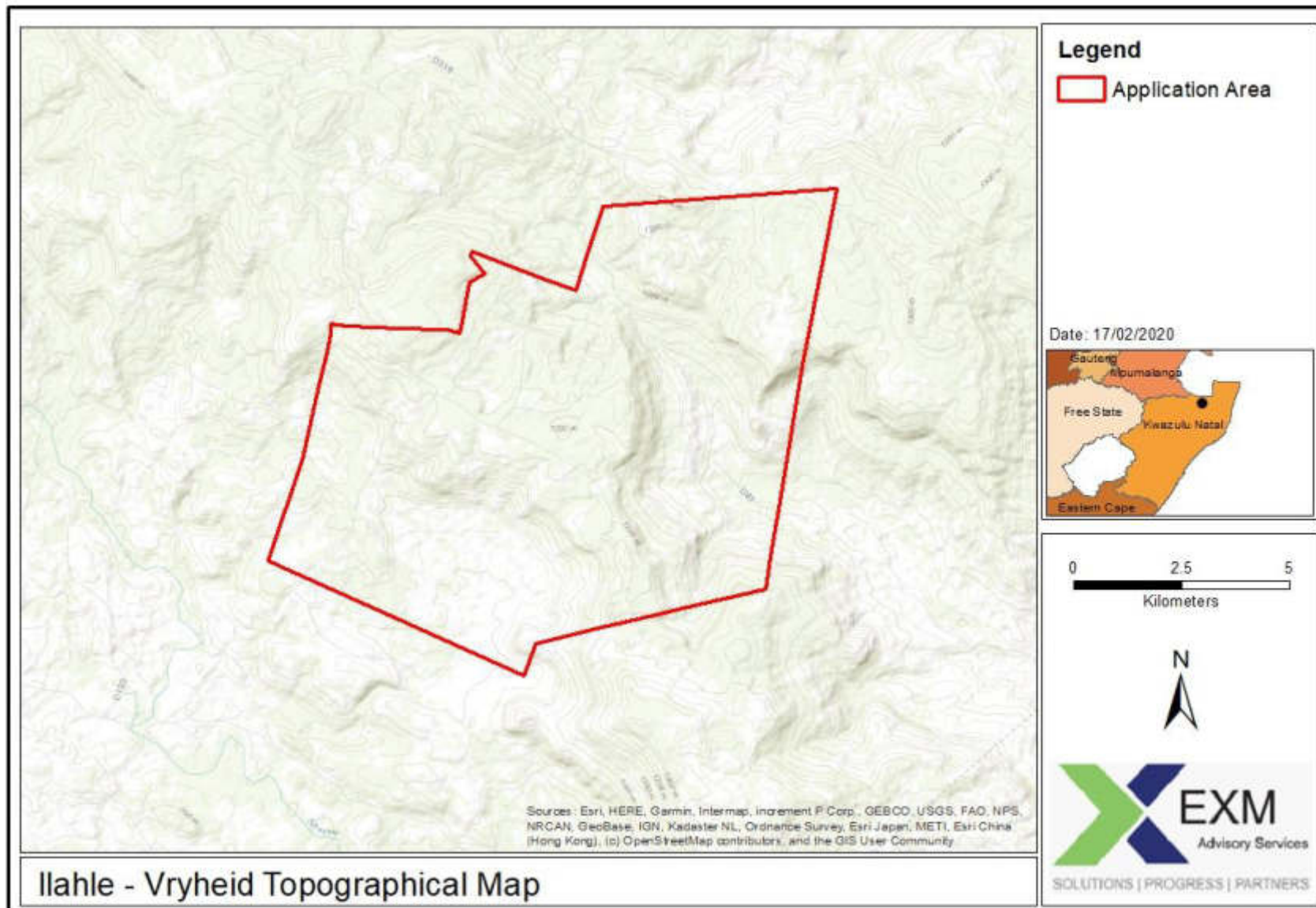


Figure 7: Topography Map

Soil:

The dominant soil classes present in the study area are red and yellow soil with low to medium base status. The soil classes associated with the LP2 land type have minimal development, usually shallow, on hard or weathering rock. There is also soils with a marked clay accumulation, strongly structured and non-reddish colour. The terrain is braded by the predominately rolling terrain and the second broken terrain, the slopes range moderately but there are some steep slopes areas. As the municipality is dominated by the Grass and the Savanna biomes there are mainly flat plains and rolling within the escarpment itself. The landscape geology is characterized by mudstones, shales and fine-grained sandstones of the Beaufort and Ecca groups along with Karroo super-group and limited Jurassic dolerite intrusion.

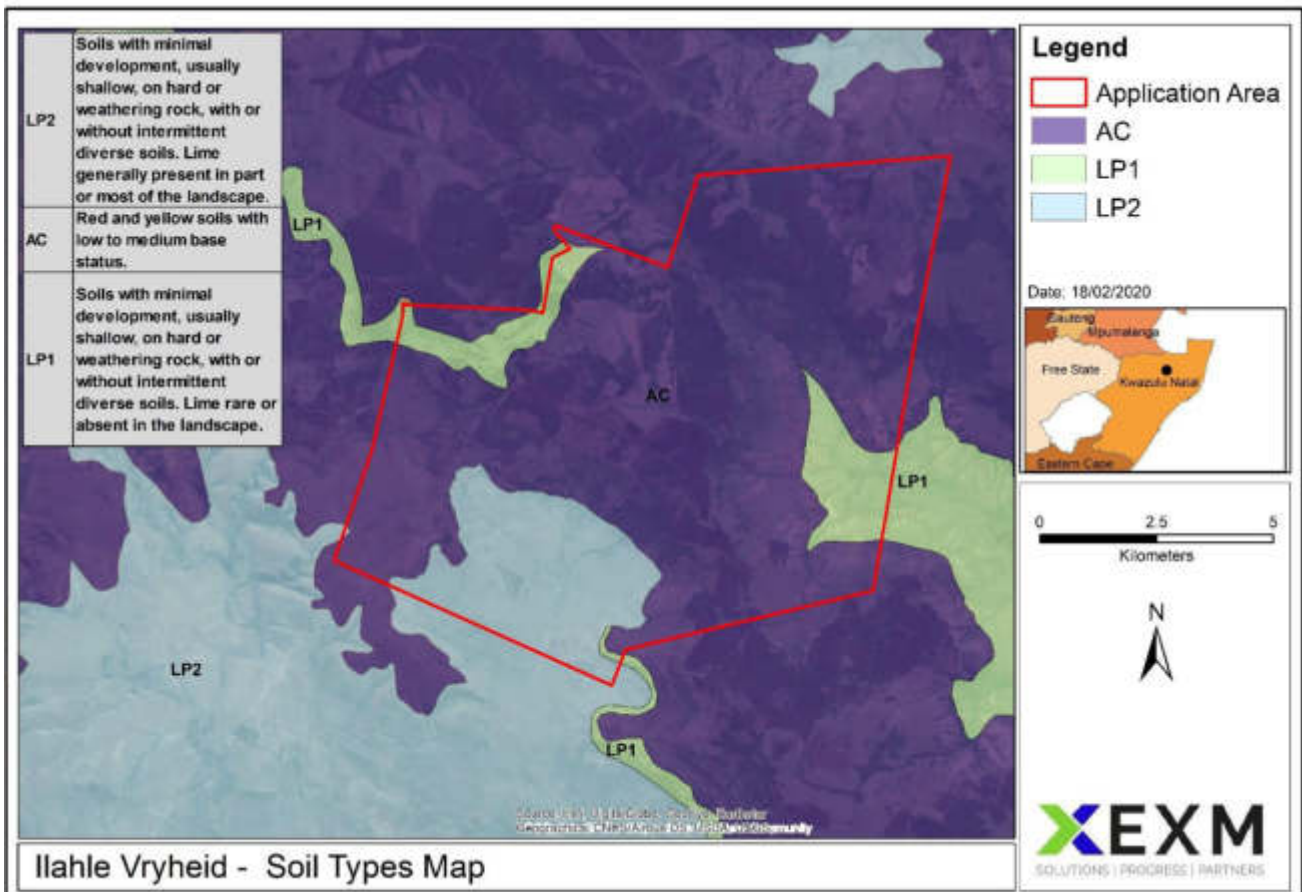


Figure 7: Soil Map

Land use:

Agricultural land is the dominant form of land use in the Abaqulusi Municipal area. The major agricultural practices are crop production (occurring mainly in the highveld areas and fertile valleys of the major rivers that runs through the area), cattle farming ranching, and game farming. A number of commercial farmlands are also subject to land restitution. The land use dominating the study area pertains to forestry/plantation which has disturbed a large section and the remaining sections are used for cultivation. Some areas are still natural with some grazing occurring in various sections.

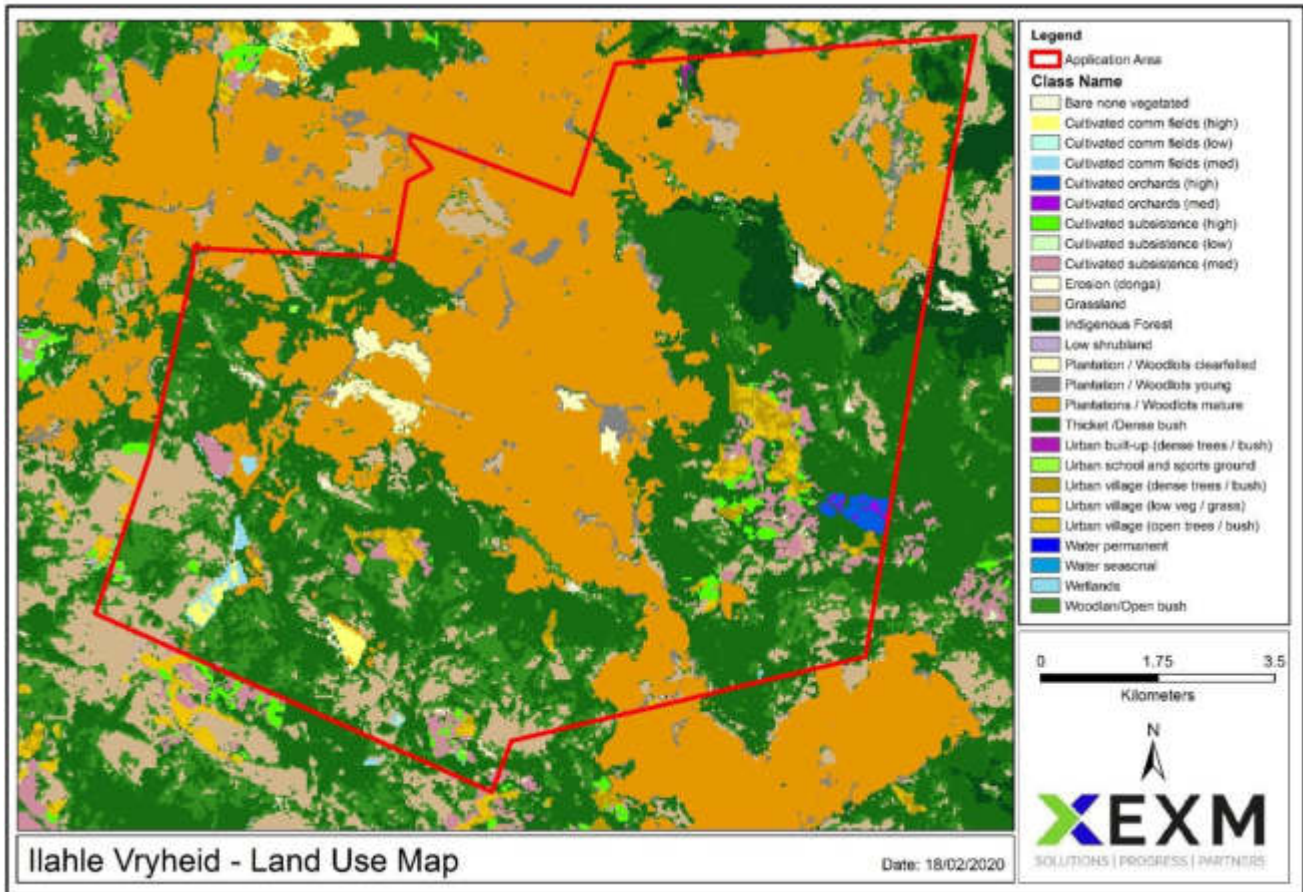


Figure 8: Land Use Map

Groundwater

On regional scale the hydrogeology consist of weathered and fractured aquifers of the Vryheid geological formation which intercept beaufort and karoo super groups, as well as Jurassic dolerite intrusions. Blow yields of 0.5 – 2 l/s can be expected regionally. The aquifer represents an important source for base flow into the streams draining the area.

Wetlands

According to the National Freshwater Ecosystem Priority Areas (NFEPA) database, several wetlands are situated within the project area as illustrated in the figure below. The majority of the wetlands are classified as Valley Floor and Bench wetland systems.

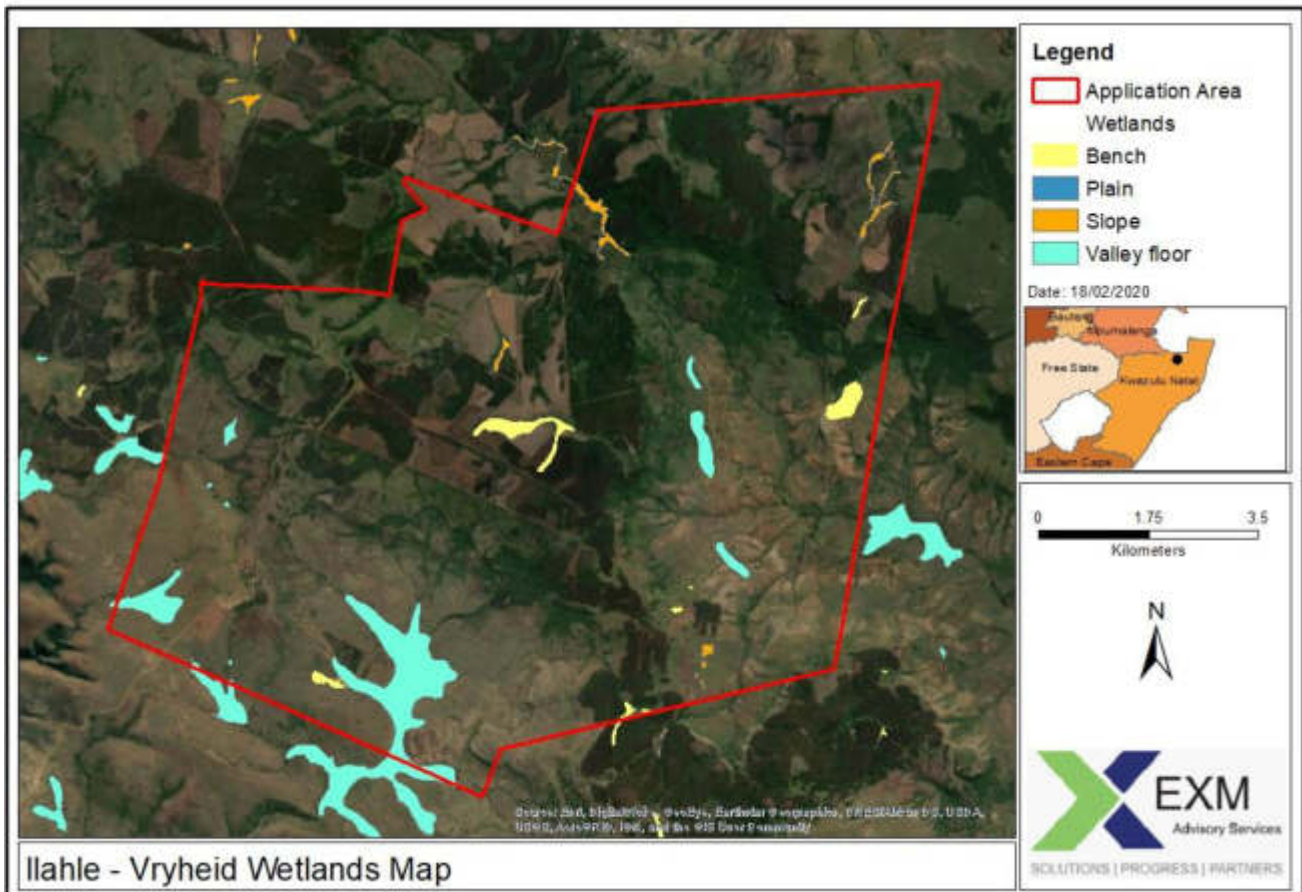


Figure 9: NFEPA wetlands

Surface water:

The prospecting area is situated in quaternary catchment W22C and W22E which forms part of the Usutu to Mhlathuze Water Management Area. The main rivers in the water management area are the Usutu, Pongola, Mkuze, Mfolozi and Mhlathuze Rivers, which drain adjoining catchments and all flow in a general eastward direction.

The surface area of the management area catchment is approximately 45 000 km² in extent. The site is situated in the Mfolozi catchment consists mostly of communal land, which is used for stock farming, although there is a significant amount of irrigation (72 km²), forestry (435 km²) and dryland sugarcane (65 km²) in the catchment. Richards Bay Minerals occur in this catchment. The Klipfontein Dam is the only major dam in the catchment. The water quality of the Klipfontein Dam is poor due to urban return flows into the dam.

The site is situated on a water divide. Non-perennial streams drain the study area in the eastern section towards the south eastern side into the Siwkebezi River and the western section drains towards the south western side into the Black Mfolozi River. The Figure below shows the surface water resources on site.

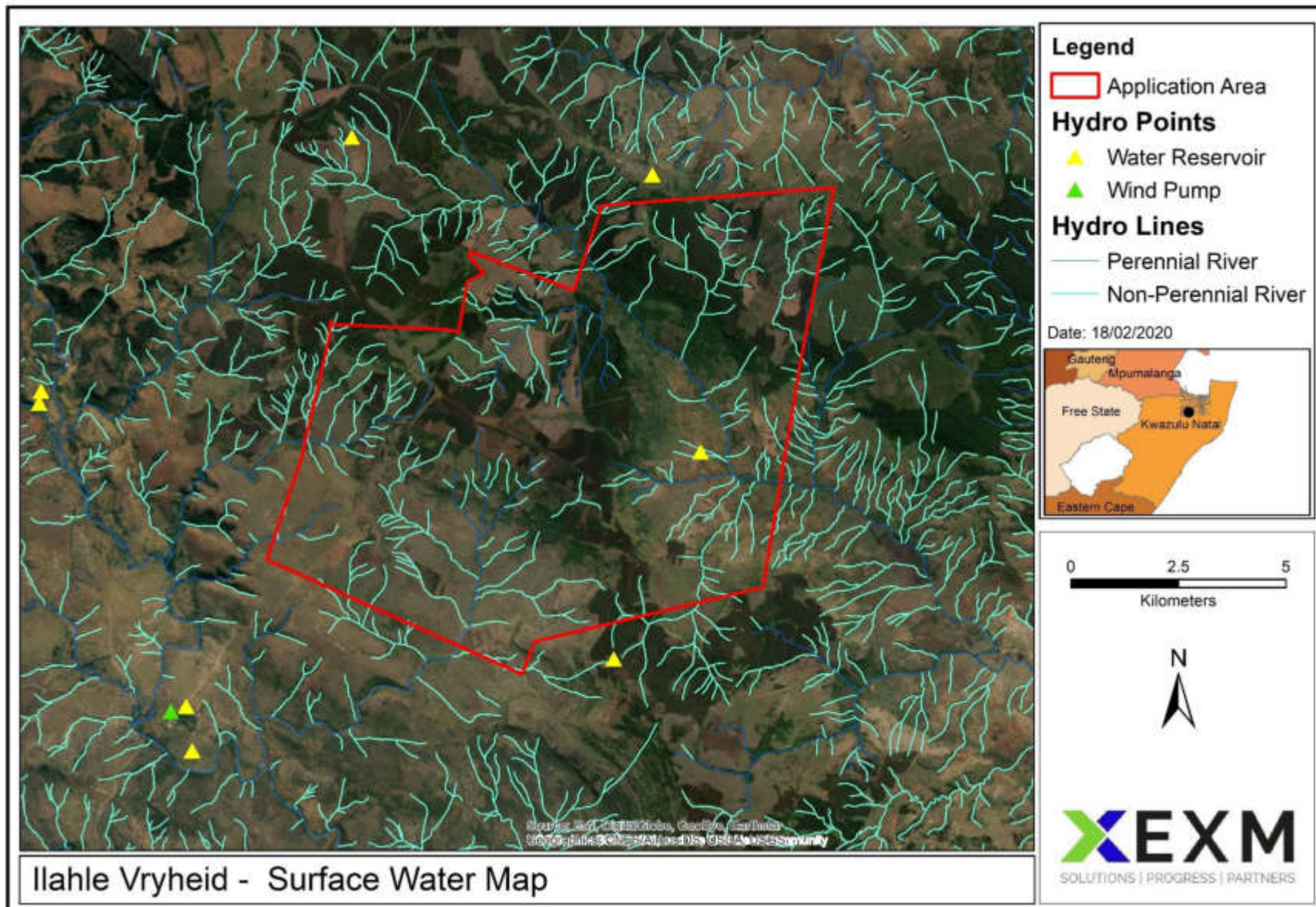


Figure 10: Surface Water Resources

Biodiversity

- Vegetation unit

The study area is covered by three vegetation types, including Southern Mistbelt Forest, Northern Zululand Mistbelt Grassland and Northern Zululand Sourveld. The Northern Zululand Mistbelt Grassland is distributed along crests and slopes of the Ngome Mountain range and the Ngoje Mountain surrounding Louwsburg as well as some smaller mountainous areas. It is characterised by gentle to steep upper slopes of mountains formed by hard dolerite dykes dominated by relatively forb-rich, tall sour *Themeda triandra* grasslands.

The Northern Zululand Sourveld is distributed from the Lusthof area in Swaziland southwards with scattered patches in northern Zululand in the surrounds of Hlomohlomo, east of Louwsburg, Nongoma and the vicinity of Ulundi including Nkandla. In the HluhluweMfolozi Park it occurs at highest altitudes in the park. The dominant structural vegetation type is wooded grassland, in places pure sour grasslands and rarely also dense bushveld thickets. Terrain is mainly low, undulating mountains, sometimes highly dissected, and also some moderately undulating plains and hills.

The Southern Mistbelt Forest only occurs in a very small section of the site. In KwaZulu-Natal these forests are found in a wide band sandwiched between the Drakensberg Montane Forests and Northern KwaZulu-Natal Mistbelt Forests at higher altitudes and Eastern Scarp Forests at lower altitudes.

These forests are tall (15-20m tall) and multi-layered (having two layers of trees, a dense shrubby understory and a well-developed herb layer). The forests found on low-altitude scarps are low (in places having the character of a scrub forest), and although less structured into different tree layers, they are still species-rich. The tall forests show a mix of coarse grained, canopy gap/disturbance-driven dynamics and fine-grained, regeneration characteristics.

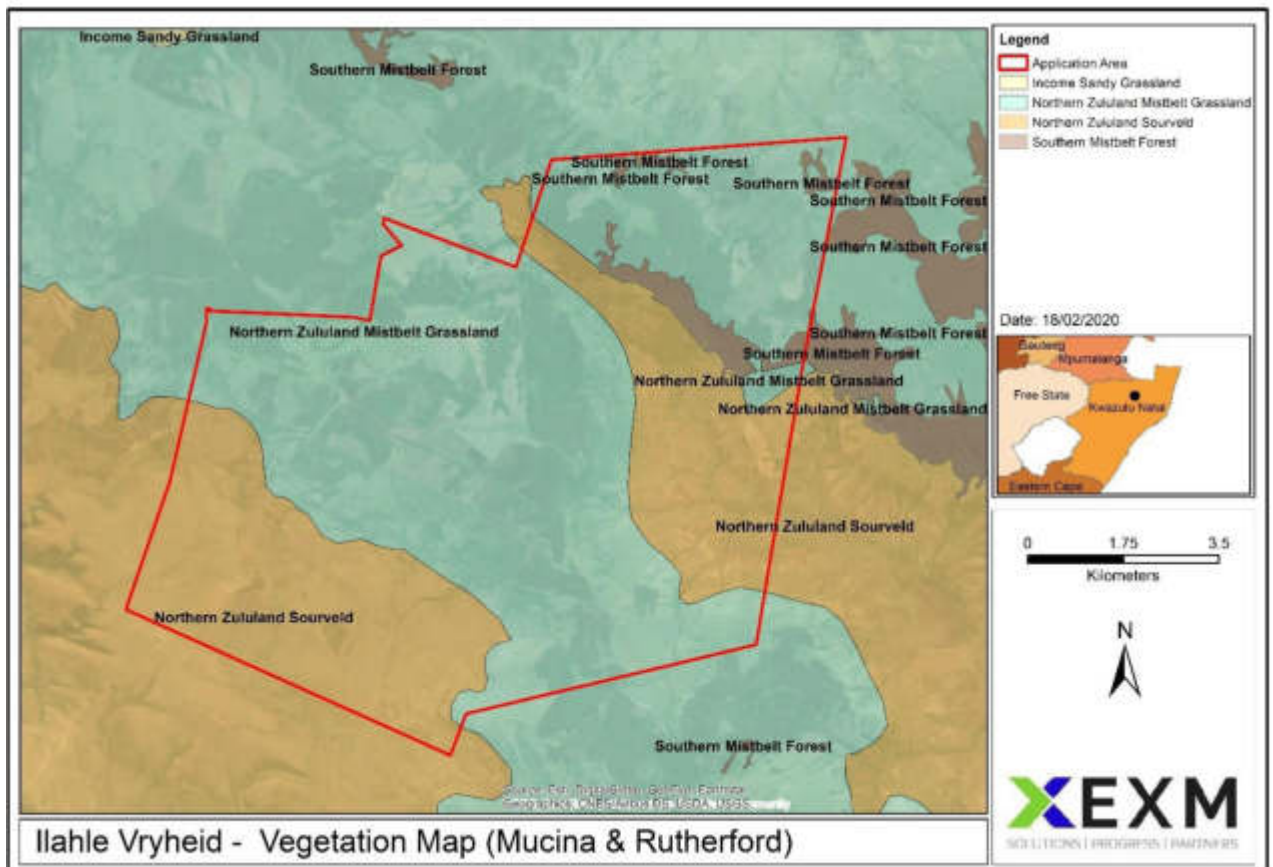


Figure 11: Vegetation map

- Sensitive Biodiversity

According to SANBI, the Ngoma Mistbelt Grassland and Forest threatened ecosystem covers a large portion of the site, but most of the area has been transformed by forestry. Moreover the Ntendeka Wilderness Area is situated adjacent to the prospecting area, east of the site. According to the KwaZulu Natal Conservation Plan, some sections within the project area are classified as Critical Biodiversity Areas (CBA). Some sections are classified as Irreplaceable CBA and the remainder of the CBAs are optimal, as per the definitions below:

Irreplaceable CBA's: Areas considered critical for meeting biodiversity targets and thresholds, and which are required to ensure the persistence of viable populations of species and the functionality of ecosystems.

Optimal CBA's: Areas that represent an optimised solution to meet the required biodiversity conservation targets while avoiding areas where the risk of biodiversity loss is high Category driven primarily by process but is also informed by expert input.

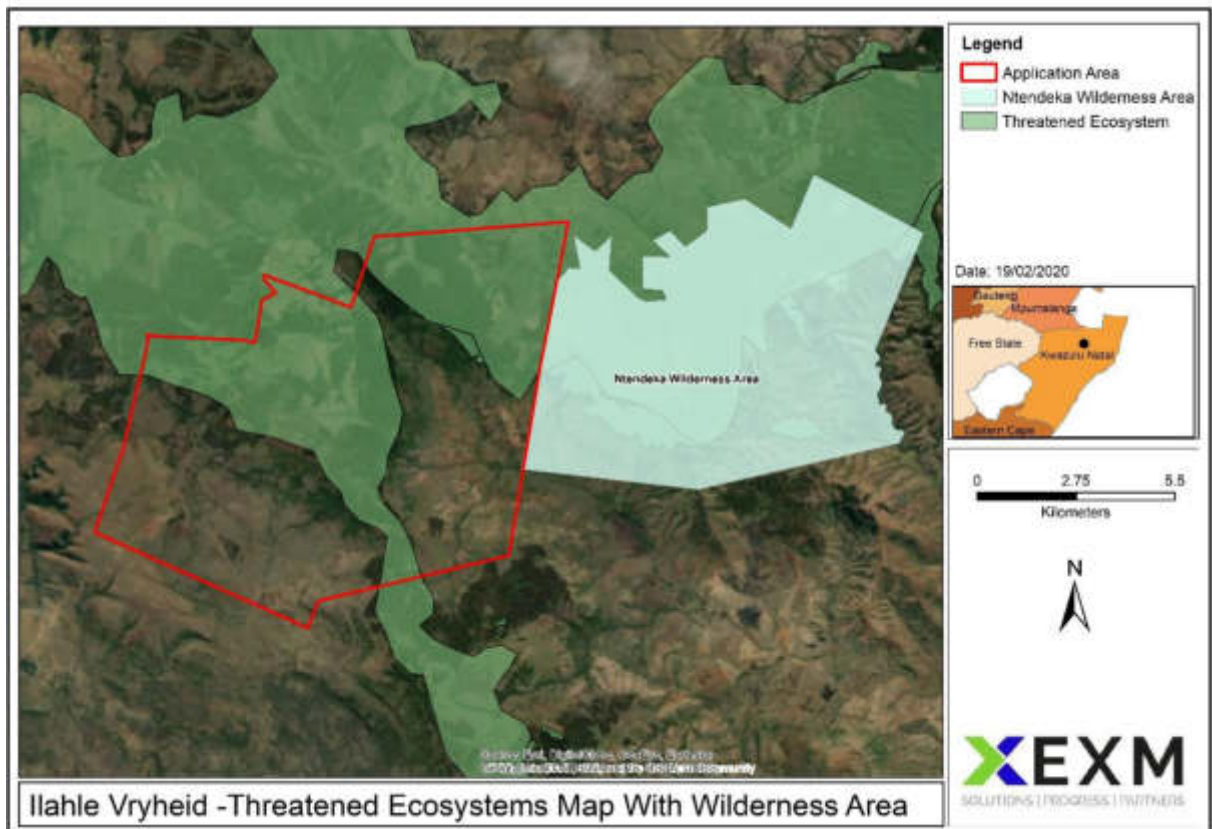


Figure 12: Threatened Ecosystems

Air quality & noise:

The majority of the site is in a rural location, with dust during winter from dirt roads and agricultural activities being the greatest impact. The predominant noise in the area is generated from sources such as the main roads, the R618.

Sites of archaeological and cultural interest:

It is possible that some graves and graveyards occur in the general area. It is likely that some historical buildings may occur in the area from the site survey. 50m buffers must be established around the sites

Socio-Economic Status

Three main economic sectors are associated with AbaQulusi include that of Community Services, Mining and Finance Services. Community services contributes just 20% to the economy and is regarded as primary contributor to the economy. The potential to further increase the Mining, Agriculture, Trade and Transport sector of the economy is an opportunity that presents itself to AbaQulusi due to its rich history in Mining activities, large agricultural land and diverse productivity and its favourable location to promote trade and transport

There was a slight increase in the intensity of poverty from 41.9% during Census 2011 up to 43.3% during Community Survey 2016. Youth unemployment was high at about 45% during Census 2011 above the average official unemployment rate for the municipality which was found to be 35.4%. The unemployment rate for females at 38.8% was found to be higher than those of males 32.0% during the

Census 2011. Coal mining historically provided a major force into the local economy of Northern KwaZulu Natal. However, over the past 15 years a number of mines in the area ceased operation impacting negatively on the regional economy.

Land Tenure

The proposed prospecting area covers numerous properties within the Zululand Magisterial District of the KwaZulu-Natal Province of South Africa. The proposed prospecting rights area covers a surface area of approximately 7 900 ha. A layout plan of the properties is provided in **Figure 13**. Table 1 describes the properties that are included in the prospecting right area.

Table 1: Property ownership and summary of infrastructure

Area of title (ha)	Properties covered	Summary of infrastructure
7900	<ul style="list-style-type: none"> • Portion 2 and the Remainder (Whole Area) of the Farm Tygerskloof No. 173-HU • A Portion of the Farm Demoina No. 830-HU • Portion 3, 4, 5 and 7 (Whole Area) of the Farm Wonderfontein No. 560-HU • Whole Area of the Farm Mariantha No. 845-HU • Whole Area of the Farm Welteverede 540-HU • A Portion Of the Farm Tierkloof 829-HU • Portions 4-7, 13, 16, Portions 2-17 of the Farm Spitzkop No. 70-HU 	No prospecting related infrastructure has been established.

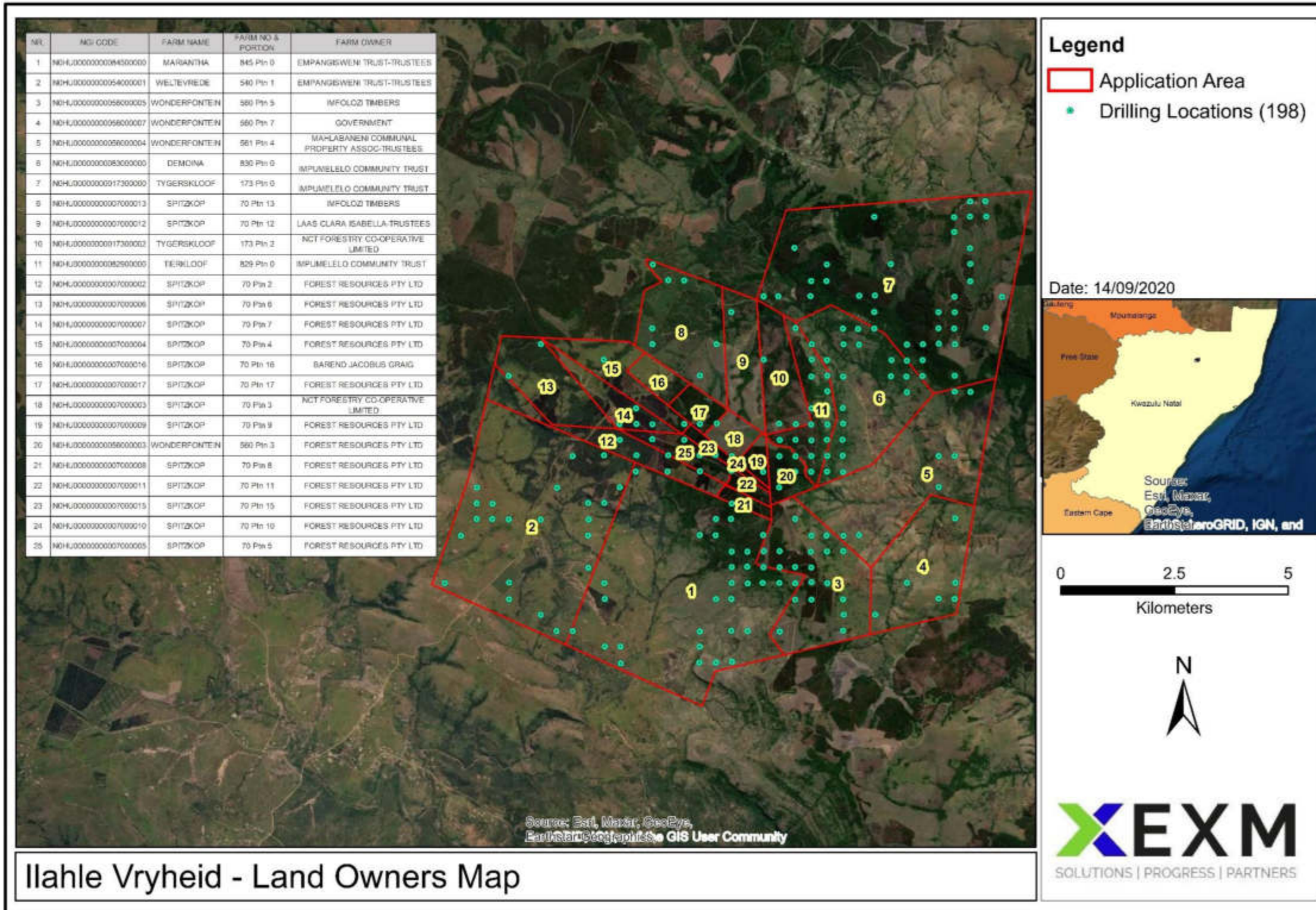


Figure 13: Land Tenure Map

(b) Description of the current land uses.

The land use dominating the study area pertains to forestry/plantations which has disturbed a large section (central and northern region) of the site. Smaller sections are used for cultivation. Some areas are still natural with some grazing occurring in various sections. The R618 regional road and N3 national route connects Vryheid 41km west of the site with Ngoma 31km east of the site.

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

According to relevant biodiversity databases, no protected areas occur within the boundaries of the site. According to SANBI, the Ngoma Mistbelt Grassland and Forest threatened ecosystem covers a large portion of the site, but most of the area has been transformed by forestry. A large section of the site is classified as an irreplaceable critical biodiversity area, but drilling sites will be located to limit disturbance and permits must be obtained before any protected trees are removed. The main environmental features would be those associated with the surface water features, including dams, drainage lines and wetlands. Prospecting sites will be located to avoid wetlands, dams and associated buffer zones. If there is a need to conduct activities in any of these areas, then the necessary authorisations must be obtained prior to undertaking such activities.

(d) Environmental and current land use map.

Please refer to Environmental and Land Use Maps (Figures 8-12)

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

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Topography	Change in natural topography of the site.	Construction	2	3	2,5	2	2,25	0,8	1,8	<ul style="list-style-type: none"> Stockpile soils removed for rehabilitation. Rehabilitate sites to original landform. 	0,6	1,08
Geology	Creation of conduits between geological strata.	Operations	1	4	2,5	3	2,75	0,6	1,65	<ul style="list-style-type: none"> Boreholes to be sealed with concrete. 	0,4	0,66
Soils	Potential loss of topsoil.	Operations	2	3	2,5	2	2,25	0,6	1,35	<ul style="list-style-type: none"> Keep the footprint of disturbance as small as practicably possible. Vegetation to be left in place to protect soils where possible. Where vegetation clearance cannot be avoided, storm water management measures to be put in place if there is a risk of soil erosion. Erosion protection where cut and fill and levelling of the drill site occurred. 	0,6	0,81
	Potential loss of soil resource.	Construction & Operation	3	3	3	2	2,5	0,6	1,5	<ul style="list-style-type: none"> Utilise existing access roads as far as possible. Keep the footprint of disturbance as small as practicably possible. Access roads to follow slope contours where possible. 	0,6	0,9

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
										<ul style="list-style-type: none"> Vegetation to be left in place at the sides of the road to protect the soils. 		
	Risk of soil contamination.	Construction, Operation and Closure	3	3	3	2	2,5	0,8	2	<ul style="list-style-type: none"> Impermeable liners or surfaces to be provided in areas where hydrocarbons are managed Diesel storage areas to be bunded and regularly checked. Drip trays to be used when any vehicle maintenance is undertaken. Spill kits to be available at drill sites. Contaminated soil to be remediated in situ. 	0,6	1,2
Surface water resources	Contamination of surface water.	Construction, Operation and Closure	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Bunded areas are to be created for the storage of all hazardous chemical substances (fuel, oil, lubricants and chemicals). Temporary bunds are to include an impervious floor (e.g. plastic sheeting) and earth/sandbag walls. 	0,6	1,44
	Increase in sediment loads as a result of erosion and heavy rainfall.	Construction, Operation and Closure	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Implement measures for soil erosion control in accordance with risk assessment. Boreholes to be situated outside of the 1 in 100 year floodline or 100m from the edge of a watercourse whichever is greater. 	0,6	1,44

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
	General and human waste.	Construction, Operation and Closure	2	2	2	3	2,5	0,6	1,5	<ul style="list-style-type: none"> Contractors may only use designated toilets and waste disposal facilities. Separate, marked receptacles are to be provided for the storage of hazardous and general wastes at the waste generation points. Littering is not to be permitted. Measures for waste avoidance, minimisation, reuse and recycling must be implemented. All items that have come into contact with any hazardous chemical substance (including fuels/oils/greases/laboratory chemicals, sludge) are to be disposed as hazardous waste. All waste are to be disposed of as general waste 	0,4	0,6
	Disturbance of surface water resources.	Construction	4	4	4	3	3,5	0,8	2,8	<ul style="list-style-type: none"> Boreholes to be situated outside of the 1 in 100 year floodline or 100m from the edge of a watercourse whichever is greater. Keep the footprint of disturbance as small as practicably possible 	0,6	1,68

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Hydrogeology (Groundwater)	Seepage of fuels, oils and lubricants.	Construction, Operation and Closure	2	4	3	3	3	0,6	1,8	<ul style="list-style-type: none"> Impermeable floor or surfaces to be provided in areas where hydrocarbons are stored managed. Diesel storage areas to be bunded and regularly checked. Drip trays to be placed under vehicles susceptible of dripping oil. Spill kits to be available at drill sites. Bunded areas are to be created for the storage of all hazardous chemical substances (fuel, oil, lubricants and chemicals). Temporary bunds are to include an impervious floor (e.g. plastic sheeting) and earth/sandbag walls. 	0,6	1,08
	Cross contamination of aquifers due to borehole construction.	Operation & Closure	2	4	3	3	3	0,4	1,2	<ul style="list-style-type: none"> Boreholes that will not be used again will be backfilled with cement and sealed. Mitigation will entail the use of biodegradable or eco friendly drilling liquid. Alternatively, a drilling sock can also be used to soak up any contamination remaining after drilling operations have been completed. Purging of the borehole upon completion or to seal the borehole to prevent 	0,4	0,48

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
										further use. The borehole can also be sealed to prevent use of the water for potable purposes.		
Noise	Increase in ambient noise levels. Disturbance to people and animals.	Construction, Operation and Closure	3	4	3,5	3	3,25	0,8	2,6	<ul style="list-style-type: none"> Avoid travelling past residences. Speed limit of 40km/h will be enforced Liaise with landowner on areas sensitive to noise. Provide a buffer of 100m from households. Drilling to take place during daylight hours. Borehole site and access route selection to minimize impacts on noise receptors 	0,6	1,56
Air Quality	Release of gaseous emissions.	Construction, Operation and Closure	2	4	3	3	3	0,4	1,2	<ul style="list-style-type: none"> No unnecessary revving of vehicles should take place. No vehicle must stand idling when not in use. 	0,4	0,48
	Dust fallout and fine particular matter emissions.	Construction, Operation and Closure	2	4	3	3	3	0,6	1,8	<ul style="list-style-type: none"> Restrict travelling speed of vehicles to reduce vehicle entrainment of dust. Wet gravel roads if dust is found to be excessive. 	0,6	1,08
Land Use and Land Capability	Intrusion due to drilling and prospecting activities in an area where agricultural uses are prominent.	Construction & Operation	3	4	3,5	3	3,25	0,8	2,6	<ul style="list-style-type: none"> Drilling sites must be selected to minimize disturbance of current land use. Relevant agreements must be in place with landowners to define location and extent of drilling sites and rehabilitation measures that 	0,4	1,04
	Reduction in land capability.	Construction	3	4	3,5	3	3,25	0,6	1,95		0,6	1,17

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
										<ul style="list-style-type: none"> will be undertaken at the end of drilling. An access agreement with relevant land owners is to be drafted and implemented once the EA has been issued. Rehabilitation of drill sites and access roads. No permanent structures will be established on site. 		
Fauna, Flora and Ecology	Removal/damage of natural vegetation due to fires and	Construction	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Preference should be given to already disturbed areas, if possible. No-go areas to be identified. No prospecting to be conducted on ridges or valleys. Environmental awareness training of all employees responsible for drilling. Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. No activities to be conducted within the 100m buffer zones around wetlands Site selection aimed at minimising disturbance to natural vegetation.No smoking at the drilling sites. 	0,6	1,44

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
										<ul style="list-style-type: none"> Code of conduct to include measures for the prevention of fires. Emergency equipment and procedures for fire fighting to be in place. Adhere to emergency procedures. 		
	Establishment of drilling sites and access routes.	Construction, Operation & Closure	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. 	0,6	1,44
	Disturbance/ poaching of animals	Construction	3	3	3	3	3	0,6	1,8	<ul style="list-style-type: none"> Drilling contractors are only allowed to move within the designated drilling area. Environmental awareness training should include poaching and disturbance of animals 	0,6	1,08
	Encroachment of Alien Invasive Plants	Construction, Operation & Closure	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Monitor areas for proliferation of Alien Invasive Plants during operations and after rehabilitation has been undertaken Eradication of Alien Invasive Plants as required Disturbance must be minimized and only be allowed in demarcated areas 	0,6	1,4

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Sensitive and Protected Areas	Degradation and destruction of sensitive biodiversity	Construction, Operation & Closure	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> • Preference should be given to already disturbed areas, if possible. • No-go areas to be identified. • No prospecting to be conducted on ridges or valleys. • Environmental awareness training of all employees responsible for drilling. • Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. • No activities to be conducted within the 100m buffer zones around water courses. • Site selection aimed at minimising disturbance to natural vegetation. 	0,6	1,44
Heritage Resources	Cultural heritage resources may be found within the study area	Construction and Operation	3	3	3	3	3	0,6	1,8	<ul style="list-style-type: none"> • A 50 meter buffer zone must be established around any heritage site observed during site establishment. 	0,6	1,08
Economic Development	Contribution to the economy.	Construction and Operation	2	4	3	2	2,5	0,4	1	<ul style="list-style-type: none"> • Preference to be given to the use of local employment, contractors and local suppliers. 	1	1
Visual and Sense of Place	Loss of sense of place due to prospecting activities	Construction, Operation & Closure	2	3	2,5	3	2,75	0,8	2,2	<ul style="list-style-type: none"> • Implement measures to reduce the visual impacts of prospecting activities, i.e. rehabilitation of drill sites and access roads. 	0,6	1,32

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
										<ul style="list-style-type: none"> • Buffers around residential units must be implemented. 		
Safety and Security	Movement of drilling contractors and influx of workers - increase in crime	Construction and Operation	3	4	3,5	4	3,75	0,6	2,25	<ul style="list-style-type: none"> • Drilling contractors not allowed moving outside of designated areas. • Access of personnel related to the prospecting operations will only be allowed on approval by the project manager. 	0,6	1,35
	Overnight accommodation of drilling contractors - increase in crime	Construction, Operation & Closure	3	4	3,5	4	3,75	0,6	2,25	<ul style="list-style-type: none"> • All personnel that have access to the property will be provided with access cards. • All personnel that have access to the property need to be made visible. • Drilling contractors to be housed off site. 	0,6	1,35
Stakeholder Acceptability	Prospecting on private property	Construction, Operation & Closure	4	4	4	3	3,5	0,8	2,8	<ul style="list-style-type: none"> • Comply with the MPRDA & NEMA Implement and Comply with the EMP 	0,6	1,68
Social impact	Prospecting seen as a predecessor to mining and this raises a risk to various environmental impacts	Construction, Operation & Closure	4	4	4	4	3,75	0,8	3,2	<ul style="list-style-type: none"> • An application for a mining right will require a separate EIA and public participation process and IAPs will be provided with the opportunity to raise their concerns. • This report should form part of the feasibility study towards a mining right 	0,4	1,28

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
										application to ensure the current information and sensitivities identified in this process is considered		

v. 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).

Assessment of the significance of the potential impacts

Please find attached as Appendix 5 the detailed environmental impact assessment table that includes the significance of all impacts in column F (potential impacts), and G (residual impacts).

The impact assessment method used in this assessment takes into account the current environment, the details of the proposed amendment activities and the findings of the specialist studies. Cognisance has been given to both positive and negative impacts that may result from the developments. The significance of the impact is dependent on the consequence and the probability that the impact will occur.

$$\text{impact significance} = (\text{consequence} \times \text{probability})$$

Where:

$$\text{consequence} = (\text{severity} + \text{extent})/2$$

and

$$\text{severity} = [\text{intensity} + \text{duration}]/2$$

Each criterion is given a score from 1 to 5 based on the definitions given below. Although the criteria used for the assessment of impacts attempts to quantify the significance, it is important to note that the assessment is generally a qualitative process and therefore the application of this criteria is open to interpretation. The process adopted will, therefore, include the application of scientific measurements and professional judgement to determine the significance of environmental impacts associated with the project. The assessment thus largely relies on experience of the environmental assessment practitioner (EAP) and the information provided by the specialists appointed to undertake studies for the basic assessment.

Where the consequence of an event is not known or cannot be determined, the “precautionary principle” has been applied and the worst-case scenario assumed. Where possible, mitigation measures to reduce the significance of negative impacts and enhance positive impacts will be recommended. The significance of the impact in light of the mitigation measures has also been rated based on a confidence rating of the mitigation measures.

Consideration will be given to the phase of the project during which the impact occurs. The phase of the development during which the impact will occur will be noted to assist with the scheduling and implementation of management measures.

Criteria for Assessing the Impact Significance

Severity Criteria

INTENSITY = MAGNITUDE OF IMPACT	RATING
Insignificant: impact is of a very low magnitude	1
Low: impact is of low magnitude	2
Medium: impact is of medium magnitude	3
High: impact is of high magnitude	4
Very high: impact is of highest order possible	5

DURATION = HOW LONG THE IMPACT LASTS	RATING
Very short-term: impact lasts for a very short time (less than a month)	1
Short-term: impact lasts for a short time (months but less than a year)	2

Medium-term: impact lasts for the for more than a year but less than the life of operation.	3
Long-term: impact occurs over the operational life of the proposed mine.	4
Residual: impact is permanent (remains after mine closure)	5

EXTENT = SPATIAL SCOPE OF IMPACT/ FOOTPRINT AREA / NUMBER OF RECEPTORS	RATING
Limited: impact affects the mine site	1
Small: impact extends to the whole farm portion	2
Medium: impact extends to neighbouring properties	3
Large: impact affects the surrounding community	4
Very Large: The impact affects an area larger the municipal area	5

Probability

PROBABILITY = LIKELIHOOD THAT THE IMPACT WILL OCCUR	RATING
Highly unlikely: the impact is highly unlikely to occur	0.2
Unlikely: the impact is unlikely to occur	0.4
Possible: the impact could possibly occur	0.6
Probable: the impact will probably occur	0.8
Definite: the impact will occur	1

Impact Significance

NEGATIVE IMPACTS

≤1	Very low	Impact is negligible. No mitigation required.
>1≤2	Low	Impact is of a low order. Mitigation could be considered to reduce impacts. But does not affect environmental acceptability.
>2≤3	Moderate	Impact is real but not substantial in relation to other impacts. Mitigation should be implemented to reduce impacts.
>3≤4	High	Impact is substantial. Mitigation is required to lower impacts to acceptable levels.
>4≤5	Very High	Impact is of the highest order possible. Mitigation is required to lower impacts to acceptable levels. Potential Fatal Flaw.

POSITIVE IMPACTS

≤1	Very low	Impact is negligible.
>1≤2	Low	Impact is of a low order.
>2≤3	Moderate	Impact is real but not substantial in relation to other impacts.
>3≤4	High	Impact is substantial.
>4≤5	Very High	Impact is of the highest order possible.

DEVELOPMENT PHASE

C	Impact is applicable to the CONSTRUCTION PHASE ONLY
O	Impact is applicable to the OPERATIONAL PHASE ONLY
C&O	Impact is applicable to the CONSTRUCTION AND OPERATIONAL PHASE

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

The mitigation measures for each of the identified impacts are included in Section 11 and in the EMPr in part B.

The significance of the impact with mitigation has been weighted by multiplying the significance rating without significance by the following depending on the confidence placed in the successful implementation of the mitigation measures or the effectiveness of those measures in reducing the impact.

1	Very low	Measures are very difficult or expensive to implement or are not expected to be effective in reducing the impact (No Confidence)
0.8	Low	Measures are difficult or expensive to implement or are expected to have limited effectiveness in reducing the impact (20% Confidence)
0.5	Moderate	Measures can be implemented with some effort and cost and/or the measures can be effective in mitigating the impact if implemented (50% Confidence)
0.2	High	There is high confidence that mitigation measures can be implemented and can be effective in mitigating the impact (80% Confidence)

vi. 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)

The following key concerns have been identified. These include:

1. Vulnerability of surface water resources.
2. Safety of landowners.
3. Conflict with land uses (agriculture and mining)
4. Rehabilitation of drill sites.

The initial site layout was planned on a 350 m x 350 m grid and overlay all land uses, sensitive features (eg. water resources). Over 400 boreholes formed part of the original grid. In order to minimise the impact of drilling activities on surface water a 100 meter buffer was allocated for each stream, river and wetlands. All boreholes within this buffer were removed. A 100m buffer has also been established from infrastructure such as roads and railways. All boreholes that overlapped with residential units have been removed. A total of 198 boreholes have remained. Several drill sites are still located within cropland but agreement or compensation will need to be sought should the specific site be developed.

The drill sites themselves will be provided with safety netting, fencing and signage to ensure no person or animal can access the drill site. Drill rig operators will not be housed on site. In addition, rehabilitation objectives will include ensuring that the site is safe for the current land uses.

vii. 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).

Table 1: Possible mitigation measures to issues raised by I&APs

Nr	Issue Raised	Raised By	Mitigation/ Response	Mitigation Failure Risk
1	<p>Conditions</p> <p>25 In the event that an EA is granted, our clients submit that it is imperative that the following conditions are included in the EA:</p> <p>25.1 a buffer of 100 meters from riparian zone fire-belts and a buffer of 500 metres from any housing owned or utilised by our clients on the Properties must be in place;</p> <p>25.2 no roads or permanent structures (including but not limited to bund walls) may</p>	<p>Nicole Limberis-Ritchie</p> <p>Nupen Staude de Vries Incorporated on behalf of NCT Forestry Co-Operative Limited</p>	<p>The following mitigation measures have been included in the EMPr:</p> <ul style="list-style-type: none"> • Mitigation will entail the use of biodegradable or eco friendly drilling liquid • Buffer zones have been included for residential areas and riparian zones/watercourse. 	Low

Nr	Issue Raised	Raised By	Mitigation/ Response	Mitigation Failure Risk
	<p>be constructed on the Properties;</p> <p>25.3 the Applicant must register with the Council for Geoscience and provide our clients, as landowners, with a copy of such results and proof of such registration;</p> <p>25.4 the Applicant shall comply with the Forest Stewardship Council requirements in respect of the Properties;</p> <p>25.5 all drilling lubricants used by the Applicant, its representatives and contractors must be biodegradable; and</p> <p>25.6 the Applicant may not drill on predicted orange or red fire danger index days or during the fire season as determined by the Vryheid Fire Protection Association.</p> <p>25.7 The above conditions, amongst others are, also contained in an access agreement which must be signed upon the granting of the EA. A draft copy is attached for consideration.</p>		<ul style="list-style-type: none"> • Existing farm tracks will be used as far as possible. • No permanent structures will be established on site. • An access agreement is to be drafted and implemented once the EA has been issued. • The requirements of the Vryheid Fire Protection Association must be adhered to during the prospecting activities, where applicable to the specific activities. 	

viii. Motivation where no alternative sites were considered.

Alternative layout options and drill site locations were considered during the study. The project location was however bound to the current location due to the underlying geology. The prospecting right is dependent on the area chosen being susceptible to possible coal deposits and therefore no alternative site could be considered.

ix. Statement motivating the alternative development location within the overall site. (Provide a statement motivating the final site layout that is proposed)

The final layout of the drilling can only be completed once the non-invasive aerial geological surveys are completed. Invasive prospecting (drilling and trenching) will avoid wetlands, rivers and 100m buffer zones / 1:100 year flood lines (whichever is greatest), and 50m buffer zones from potential historical sites, graves and identified protected plants. Ridge and valleys must also be avoided. Drill site locations are not fixed and need approval by an environmental control officer before drilling. The ECO will, as a minimum, consider:

- Plant and animal sensitivity
- Current land use
- Sensitive features such as households

- Heritage sites (including graveyards)
- 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 are 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 same impact ranking criteria and methodology was employed as discussed in Section VI of this report.

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).

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
Topography						
Levelling of drilling sites.	Change in natural topography of the site.	Topography	Construction	<ul style="list-style-type: none"> Stockpile soils removed for rehabilitation. Rehabilitate to original landform. 	Neg Low	Neg Low
Geology						
Removal of geological core	Creation of conduits between geological strata.	Geology	Operations	<ul style="list-style-type: none"> Boreholes to be sealed with concrete. 	Neg Low	Neg Very low
Soils						
Erosion from soil disturbance at drilling sites.	Potential loss of topsoil.	Soils	Operations	<ul style="list-style-type: none"> Keep the footprint of disturbance as small as practicably possible. Vegetation to be left in place to protect soils where possible. Where vegetation clearance cannot be avoided, storm water management measures to be put in place if there is a risk of soil erosion. Erosion protection where cut and fill and levelling of the drill site occurred. 	Neg Low	Neg Very low

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
Erosion from soil disturbance on access roads.	Potential loss of soil resource.	Soils	Construction & Operation	<ul style="list-style-type: none"> Utilise existing access roads as far as possible. Keep the footprint of disturbance as small as practicably possible. Access roads to follow slope contours where possible. Vegetation to be left in place at the sides of the road to protect the soils. 	Neg Low	Neg Very low
Oil and diesel spills due to inappropriate storage, vehicle maintenance and washing operations.	Risk of soil contamination.	Soils	Construction, Operation and Closure	<ul style="list-style-type: none"> Impermeable floor or surfaces to be provided in areas where hydrocarbons are stored managed. Diesel storage areas to be bunded and regularly checked. Drip trays to be placed under vehicles susceptible of dripping oil. Spill kits to be available at drill sites. 	Neg Low	Neg Low
Surface Water						
Spillage from fuels, oils and lubricants.	Contamination of surface water.	Surface Water	Construction, Operation and Closure	<ul style="list-style-type: none"> Bunded areas are to be created for the storage of all hazardous chemical substances (fuel, oil, lubricants and chemicals). Temporary bunds are to include an impervious floor (e.g. plastic sheeting) and earth/sandbag walls. 	Neg Med	Neg Low

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
Increase in sediment loads as a result of erosion and heavy rainfall.		Surface Water	Construction, Operation and Closure	<ul style="list-style-type: none"> Implement measures for soil erosion control in accordance with risk assessment. Boreholes to be situated outside of the 1 in 100 year floodline or 100m from the edge of a watercourse whichever is greater. 	Neg Med	Neg Low
General and human waste.		Surface Water	Construction, Operation and Closure	<ul style="list-style-type: none"> Contractors may only use designated toilets and waste disposal facilities. Separate, marked receptacles are to be provided for the storage of hazardous and general wastes at the waste generation points. Littering is not to be permitted. Measures for waste avoidance, minimisation, reuse and recycling must be implemented. All items that have come into contact with any hazardous chemical substance (including fuels/oils/greases/laboratory chemicals, sludge) are to be disposed as hazardous waste. All waste are to be disposed of as general waste. 	Neg Low	Neg Very low

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
Disturbance caused by drilling footprint		Surface Water	Construction	<ul style="list-style-type: none"> Boreholes to be situated outside of the 1 in 100 year floodline or 100m from the edge of a watercourse whichever is greater. Keep the footprint of disturbance as small as practicably possible. 	Neg Med	Neg Low
Hydrogeology (Groundwater)						
Seepage of fuels, oils and lubricants.	Contamination of groundwater.	Groundwater	Construction, Operation and Closure	<ul style="list-style-type: none"> Impermeable floor or surfaces to be provided in areas where hydrocarbons are stored managed. Diesel storage areas to be bunded and regularly checked. Drip trays to be placed under vehicles susceptible of dripping oil. Spill kits to be available at drill sites. Bunded areas are to be created for the storage of all hazardous chemical substances (fuel, oil, lubricants and chemicals). Temporary bunds are to include an impervious floor (e.g. plastic sheeting) and earth/sandbag walls. 	Neg Low	Neg Low
Cross contamination of aquifers due to borehole construction.		Groundwater	Operation & Closure	<ul style="list-style-type: none"> Boreholes that will not be used again will be backfilled with cement and sealed. Mitigation will entail the use of biodegradable or eco friendly drilling liquid. Alternatively, a drilling sock can also be used to soak up any 	Neg Low	Neg Very low

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
				contamination remaining after drilling operations have been completed. <ul style="list-style-type: none"> Purging of the borehole upon completion or to seal the borehole to prevent further use. The borehole can also be sealed to prevent use of the water for potable purposes. 		
Noise						
Machinery and drilling operations. Movement of vehicles.	Increase in ambient noise levels. Disturbance to people and animals.	Noise	Construction, Operation and Closure	<ul style="list-style-type: none"> Avoid travelling past residences. Speed limit of 40km/h will be enforced Liaise with landowner on areas sensitive to noise. Provide a buffer of 100m from households. Drilling to take place during daylight hours. Borehole site and access route selection to minimize impacts on noise receptors 	Neg Moderate	Neg Low
Air Quality						
Exhaust fumes from vehicles and machinery related to prospecting activities.	Release of gaseous emissions.	Air Quality	Construction, Operation and Closure	<ul style="list-style-type: none"> No unnecessary revving of vehicles should take place. No vehicle must stand idling when not in use. 	Neg Low	Neg Very low

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
Vehicles travelling on gravel roads.	Dust fallout and fine particular matter emissions.	Air Quality	Construction, Operation and Closure	<ul style="list-style-type: none"> Restrict travelling speed of vehicles to reduce vehicle entrainment of dust. Wet gravel roads if dust is found to be excessive. 	Neg Low	Neg Low
Land Use and Land Capability						
Intrusion due to drilling and prospecting activities in an area where agricultural and mining land uses are prominent.	Land use conflict.	Land Use	Construction & Operation	<ul style="list-style-type: none"> Drilling sites must be selected to minimize disturbance of current land use. Relevant agreements must be in place with landowners to define location and extent of drilling sites and rehabilitation measures that will be undertaken at the end of drilling. An access agreement with relevant land owners is to be drafted and implemented once the EA has been issued. Rehabilitation of drill sites and access roads. No permanent structures will be established on site. 	Neg Moderate	Neg Low

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
Land clearing and transformation.	Reduction in land capability.	Land Use	Construction	<ul style="list-style-type: none"> • Drilling sites must be selected to minimize disturbance of current land use. • Relevant agreements must be in place with landowners to define location and extent of drilling sites and rehabilitation measures that will be undertaken at the end of drilling. • An access agreement with relevant land owners is to be drafted and implemented once the EA has been issued. • Concurrent rehabilitation of drill sites • No permanent structures will be established on site. 	Neg Low	Neg Low
Fauna, Flora and Ecology						
Establishment of drilling sites and access routes.	Removal/ damage of natural vegetation	Fauna, Flora and Ecology	Construction	<ul style="list-style-type: none"> • Preference should be given to already disturbed areas, if possible. • No-go areas to be identified. • No prospecting to be conducted on ridges or valleys. • Environmental awareness training of all employees responsible for drilling. • Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. • Site selection aimed at minimising disturbance to natural vegetation. 	Neg Moderate	Neg Low

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
Accidental fires.		Fauna, Flora and Ecology	Construction, Operation & Closure	<ul style="list-style-type: none"> No smoking at the drilling sites. Code of conduct to include measures for the prevention of fires. Emergency equipment and procedures for fire fighting to be in place. Adhere to emergency procedures. 	Neg Moderate	Neg Low
Establishment of drilling sites and access routes.	Disturbance/ poaching of animals	Fauna, Flora and Ecology	Construction	<ul style="list-style-type: none"> Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. 	Neg Moderate	Neg Low
Movement of drilling contractors.		Fauna, Flora and Ecology	Construction, Operation & Closure	<ul style="list-style-type: none"> Drilling contractors are only allowed to move within the designated drilling area. Environmental awareness training should include poaching and disturbance of animals 	Neg Moderate	Neg Low
Disturbance caused by drilling footprint	Encroachment of Alien Invasive Plants		Construction, Operation & Closure	<ul style="list-style-type: none"> Monitor areas for proliferation of Alien Invasive Plants during operations and after rehabilitation has been undertaken Eradication of Alien Invasive Plants as required Disturbance must be minimized and only be allowed in demarcated areas 	Neg Moderate	Neg Low

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
Sensitive and Protected Areas						
Establishment of drilling sites and access routes.	Degradation and destruction of sensitive biodiversity	Biodiversity	Construction, Operation & Closure	<ul style="list-style-type: none"> • Preference should be given to already disturbed areas, if possible. • No-go areas to be identified. • No prospecting to be conducted on ridges or valleys. • Environmental awareness training of all employees responsible for drilling. • Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. • No activities to be conducted within the 100m buffer zones around water courses. • Site selection aimed at minimising disturbance to natural vegetation. • Limit disturbance in sensitive or densely vegetated areas and no vegetation clearance except for borehole access point in these sites. • The seed mix used for rehabilitation must take into account the dominant plant species of the area. 	Neg Moderate	Neg Low
Heritage Resources						

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
Drilling of boreholes will damage/destroy heritage resources in the area.	Cultural heritage resources may be found within the study area	Heritage Resources	Construction and Operation	<ul style="list-style-type: none"> A 50 meter buffer zone must be established around any heritage site observed during site establishment. 	Neg Low	Neg Low
Economic Development						
Employment and use of contractors and purchasing goods.	Contribution to the economy.	Economic Development	Construction and Operation	<ul style="list-style-type: none"> Preference to be given to the use of local employment, contractors and local suppliers. 	Pos Moderate	Pos Moderate
Dust and noise from prospecting activities.	Creation of nuisance and disturbance to surrounding activities.	Economic Development	Construction, Operation & Closure	<ul style="list-style-type: none"> Implement measures to minimize air quality and noise impacts. Surrounding neighbours and landowners must be allowed to raise issues and complaints associated with prospecting activities. Their issues must be addressed promptly. 	Neg Low	Neg Low
Visual and Sense of Place						
Visual intrusion due to drilling and prospecting activities	Loss of sense of place due to prospecting activities	Visual and Sense of Place	Construction and Operation	<ul style="list-style-type: none"> Implement measures to reduce the visual impacts of prospecting activities, i.e. rehabilitation of drill sites and access roads. 	Neg Moderate	Neg Low
Safety and Security						

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
Movement of drilling contractors and influx of workers	Increase in crime	Safety & Security	Construction and Operation	<ul style="list-style-type: none"> Drilling contractors not allowed moving outside of designated areas. Access of personnel related to the prospecting operations will only be allowed on approval by the project manager. All personnel that have access to the property will be provided with access cards. All personnel that have access to the property needs to be made visible. 	Neg Moderate	Neg Low
Overnight accommodation of drilling contractors		Safety & Security	Construction, Operation & Closure	<ul style="list-style-type: none"> Drilling contractors to be housed off the drilling property. 	Neg Moderate	Neg Low
Stakeholder Acceptability						
Prospecting activities is a predecessor to mining.	Prospecting on private property	Stakeholder Acceptability	Construction, Operation & Closure	<ul style="list-style-type: none"> Comply with the MPRDA & NEMA Implement and Comply with the EMP 	Neg Moderate	Neg Low
Prospecting activities. Mining right application.	Prospecting seen as a predecessor to mining and this raises a risk to various environmental impacts	Stakeholder Acceptability	Construction, Operation & Closure	<ul style="list-style-type: none"> An application for a mining right will require a separate public participation process and IAPs will be provided with the opportunity to raise their concerns. This report should form part of the feasibility study towards a mining right application to ensure the current 	Neg High	Neg Low

ASSESSMENT OF IMPACTS AND MITIGATION MEASURES					POTENTIAL IMPACTS (without mitigation)	RESIDUAL IMPACTS (with mitigation)
Activity	Potential Impact	Aspects Affected	Phase	Mitigation Measures / Enhancement Measures	Significance (Consequence + Probability)	Significance (Consequence + Probability)
				information and sensitivities identified in this process is considered		

The supporting impact assessment conducted by the EAP must be attached as an appendix, marked **Appendix 3**

k) Summary of specialist reports.

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

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
<p>No specialist studies were undertaken as the EAP was confident in the status of the proposed site. The project team consists of qualified environmental assessment practitioners that have sufficient experience to inform the report on potential impacts and the baseline environment. The EAP also considered the temporary nature and limited footprint of the proposed project drill sites.</p>			

I) Environmental impact statement

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

The environmental impacts associated with the proposed project are largely low to moderate with no high impacts anticipated. The most significant impacts are:

Impact	Significance	Comment	Mitigation
Negatively affecting the surface water quality. Disturbance of surface water resources.	<p>Before Mitigation Negative Moderate</p> <p>After Mitigation Negative Low</p>	Various non-perennial streams, wetlands and dams are located within the project area. Surface water is integral to operation of agricultural activities.	<ul style="list-style-type: none"> - 100 meter buffers will be established from any surface water resources. - Storm water diversion measures and containment of hazardous substances will be implemented. - Water will be recycled as far as possible using a closed loop sump system. - Adequate waste management practices should be implemented.
Negatively affecting the surface water quality. Disturbance of surface water resources.	<p>Before Mitigation Negative Moderate</p> <p>After Mitigation Negative Low</p>	Some areas are classified as irreplaceable CBA and may contain sensitive habitats.	<ul style="list-style-type: none"> - Preference should be given to already disturbed areas, if possible. - No-go areas to be identified. - No prospecting to be conducted on ridges or valleys. - Environmental awareness training of all employees responsible for drilling. - Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. - No activities to be conducted within the buffer zones around wetlands - Site selection aimed at minimising disturbance to natural vegetation.
Conflicting land uses (agriculture)	<p>Before Mitigation Negative Moderate</p> <p>After Mitigation Negative Low</p>	Drilling may potentially be conducted within croplands which may affect planting, ploughing and harvesting activities.	<ul style="list-style-type: none"> • Drilling sites must be selected to minimize disturbance of current land use. • Relevant agreements must be in place with landowners to define location and extent of drilling sites and rehabilitation measures that will be undertaken at the end of drilling. • An access agreement with relevant land owners is to be drafted and implemented once the EA has been issued. • Concurrent rehabilitation of drill sites. • No permanent structures will be established on site.

The nature of prospecting involves invasive drilling of sites not exceeding 15m x 20m. The drill sites are not fixed and can be relocated by 1-50 meters. Due to the flexibility of the drill sites and small size the key mitigation is to approve each site on environmental factors by a competent environmental officer. Each

drill site will be rehabilitated to its natural status before drilling. The success of the proposed mitigation is high.

(ii) Final Site Map

Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers .Attach as **Appendix 4**

Please see figure 14 and Appendix 4 in which the final drill site map is presented; including site sensitivities and their buffers. Please note the infrastructure of existing mining operations on the south-eastern and eastern boundary of the project area has not been considered until final agreement is sought with the mining entity.

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

Refer to the Table in Section i for the summary of impacts.

The most significant risks associated with the project are potential damage (pollution and physical disturbance) to water resources (wetlands, dams and streams) and terrestrial habitats. The project also has the potential to cause a change/conflict in land use and cause impacts on the sense of place due to noise generation for local residents. All these impacts can be prevented/minimised through proper planning and thorough visual surveys of sites targeted for prospecting. Positive impacts are associated with the brief creation of jobs and is considered of moderate to low significance. This has been assessed in terms of the prospecting operation on its own; however should this prospecting right be converted into a Mining Right, then the social benefits will be of moderate to high significance.

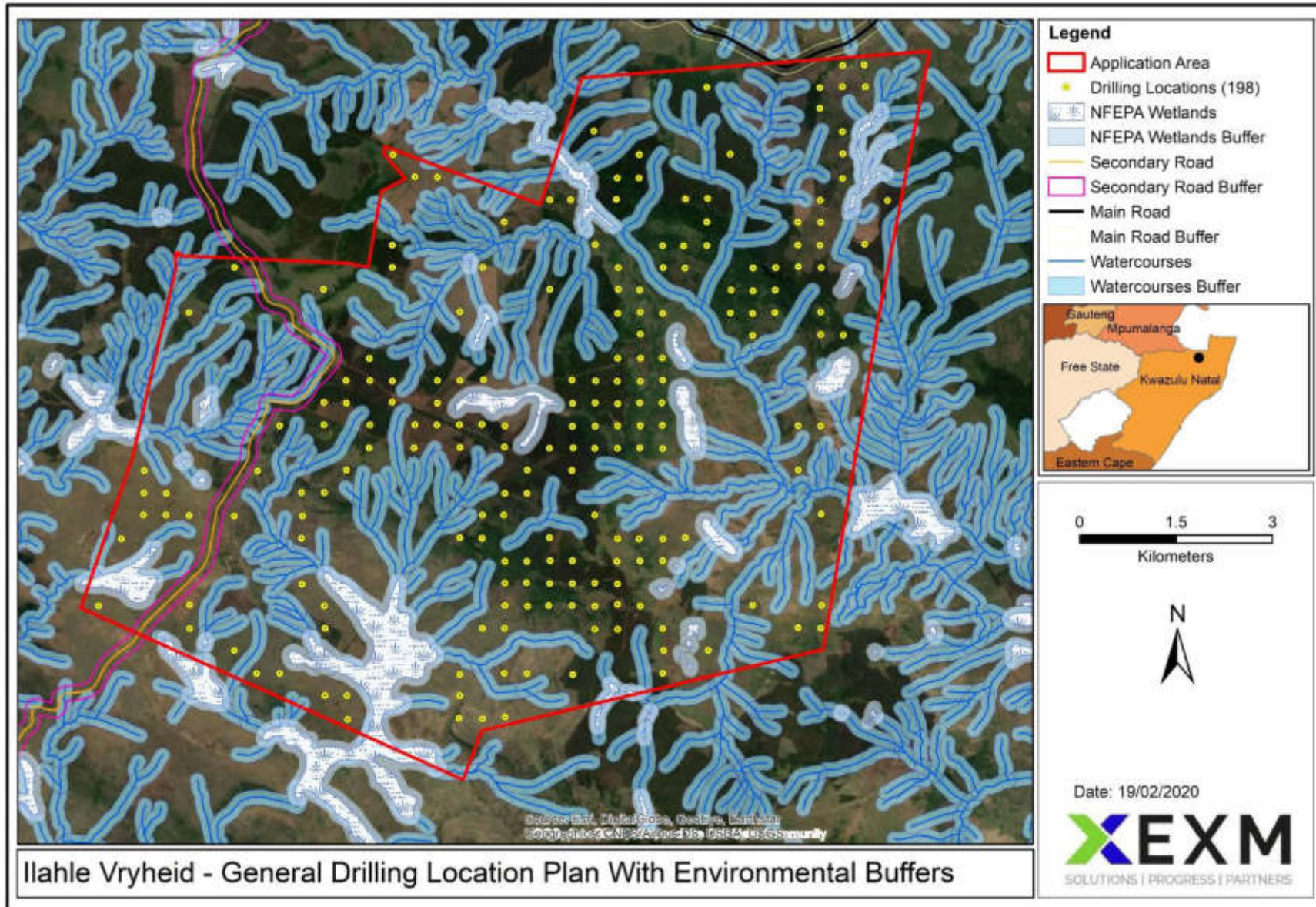


Figure 4: Final Drill Site Map and Sensitivities.

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 objectives of impact mitigation and management are to:

- Primarily pre-empt impacts and prevent the realisation of these impacts -PREVENTION.
- To ensure activities that are expected to impact on the environment are undertaken and controlled in such a way so as to minimise their impacts – MODIFY and/or CONTROL.
- To ensure a system is in place for treating and/or rectifying any significant impacts that will occur due to the proposed activity – REMEDY.
- Implement an adequate monitoring programme to:
 - Ensure that mitigation and management measure are effective.
 - Allow quick detection of potential impacts, which in turn will allow for quick response to issue/impacts.
 - Reduce duration of any potential negative impacts.

Environmental impact management outcomes are:

- Conduct prospecting activities responsibly and ensure operation is compliant with legislative requirements.
- Protect the biophysical environment as far as possible, specifically wetlands and riverine areas and any protected species observed on site.
- Protect the water resources in the area as far as possible.
- Ensure atmospheric pollution is kept to a minimum:
- Ensure adequate rehabilitation to allow continued grazing and crop cultivation land use.
- Ensure socially responsible activities.
- Protect historical and cultural sites if they are observed on site.

n) Aspects for inclusion as conditions of Authorisation.

Any aspects which must be made conditions of the Environmental Authorisation

- No activity is to occur within wetlands and their 100m buffer zones, within rivers and their 100m buffer zone / 1:100 year flood line without the necessary authorisation under NEMA and NWA.
- Ridges and valleys with natural vegetation must be avoided.
- Infrastructure, including powerlines and Telkom lines, and associated buffer zones must be avoided.
- Protected species must remain in situ until the necessary permits are obtained under NEM:BA.
- Heritage sites and 50m buffer zones will be preserved at all times unless the necessary permits are obtained under NHRA
- An access agreement with relevant land owners is to be drafted and implemented once the EA has been issued.
- Rehabilitation must be applied on an on-going basis (concurrent) and no sites must be left exposed for more time than necessary to obtain the necessary data.

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

(Which relate to the assessment and mitigation measures proposed)

At this stage the exact location of the invasive prospecting is not conclusive, due to the fact that the locations will be dependent on the findings of non-invasive techniques. This is not seen as a major gap as the lack of this knowledge has been worked into the EMP as well as the proposed conditions stipulated above. In general, the approach will be as follows for invasive prospecting:

- All water features (wetlands, non-perennial streams and dams) and associated buffers must be avoided by prospecting activities.
- Any heritage sites, including graves, and buffers must be avoided by prospecting activities.
- Any residential units must be avoided and appropriate buffers around residential units must be implemented.
- Activities must remain outside all wetland areas unless authorisation has been obtained under NEMA and NWA.

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.

The EAP believes that the authorisation of the activity should be granted. The prospecting sites will not cover large areas and the disturbance will not be significant.

The risks pertaining to the prospecting activity are minimal and can be easily mitigated by following the mitigation measures stipulated in the EMP, which will reduce the dsignificance of impacts to within acceptable levels and the bio-physical environmennt will easily recover.

ii) Conditions that must be included in the authorisation

- No activity is to occur within wetlands and their 100m buffer zones, within rivers and their 100m buffer zone / 1:100 year flood line without the necessary authorisation under NEMA and NWA.
- Ridges and valleys with natural vegetation must be avoided.
- Infrastructure, including powerlines and Telkom lines, and associated buffer zones must be avoided.
- Protected species must remain in situ until the necessary permits are obtained under NEM:BA.
- Heritage sites and 50m buffer zones will be preserved at all times unless the necessary permits are obtained under NHRA
- An access agreement with relevant land owners is to be drafted and implemented once the EA has been issued.
- Rehabilitation must be applied on an on-going basis (concurrent) and no sites must be left exposed for more time than necessary to obtain the necessary data.

q) Period for which the Environmental Authorisation is required.

Five (5) years

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 applicant representative, Mbongiseni Alfred Sibisi, hereby confirms the undertaking to ensure implementation and compliance with the Basic Assessment Report and Environmental Management Programme.

s) Financial Provision

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

R 91 904,00 (excl VAT)

i) Explain how the aforesaid amount was derived.

A Final Rehabilitation, Decommissioning and Mine Closure Plan (**Appendix 6**) has been developed for the site in terms of the NEMA Financial Provision Regulations which contains details regarding the actions for rehabilitation as well as detailed description of the methodology for calculating the financial provision. A latent environmental risk report is also attached as **Appendix 7**.

The rehabilitation liability has been calculated by EXM according to regulation 6 of the financial provision for prospecting, exploration, mining or production operations regulations (GNR 1147, November 2015). These regulations prescribe the required minimum content as follows: "a detailed itemisation of all activities and costs, calculated based on the actual costs of implementation of the measures required." The regulation further outlines that closure cost estimation must include the following:

1. An explanation of the closure cost methodology;
2. Auditable calculations of costs per activity or infrastructure; and
3. Cost assumptions;

The model used to develop the rehabilitation cost for the Ilahle Vryheid Prospecting Area was developed in Microsoft Excel. An itemised list of all the required actions was included, which considered measurements of the areas to be rehabilitated. The rates for earthworks were calculated based on site conditions and typical plant hire rates.

An appropriately sourced contractor rate for 2020 was applied to each rehabilitation action to be implemented. These rates were obtained from recent projects undertaken by EXM and contractor sourced rates.

As stated in Section 12.1, no more than six boreholes will be active/disturbed at any time and rehabilitation of the first two boreholes will commence once prospecting commences at the next two sites. The project is committed to continuous rehabilitation on completion of each borehole. It is not anticipated that more

than six boreholes will require rehabilitation at any one time and therefore the calculations for the quantum reflects this commitment.

The liability calculation sheets have been developed to provide as much information as possible to indicate the actions, conditions and assumptions related to each cost item. The actual quantities, rates and liability calculations are provided in the calculation sheets. The rates used for the calculation of the rehabilitation liability can be updated to improve confidence and the level of accuracy required, by feeding this back into the rate calculations.

The quantum has been aligned with the rehabilitation and allows for the site to be rehabilitated back to the original status of the site. This will include:

- 1) Ensure all pollution sources are removed from site.
- 2) Ensure all infrastructure is removed from site.
- 3) Ensure that the existing land use can continue.
- 4) Ensure sustained vegetation growth.
- 5) Ensure that the site is stable and safe for humans and animals.

The activities considered during calculation of the quantum are based on drilling 236 boreholes within the project area. The project is committed to continuous rehabilitation on completion of each borehole. **It is not anticipated that more than six boreholes will require rehabilitation at any one time and therefore the quantum reflects this commitment.**

Existing roads will be used as far as possible and it is not possible to identify any new access roads at this stage as its route will be determined in conjunction with the landowner and activities on the property at that time. No other infrastructure, offices or housing, will be present within the prospecting area and all employees will be housed in nearby towns. Vegetation establishment is monitored after the first rain to ensure sustainability in the rehabilitation efforts.

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 may be).

The provision forms part of the capital expense of the project and is not included in the operational budget allocated in the prospecting works programme. Allowance has been made for environmental reporting in the operational budget.

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** .

The proposed prospecting activities are expected to be limited and thus opportunities for employment will be low. However, consideration will be given to local procurement of goods and services where practicable. There is some concern that the introduction of the prospecting workforce into the farm communities can result in disputes. The prospecting workforce is not to interfere with any farm labourers or communities. No persons are to reside on the properties during prospecting activities.

(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)(j)(vi) and (vii) of that Act, attach the investigation report (no report) and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6. and 2.12. herein).

Section 3(2) of the National Heritage Resources Act, No. 25 of 1999 provides a description of all items that are classified as national estate. The EAP has evaluated the list in comparison with the project site. The results of the assessment are provided below with recommendations to the environmental officer where there was uncertainty.

National Estate Item	Present	Comment
(a) places, buildings, structures and equipment of cultural significance;	Possible	Buildings/farm houses are present on site and must be avoided by prospecting activities.
(b) places to which oral traditions are attached or which are associated with living heritage;	N	
(c) historical settlements and townscapes;	N	
(d) landscapes and natural features of cultural significance;	Unknown	
(e) geological sites of scientific or cultural importance;	Unknown	
(f) archaeological and palaeontological sites;	Unknown	
(g) graves and burial grounds, including—	Possible	No grave yards have been observed on site. Any graves detected during project initiation will be avoided and prospecting sites will be placed away from any such sites.
(i) ancestral graves;		
(ii) royal graves and graves of traditional leaders;		
(iii) graves of victims of conflict;		
(iv) graves of individuals designated by the Minister by notice in the Gazette;		
(v) historical graves and cemeteries; and		
(vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);		
(h) sites of significance relating to the history of slavery in South Africa;	N	
(i) movable objects, including—		

National Estate Item	Present	Comment
(i) objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens;	N/A	
(ii) objects to which oral traditions are attached or which are associated with living heritage;	N	
(iii) ethnographic art and objects;	N	
(iv) military objects;	N	
(v) objects of decorative or fine art;	N	
(vi) objects of scientific or technological interest; and	N/A	
(vii) books, records, documents, photographic positives and negatives,	N/A	

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

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

Section 24(4)(b)(i) of the Act requires the EAP to conduct an investigation of the potential consequences of impacts of alternatives to the activity on the environment and assessment of the significance of those potential consequences. Alternatives to the project are limited to the location of drill sites within the project area. Drill sites are not fixed and will only be confirmed during the desktop study if the prospecting right is awarded. The EAP has however provided a grid of possible drill site locations. The drill site locations were amended on consideration of watercourses and biodiversity. This consideration has given value to alternative sites by removing sites that pose a high significance impact to the project.

IAPs raised that that the application is in direct conflict with existing mining rights for coal (of which mining is already being undertaken). DMR need to ensure that a workable agreement is sought between all parties that hold mineral rights should this application be accepted. Special consideration needs to be made on the economics of the project, its impact on the water regime and protected areas.

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

1) Draft environmental management programme.

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

Name of The Practitioner: Trevor Hallatt
Tel No.: 071 689 2229
Fax No.: 086 407 9911
Email address: trevor@exm.co.za

In terms of section 13 (2&3) of the 2014 National Environmental Management Act EIA regulations (GNR. 982 of 2014):" In the event where the EAP or specialist does not comply with subregulation (1)(a) (which is the independence clause), the proponent or applicant must, prior to conducting public participation as contemplated in chapter 5 of these Regulations, appoint another EAP or specialist to externally review all work undertaken by the EAP or specialist, at the applicant's cost" The external reviewer however needs to be independent. To satisfy the above requirements Ilahle appointed EXM Advisory (Pty) Ltd as the Independent Environmental Assessment Practitioners ("EAP") to generate the BA Report and to oversee the PPP for the Prospecting Right Application.

Please refer to Appendix 1 for a detailed CV.

- 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 impacts and aspects have been compiled into the table below as reflected in the impact assessment contained in section 1(h & j) of Part A.

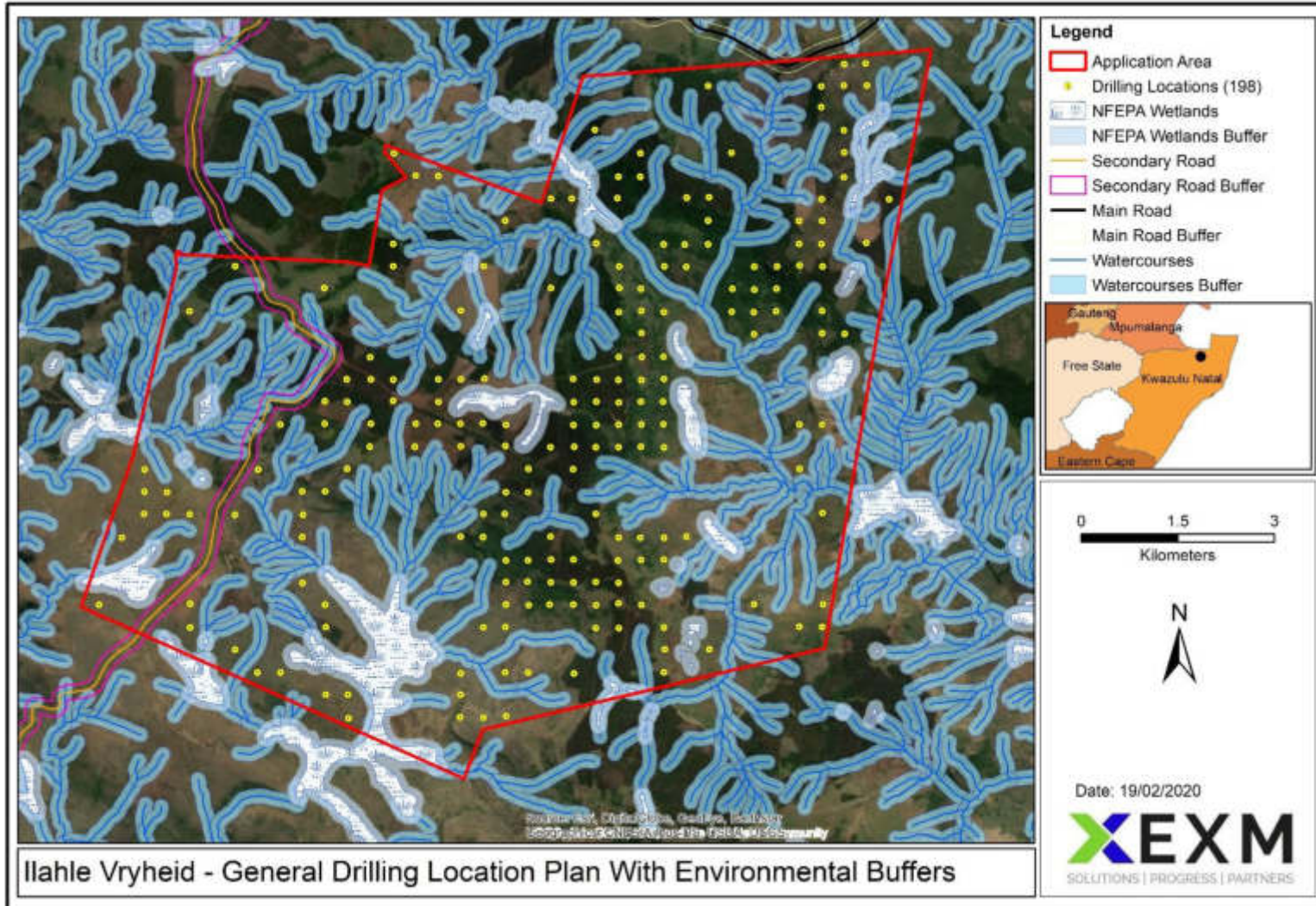
Impacts and Aspects			
Activity	Potential Impact	Aspects Affected	Phase
Leveling of drilling sites.	Change in natural topography of the site.	Topography	Construction
Removal of geological core	Creation of conduits between geological strata.	Geology	Operations
Erosion from soil disturbance at drilling sites.	Potential loss of topsoil.	Soils	Operations
Erosion from soil disturbance on access roads.	Potential loss of soil resource.	Soils	Construction & Operation
Oil and diesel spills due to inappropriate storage, vehicle maintenance and washing operations.	Risk of soil contamination.	Soils	Construction, Operation and Closure
Spillage from fuels, oils and lubricants.	Contamination of surface water.	Surface Water	Construction, Operation and Closure
Increase in sediment loads as a result of erosion and heavy rainfall.		Surface Water	Construction, Operation and Closure
General and human waste.		Surface Water	Construction, Operation and Closure
Seepage of fuels, oils and lubricants.	Contamination of ground water.	Groundwater	Construction, Operation and Closure
Cross contamination of aquifers due to borehole construction.		Groundwater	Operation & Closure
Machinery and drilling operations. Movement of vehicles.	Increase in ambient noise levels. Disturbance to people and animals.	Noise	Construction, Operation and Closure
Exhaust fumes from vehicles and machinery related to prospecting activities.	Release of gaseous emissions.	Air Quality	Construction, Operation and Closure
Vehicles travelling on gravel roads.	Dust fallout and fine particular matter emissions.	Air Quality	Construction, Operation and Closure
Intrusion due to drilling and prospecting activities in an area where agricultural and mining land uses are prominent.	Land use conflict.	Land Use	Construction & Operation
Land clearing and transformation.	Reduction in land capability.	Land Use	Construction

Impacts and Aspects			
Activity	Potential Impact	Aspects Affected	Phase
Establishment of drilling sites and access routes.	Removal/ damage of natural vegetation	Fauna, Flora and Ecology	Construction
Accidental fires.		Fauna, Flora and Ecology	Construction, Operation & Closure
Establishment of drilling sites and access routes.	Disturbance/ poaching of animals	Fauna, Flora and Ecology	Construction
Movement of drilling contractors.		Fauna, Flora and Ecology	Construction, Operation & Closure
Establishment of drilling sites and access routes.	Degradation and destruction of sensitive biodiversity	Biodiversity	Construction, Operation & Closure
Drilling of boreholes will damage/destroy heritage resources in the area.	Cultural heritage resources may be found within the study area	Heritage Resources	Construction and Operation
Employment and use of contractors and purchasing goods.	Contribution to the economy.	Economic Development	Construction and Operation
Dust and noise from prospecting activities.	Creation of nuisance and disturbance to surrounding activities.	Economic Development	Construction, Operation & Closure
Visual intrusion due to drilling and prospecting activities	Loss of sense of place due to prospecting activities	Visual and Sense of Place	Construction and Operation
Movement of drilling contractors and influx of workers	Increase in crime	Safety & Security	Construction and Operation
Overnight accommodation of drilling contractors		Safety & Security	Construction, Operation & Closure
Prospecting activities is a predecessor to mining.	Prospecting on private property	Stakeholder Acceptability	Construction, Operation & Closure

a) Composite Map

(Provide a map (**Attached as an Appendix 4**) 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 should be avoided, including buffers)

Please also refer to Appendix 4



b) 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)

A Final Rehabilitation, Decommissioning and Mine Closure Plan (**Appendix 6**) has been developed for the site in terms of the NEMA Financial Provision Regulations which contains details regarding the actions for rehabilitation as well as detailed description of the methodology for calculating the financial provision. A latent environmental risk report is also attached as **Appendix 7**.

The closure objective allows for the site to be rehabilitated back to the original status of the site. This will include:

1. Ensure all pollution sources are removed from site.
2. Ensure all infrastructure is removed from site.
3. Ensure that the existing land use can continue.
4. Ensure sustained vegetation growth.
5. Ensure that the site is stable and safe for humans and animals.

Vegetation establishment is monitored after the first rain to ensure sustainability in the rehabilitation efforts.

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

Only a small volume of water will be required during drilling. Approximately 50m³ of water will be used per day for a maximum of 90 days. This amounts to a total maximum of 4 500 m³. Water will also be brought onto site for potable use, this is estimated at 25 litres per person/day.

- iii) **Has a water use licence been applied for?**

No water use licence or water use authorisation? has been applied for. The project aims to utilise water from existing lawful users, an irrigation board or water services provider. Should water be required from a water resource if the above is unsuccessful a water use registration will be applied for.

No watercourses will also be impacted by the activity and an appropriate buffer has been created around all watercourses. A WUL will have to applied for or registration submitted if the activities trigger Section 21 (c) or (i).

- iv) **Impacts to be mitigated in their respective phases**

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

Objectives

This section provides for the environmental management of all prospecting activities to be undertaken in the prospecting area. The objective of this section is to detail actions required to address the potential impacts resulting from the identified activities to be undertaken during the establishment, operation and rehabilitation of drilling sites within the prospecting right area. This section elaborates on the implementation of the mitigation measures documented in the detailed impact assessment.

Environmental Impacts

The aim of this section is to reduce the significance of negative impacts and enhance positive impacts as far as practicably possible. The overall objectives are thus to:

- Minimize disturbance on the physical environment including the protection of soil, surface water and groundwater during drilling operations;
- Minimize disturbance to the ecological environment and prevent disturbance to sensitive sites;
- Prevent disturbance of sites of cultural and historical importance;
- Minimize disturbance to current land uses and neighbouring activities;
- Provide for a forum for consultation with landowners and affected parties; and
- Facilitate socio-economic development where practicable.

Rehabilitation

Prospecting activities are to be undertaken in a manner which facilitates site rehabilitation and the restoration of pre-disturbance land capabilities. The primary objectives for rehabilitation include the:

- Removal of all infrastructure and materials introduced to site;
- Removal and disposal of all waste;
- Promotion of the rapid re- establishment of natural vegetation and the restoration of site ecology;
- Facilitation of the re-establishment of the land use and land capability to as close as reasonably possible to the original conditions.

Action Plan

The various actions that need to be implemented, to ensure that the environmental objectives are met, are detailed in this section. The actions are aimed at preventing or mitigating environmental impacts and implementing the rehabilitation plan. The management actions are presented in a manner that ensures that they can be audited during the performance assessment programme.

Time Schedule

Time-frames detail the implementation schedule of management actions. The successful implementation and commencement within the timeframes is to be monitored as part of the performance assessment programme.

Requirements for Implementation

Additional measures that will need to be put in place to allow for the successful implementation of the action plan are listed where relevant. The table below presents the actions that need to be implemented to address the potential impacts resulting from establishment, operation and rehabilitation of drilling sites within the prospecting right area. The management actions are stated presented in a manner that ensures that they can be audited during the performance assessment programme. Once approved by the relevant authorities, the provisions of the EMP are legally binding on the project applicant and all its contractors and suppliers.

ACTIVITIES (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc	PHASE Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure).	SIZE AND SCALE of disturbance (volumes, tonnages and hectares or m ²)	MITIGATION MEASURES (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)	TIME PERIOD FOR IMPLEMENTATION Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required.
Drill site clearance	Construction	300m ²	<ul style="list-style-type: none"> - ECO to approve drill site location considering biodiversity, water resources, heritage and land use - Consult with landowner on drill site location demarcate drill site for safety - create an upstream berm to divert clean stormwater around the site - create a downstream berm to contain any dirty water 	<p>Compliance with SAHRA directive and Heritage Resources Act</p> <p>Implementation of the Impact management hierarchy to avoid, minimise, mitigate and rehabilitate</p> <p>Compliance with GN704 of the National Water Act</p>	<p>Prior to construction</p> <p>During construction</p> <p>To be installed during construction and removed after rehabilitation</p>
Establish water recycling sumps	Construction	2m ²	<ul style="list-style-type: none"> - remove topsoil where sumps will be placed for rehabilitation - line drill sumps with plastic to limit groundwater seepage 	<ul style="list-style-type: none"> - to meet rehabilitation standards - to limit groundwater contamination 	During construction
Clearance of access roads	Construction	~800m ²	<ul style="list-style-type: none"> - ECO to approve access road route - limit clearance to two lane tracks 	-Implementation of the Impact management hierarchy to avoid, minimise, mitigate and rehabilitate	During construction
Establish drill site	Construction	300m ²	<ul style="list-style-type: none"> - Chemical toilets need to be placed in close proximity to the drill site - All chemicals and fuels need to be stored in a bunded area - bins for general waste need to be provided - signage indicating hazards need to be placed at the entrance of the site - drill rig operators and labourers need to be provided with identification cards - no labourers are to be housed on site 	Occupation Health requirement Management of hazardous substances	During construction
Operation of the drill site	Operations	As above	- General waste needs to be collected and disposed of at a licensed facility	- impact mitigation	During operations

ACTIVITIES (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc	PHASE Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure).	SIZE AND SCALE of disturbance (volumes, tonnages and hectares or m ²)	MITIGATION MEASURES (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)	TIME PERIOD FOR IMPLEMENTATION Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required.
			<ul style="list-style-type: none"> - during rainfall events the drilling sumps need to be covered with plastic - no employees are allowed outside of the drill site barricading without permission from the site manager - water is to be sourced from existing lawful users - propsecting activities are only permitted during daytime hours - vehicles are not permitted to exceed 30km/h within the drill properties 		
Decommissioning and rehabilitation of the drill site Access roads	Rehabilitation	300m ² ~ 800m ²	<ul style="list-style-type: none"> - All infrastructure needs to be removed from the site - All waste and spillage needs to be cleaned and disposed of appropriately - plastic from drill sumps need to be removed - Chemical toilets need to be cleaned before they can be moved to the following drill site - The drill hole must be capped or sealed to limit water ingress and ensure safety for humans and animals - vehicles are not permitted to exceed 30km/h within the drill properties 	- Rehabilitation standards and objectives	Rehabilitation

A more detailed EMP has also been developed for the project that will be used in conjunction with this table. The EMP is included as Appendix 5

v) 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.

A Final Rehabilitation, Decommissioning and Mine Closure Plan (**Appendix 6**) has been developed for the site in terms of the NEMA Financial Provision Regulations which contains details regarding the actions for rehabilitation as well as a detailed description of the methodology for calculating the financial provision. A latent environmental risk report is also attached as **Appendix 7**.

Ilahle 's closure vision for the Vryheid Prospecting area is:

“To render a safe, stable and non-polluting environment aligned to regulatory and regional requirements, and ultimately provides a sustained post-closure ecosystem service or livelihood, leaving behind a positive post-mining legacy for the receiving community and our shareholders”.

The project closure and rehabilitation vision is founded on the following principles:

- Ensure areas are stable and safe for local communities.
- Sustainable exploitation of natural resources without limiting the ability of future generations to live off the same land.
- Limiting to the greatest extent possible, the disruption of natural ecosystems, and where necessary and possible, restoring the environment to its original state (baseline environment) after the cessation of activities. Alternatively, to restore all land to a status and land-use agreed upon between Ilahle and the relevant authorities, communities and other stakeholders.
- To ensure that the safety of people and animals is not compromised at any stage during and after any activities.

The closure objective allows for the site to be rehabilitated back to the original status of the site.

This will include:

- Ensuring all pollution generating activities are eliminated
- Ensuring all infrastructure is removed from site
- Ensuring that the existing land use can continue.
- Ensuring that the site is safe for humans and animals.

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

The basic assessment report and environmental management programme is provided to IAPs for review and comment for a 30-day period. The objective to rehabilitate the land that has been disturbed will be communicated to IAPs during the public consultation process, as included in the final closure and rehabilitation plan. The landowners will be allowed to comment on the measures that will be used for the rehabilitation of the site. Please refer to Appendix 2 for details regarding the PPP process.

- (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.**

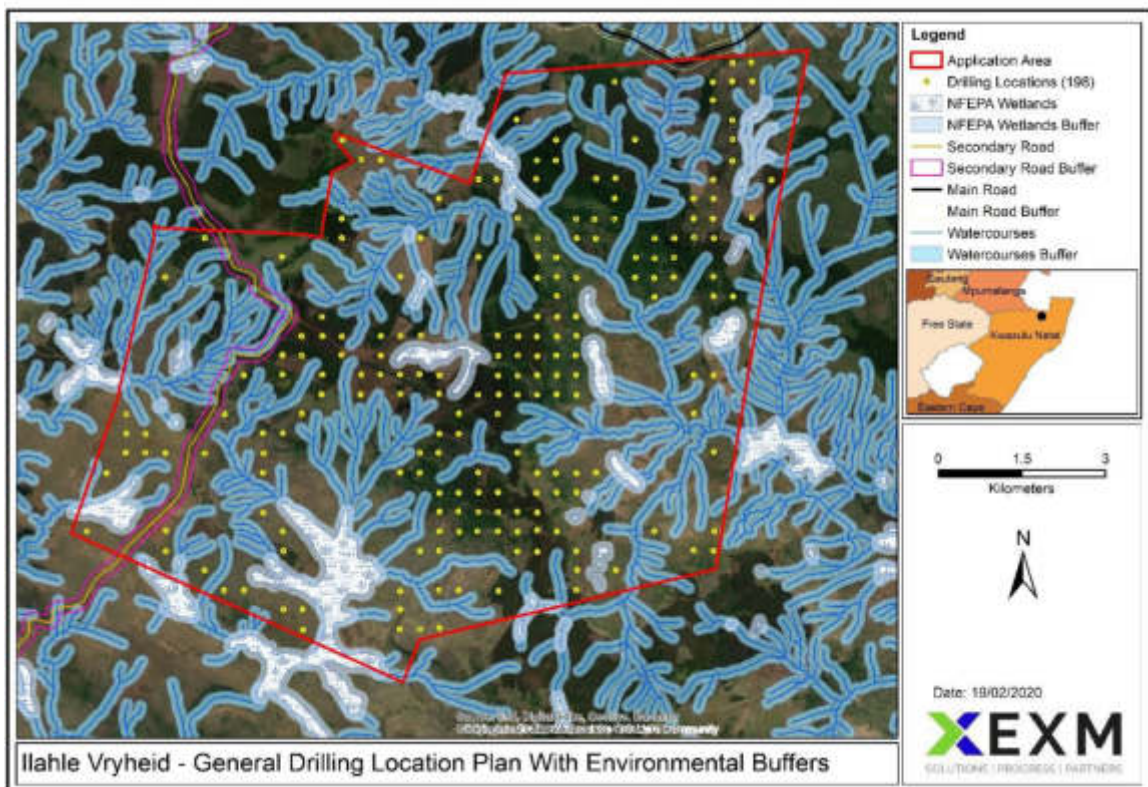


Figure 5 : Drill Site Map

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

The final closure and rehabilitation plan (**Appendix 6**) aims to provide a project site that is similar to the pre-prospecting environment through the removal of infrastructure, capping of boreholes and re-vegetating of disturbed areas (where not within cultivated lands). The closure plan makes provision for the re-shaping and stabilisation of the sites to ensure a safe environment for communities. The rehabilitation plan is therefore aligned with the closure objectives.

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

The total provision amounts to the number of holes requiring rehabilitation at any given moment. This ensures that should the project application become insolvent prematurely the costs of rehabilitation can be recovered. Existing roads will be used as far as possible and it is not possible to identify any new access roads at this stage as the routes will be determined in conjunction with the landowner and activities on the property at that time. No other infrastructure, offices or housing, will be present within the prospecting area and all employees will be housed in nearby towns. The quantum as calculated using the Department's guideline as provided in the Table below.

Ilahle Vryheid - Unplanned Closure Cost @ February 2020							
Company:	Ilahle 4 KZN (Pty) Ltd						
Mining Right:	KZN 30/5/1/1/2/10921 PR						
Application area:	Vryheid						
Prepared by:	EXM Advisory Services (Pty) Ltd						
Item	Description	Calculation per drilling site			Calculation for all applicable sites		Comments
		Unit	Quantity	Rate	Boreholes	Amount	
1	Sealing of borehole with cement	Cement seal	1	R 2 700,00	6	R 16 200,00	Based on contractor costs per borehole. Only three sites have boreholes present.
2	General surface rehabilitation						
2,1	Travelling to site	Travelling cost	700	3,61		R 2 527,00	Based on AA rates
2,2	Physical removal of weeds and invasive species	Man hours	5	R 250,00	6	R 7 500,00	Assume 5 man hours per site including removal.
2,3	Disposal of removed plants	Kg	300	R 0,50	6	R 900,00	Rate based on municipal rate for waste disposal.
2,4	Insitu remediation of hydrocarbon spills	20kg bag absorbent material	1	R 395,00	6	R 2 370,00	According to actual cost of product
2,5	Removal of drill sludge residue	Man hours	6	R 250,00	6	R 9 000,00	Assume 6 man hours per site, including removal.
2,6	Disposal of sludge residue (travelling)	Kg	500	R 0,50	6	R 1 500,00	Rate based on municipal rate for waste disposal.
2,7	Ripping of compacted areas	Man hours	5	R 250,00	6	R 7 500,00	Assume 5 man hours per site
2,8	Fertilization and seeding	Seed mix and fertiliser	1	R 1 650,00	6	R 9 900,00	Purchase and placement of organic compost or artificial fertiliser (1 m3 per site)+ 3 man hours per borehole+ transport
2,9	Brushpacking	Man hours	5	R 250,00	6	R 7 500,00	Assume 5 man hours on site

Ilahle Vryheid - Unplanned Closure Cost @ February 2020								
Company:	Ilahle 4 KZN (Pty) Ltd							
Mining Right:	KZN 30/5/1/1/2/10921 PR							
Application area:	Vryheid							
Prepared by:	EXM Advisory Services (Pty) Ltd							
Sub Total (2,1 - 2,9)						R 48 697,00		
3	Placement of drill socks to soak any hydrocarbons	Per absorbent sock	2	R 980,00	6	R 11 760,00	Assume 2 drill sock per hole is required.	
4	Monitoring and maintenance of rehabilitated sites including:							
4,1	Site inspection	3,61	700			R 2 527,00	Based on AA rates	
4,2	Ripping of compacted areas	Man hours	5	R 250,00	3	R 3 750,00	Assume 5 man hours per site	
4,3	Physical removal of weeds and invasive species	Man hours	5	R 250,00	3	R 3 750,00	Assume 5 man hours per site including removal.	
4,4	Disposal of removed plants	Kg	300	R 0,30	3	R 270,00		
4,5	Fertilization and seeding	Seed mix and fertiliser	1	R 1 650,00	3	R 4 950,00	Purchase and placement of organic compost or artificial fertiliser (1 m3 per site)+ 3 man hours per borehole+ transport	
Sub Total (4,1-4,5)						R 15 247,00		
					SUB TOTAL		R 91 904,00	
						Add 15% VAT	R13 785,60	
					GRAND TOTAL (INCL. VAT)		R105 689,60	

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

The applicant, Ilahle 4 KZN (Pty) Ltd, hereby commits to undertaking to provide the calculated amount of **R 91 904,00 (excl VAT)** in terms of the financial provisioning regulations, 2015 Published under Government Notice R1147 (GN R. 39425 of 2015).

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

- c) Monitoring of Impact Management Actions
- d) Monitoring and reporting frequency
- e) Responsible persons
- f) Time period for implementing impact management actions
- g) 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
Camp site establishment	Disturbance of vegetation Hazardous substance spillage Noise and dust generation	Pre-site establishment and approval by EO Hazardous substance handling, storage and spill management audit Complaint register	Project environmental officer Site manager Project environmental officer	Prior to site establishment (once off) During operations and closure (monthly) During operations and closure (continuous)
Drill site establishment, moving and rehabilitation	Disturbance of vegetation Contamination of ground and surface water Disturbance of heritage resources	Pre-site establishment risk assessment Visual assessment Pre-site establishment risk assessment Pre-site establishment risk assessment	Project environmental officer Project environmental officer Project environmental officer	Prior to site establishment (once off) During operations and closure (bi-monthly) Prior to site establishment (once off)

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>Land use conflicts</p> <p>Noise and dust generation</p> <p>Rehabilitation sustainability</p>	<p>Complaint register</p> <p>Rehabilitation closure report</p>	<p>Project environmental officer</p> <p>Project environmental officer</p> <p>Project environmental officer</p>	<p>Prior to site establishment (once off)</p> <p>During operations and closure (continuous)</p> <p>Post closure</p>
Entire operational site	All activities and impacts identified	Auditing all site activities in compliance with the management commitments	Project environmental officer	During life of project (monthly)

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

A performance assessment will be undertaken as stipulated in the Environmental Authorisation or relevant legal requirements. The performance assessment will be conducted by an external consultant throughout the life of prospecting as required under NEMA. This is conducted to assess the adequacy and compliance to the EMP, EA and any additional? relevant legislation.

i) Environmental Awareness Plan

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

The Environmental Manager, Site Manager and Prospecting Manager must be conversant in environmental legislation, with special reference to the MPRDA, NEMA and the NWA.

The contractor / driller will be responsible for training its staff in terms of general environmental awareness. This will include basic training on the contents of this EMP; and will be conducted prior to commencement of prospecting activities. The aim of the environmental awareness training will be to highlight the potential impacts of the prospecting activities, and to highlight no-go areas.

The contractor / driller will ensure that records are kept of all training sessions / inductions. The Environmental Manager will monitor these records and undertake regular follow ups.

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

Training, as detailed above, will address the specific measures and actions as listed in the EMP and also conditions of the EA. In this way the prospecting team will be provided the knowledge required to conduct the prospecting activities without resulting in environmental non-compliance, the liability of which would lie with Ilahle. Secondly, informing the prospecting team of the EMP will also assist the team in identifying if an impact is likely to occur / has occurred and communicate this appropriately to the Environmental Manager.

In order for appropriate action to be taken, a proper communications network and reporting protocol must be established, with the prospecting team and the site manager reporting all environmental issues to the Environmental Manager and the all social issues to the Social Manager.

**j) Specific information required by the Competent Authority
(Among others, confirm that the financial provision will be reviewed annually).**

- None specified

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 ;
- 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:

EXM Advisory Services (Pty) Ltd

Name of company:

2020/02/16

Date:

Appendices

- Appendix 1: EAP CV
- Appendix 2.1: IAP Database
- Appendix 2.2: Notification Letter of Project
- Appendix 2.3: Proof of Site Notices
- Appendix 2.4: Proof of Newspaper Advert
- Appendix 2.5: Notification letter of BAR review & Responses
- Appendix 3: Environmental Impact Assessment
- Appendix 4: Final Drill Site Layout
- Appendix 5: Supplementary Environmental Management Plan
- Appendix 6: Final Rehabilitation, Decommissioning and Mine Closure Plan
- Appendix 7: Latent Environmental Risk Report.

-END-

APPENDIX 1: EAP CV

Curriculum Vitae Trevor Hallatt



Profession: Environmental Consultant

Education: Masters Degree in Environmental Management

Registrations/
Affiliations: South African Council for Natural Scientific Professions
Registration nr: 300123/15

Experience 9 years

ID number: 8706245033083

Contact nr. +27 82 674 1392

E-mail address twhallatt@gmail.com

Specialisation: Environmental Impact Assessments; Environmental Management Programmes; Waste Licence Applications; Water Use Licence Applications; Atmospheric Emissions Licence Applications; Environmental Legal Auditing; Environmental Management System Implementation and Audits.

1. Expertise

Trevor Hallatt has been involved in the field of environmental management for the past 9 years. His expertise includes:

- Environmental Impact Assessment, including full EIA and Scoping as well as Basic Assessments;
 - Generation of Environmental Management Programmes;
 - Water Use Licence Applications, Waste Management Licence Applications and Atmospheric Emissions Licence Applications;
 - Legal Compliance Management and Environmental Control Officer related duties;
 - Auditing of Environmental Authorisations;
 - Working Experience in Geographical Information Systems;
 - Environmental Management System (ISO 14001) Audits and Implementation;
 - Environmental Risk Assessment;
 - Public and government consultation; and
 - Short course development and presentation.
-

2. Employment Record

- 2015 – present:

Zantow Environmental Consulting Services (Senior Environmental Consultant)

- 2010 – 2014

Centre for Environmental Management (North-West University) (Junior Environmental Consultant)

3. Education

- B.Sc. Degree in Geography, Zoology and Tourism
- Honours degree in Environmental Management (obtained best student award)
- Masters Degree in Environmental Management (*Cum Laude*)
- Short courses (Risk Assessment, Environmental Control Officer, EMS, Auditing, Environmental Legislation, Rehabilitation)

4. Publications:

HALLATT, TW, RETIEF, FP and SANDHAM, LA. (1989): "The Quality of Biodiversity Inputs to EIA in Areas with High Biodiversity Value — Experience from the Cape Floristic Region, South Africa". *Journal of Environmental Assessment Policy and Management (JEAPM)* 2015; 17(3): 1-26.

5. Experience

5.1 Environmental Assessment Practitioner

Acted as Environmental Assessment Practitioner (EAP) for the legal processes to obtain Environmental Authorisations for the following projects:

- Vereeniging Refractories Elgin Operations Waste Management Licence;
- Vereeniging Refractories Hammanskraal Waste Management Licence and EMPr amendment;
- ArcelorMittal full EIA and Scoping as well as BAR for the decommissioning of the Existing Metallurgical Disposal Site and the Construction of a New Class B Disposal Site;
- Pinnacle Metals Waste Management and AEL application;
- Bumatech Expansion Project Basic Impact Assessment Process;
- TerraNova Ceramics Atmospheric Emissions Licence and full EIA;
- Ceramic Industries Warehouse Development Basic Impact Assessment;
- Ceramic Industries Phoenix Factory Atmospheric Emissions Licence and full EIA;
- ArcelorMittal Vanderbijlpark Galvanising Line Conversion to Combi-Line Basic Impact Assessment;
- Universal Oil Solutions Waste Management Licence Application;
- Review of Various Mining Prospecting Basic Assessment Applications;
- NEMA Section 24G Applications for the Eco Energy Trading Roodekop and Brakpan Sites;
- Basic Assessment for the Development of a Coal Siding near Bronkhorstspuit;
- Full EIA for a Photovoltaic Solar facility near Middleburg, Eastern Cape;
- Involved in 15 Waste Management Licence Applications for landfill sites across the North-West Province;
- Involved in the Atmospheric Emissions Licence Application and full EIA for a Medical Waste Incinerator in Waltloo, Pretoria.
- Columbus Stainless Basic Assessment for the Storage of Hazardous Substances (current); and
- SA Tank Terminals Waste Management Licence Application.

5.2 Water Use Licence Applications

- Ceramic Industries Phoenix, Samca and Gryphon Factories (respective);
- Cape Gate Vanderbijlpark; and
- Danone Southern Africa (current).

5.3 Environmental Compliance Auditing

Conducted audits to assess compliance to a variety of Environmental Authorisations for the following organisations:

- ArcelorMittal Vanderbijlpark, Vereeniging and New Castle;
- AfriSam Vanderbijlpark;
- Retromin Refractories in Meyerton;
- Cape Gate;
- Bumatech;
- Future Coal;
- Mooiriver Mall in Potchefstroom; and
- North-West University.

5.3 Environmental Management System (EMS) Auditing and Implementation

Conducted EMS Audits in terms of ISO 14001:2004/15 for the following organisations:

- AfriSam Vanderbijlpark and Roodekop;
- Camden and Tutuka Power Stations; and
- M-Tec Vanderbijlpark.

Involved in EMS implementation projects for the following organisations:

- Sishen Iron Ore Mine;
- AfriSam Vanderbijlpark and Roodekop (new ISO 14001:2015 standard); and
- Ceramic Industries Vereeniging.

5.4 Environmental Risk Assessment

- Assistance with closing out of risk/impact/aspect related findings (Camden Power Station)
- SHERQ risk register review and rectification for Assmang - Beeshoek Iron Ore Mine
- Environmental Risk Assessment in the Banking Sector (ABSA)
- Assisted in chemical risk assessments for Sishen Iron Mine and Koffiefontein Diamond Mine

5.5 Short Course Development and Delivery

Development of course material (presentations, programmes, course information sheets etc.) for various environmental management short courses and duties included the following:

- Acted as technical coordinator for short courses; and
- Presented on various topics at short course including
 - Biodiversity, soil, hazardous substances management
 - EMS and environmental risk assessment
 - Corporate governance
 - Environmental management tools

APPENDIX 2: PUBLIC PARTICIPATION

Appendix 2.1: IAP Database

Appendix 2.2: Notification Letter of Project

Appendix 2.3: Proof of Site Notices

Appendix 2.4: Proof of Newspaper Advert

Appendix 2.5: Notification letter of BAR review

Appendix 2.6: Proof of comments and responses

Appendix 2.7: Consultation with traditional authority

Appendix 2.8 Proof of notification of extended PPP period

Appendix 2.1: IAP Database

Vryheid IAP List							
Name and surname	Organisation/Farm and portion	Designation	Tel	Cell	Email	Address	Notification method
Landowners							
IMPUMELELO COMMUNITY TRUST-TRUSTEES (Derrick Buthulezi)	Tygerskloof No. 173- HU ptn 0, ptn 2, Farm Demoina No. 830-HU ptn 0	Inkosi		(082) 301 9751	buthulezi.derrick317@gmail.com		Email, SMS and hand delivered
IMPUMELELO COMMUNITY TRUST-TRUSTEES (Sipho Khumalo)					0714374115	-	
FOREST RESOURCES PTY LTD	Wonderfontein No. 560-HU ptn 3, Spitzkop No. 70-HU ptn 2, ptn 4, ptn 5, ptn 6, ptn 7, ptn 8, ptn 9, ptn 10, ptn 11, ptn 15, ptn 17		(034) 995-0480		richardl@nctforest.com limberis.ritchie@nsdv.co.za nupen@nsdv.co.za		Email
MAHLABANENI COMMUNAL PROPERTY ASSOCIATION-TRUSTEES (Bongani Mdwanje)	Wonderfontein No. 560-HU ptn 4			(063) 307 5434		P O BOX 16 VRYHEID 3100	SMS and registered letter
IMFOLOZI TIMBERS PROPRIETARY LIMITED (Hayley)	Wonderfontein No. 560-HU ptn 5, Spitzkop No. 70-HU ptn 13		(033) 342 2379	(082) 384 4242	hayley@forestrysa.co.za		Email and SMS
R S A	Wonderfontein No. 560-HU ptn 7				Various departments informed		Email and SMS
EMPANGISWENI COMMUNITY TRUST-TRUSTEES	Mariantha No. 845-HU ptn 0, Welteverede 540-HU ptn 1					PO BOX 3 SWART UMFOLOZI KWA-ZULU NATAL 3115	Hand delivered Registered post

Vryheid IAP List							
Name and surname	Organisation/Farm and portion	Designation	Tel	Cell	Email	Address	Notification method
NCT FORESTRY CO-OPERATIVE LIMITED (Jean Simpson)	Spitzkop No. 70-HU ptn 3, ptn 12		(034) 982 2597		jean@nctforest.com		Email
CRAIG BAREND JACOBUS (Jacqs Craig)	Spitzkop No. 70-HU ptn 16		(033) 328 1000	(083) 637 7747	jacqs.craig2019@gmail.com		Email and SMS
Surrounding Landowners							
IMFOLOZI TIMBERS PROPRIETARY LIMITED (Hayley)	Grootgeluk 52 ptn 3, Zomerveld 277 ptn 0, ptn 4		(033) 342 2379	(082) 384 4242	hayley@forestrysa.co.za		Email and SMS
ESIHLENGENI TRUST-TRUSTEES (Buthelezi)	Isihlengeni 689 ptn 0			(078) 638 3404			SMS
SIHLENGENI PLASE EDMS BPK	Negenuur 769 ptn 0			0823281085	Magdalena@vhd.dorea.co.za		
EMPANGISWENI TRUST-TRUSTEES	Nooitgedacht 427 ptn 0, Wagendrift 541 ptn 1					PO BOX 3 SWART UMFOLOZI KWA-ZULU NATAL 3115	Hand delivered and telephone discussion with Traditional Authority.
NCT FORESTRY CO-OPERATIVE LIMITED (Jean Simpson)	Ongemaakt 301 ptn 0 Spitzkop Portion 19		(034) 982 2597		jean@nctforest.com		Email and SMS
IMPUMELELO COMMUNITY TRUST-TRUSTEES (Derrick Buthelezi)	Toovernaarsrust 518 ptn 0 and 5			(082) 301 9751	buthulezi.derrick317@gmail.com		Email and SMS
PEREZ FARMING PTY LTD (JURIE HENDRIK WYNAND MENTZ)	Toovernaarsrust 518 ptn 4		(034) 907 5040; (012) 807 3166	(082) 354 5749	jurie@grainsa.co.za	PO BOX 44, LOUWSBURG, VRYHEID, 3150	SMS and Email

Vryheid IAP List							
Name and surname	Organisation/Farm and portion	Designation	Tel	Cell	Email	Address	Notification method
R S A	Zaagkuil 777 ptn 0				Various departments informed		Various departments informed
Land occupiers							
Zulu Melusi				0721300547			Hand Delivery and SMS
Xulu Ndimuso				0788277592			Hand Delivery and SMS
Thokozani				0765469843			Hand Delivery and SMS
Nompiloh Madide				0728660708			Hand Delivery and SMS
Mzandile Mdletshe				0769496700			Hand Delivery and SMS
Traditional Authorities							
Prince Sibusiso Zulu				0727051010			SMS and Telephone Discussion
Commenting Authorities							
Sandile Njapha	Department of Mineral Resources	Officer	(031) 335 9600		sandile.njapha@dmr.gov.za		Email
	Abaqulusi Local Municipality	Ward Councilor			ntuthumlaba@gmail.com		Email
	Abaqulusi Local Municipality	Mayor			corporateservice@abagulusi.gov.za		Email
SS Ngiba	Abaqulusi Local Municipality	Municipal Manager	(036) 631 2202		municipalmanager@abagulusi.gov.za		Email
	Zululand District Municipality	Mayor			skunema@zululand.org.za		Email
	Zululand District Municipality	Municipal Manager			mm@zululand.org.za		Email
	Zululand District Municipality	Head of Communications			mnshandu@zululand.org.za		Email

Vryheid IAP List

Name and surname	Organisation/Farm and portion	Designation	Tel	Cell	Email	Address	Notification method
Mthalande A	Department of Water and Sanitation (KZN)	Officer	(031) 336 2700		MthalandeA@dws.gov.za		Email
Bernadet Pawandiwa	AMAFA	Archaeologist	(033) 394 6543		bernadertp@amafapmd.co.za		Email
Bheki Mbili	Land Restitution Commission	Chief Director	(033) 341 2670		bheki.mbili@drdlr.gov.za		Email
Jerry Mfusi	Department of Economic development ,Tourism and Environmental Affairs	Acting Head of Department	(033) 355 9293	(082) 419 2881	jerry.mfusi@kzndard.gov.za		Email and SMS
Sizile Mthalande	Department of Rural Development & Land Reform	Deputy Director: Rural Enterprise Infrastructure Development (REID)			sizile.mthalande@drdlr.gov.za		Email
Bhekumuzi Mathenjwa	Department of economic Development, Tourism and Environmental Affairs	Director	(033) 264 2500		bhekumuzi.mathenjwa@kznedtea.gov.za		Email
Amkela C/Thembalake Sibozana	Department of Agriculture, Forestry and Fisheries (DAFF)	Senior Forester	(033) 392 733		AmkelaC@daff.gov.za ThembalakeS@daff.gov.za		Email
Rob Crankshaw	KZN Conservancies	Representatives		(082) 900 9593	rob.crankshaw@amamarketing.co.za		Email and SMS

Vryheid IAP List							
Name and surname	Organisation/Farm and portion	Designation	Tel	Cell	Email	Address	Notification method
Sizile Mthlane	Comision on restitution on Land Rights	Chief Director	(033) 341 2600		sizile.mthlane@drdlr.gov.za		Email
Buhle Mzulwini	Department of Agriculture, Forestry and Fisheries (DAFF)		(033) 392 7744		BuhleM@daff.gov.za		Email
Gerald Willis Smith	DAEARD	Assessing Officer			gerald.willis-smith@kzndae.gov.za		Email
Shezi Mkhize	Kwazulu Department- Department of Agriculture and Rural Development	Head of Department Kwazulu Natal		(082) 776 6296	hodpa@kzndard.gov.za ; hod.pa@kzndard.gov.za		Email and SMS
Musa Mntambo	Ezemvelo KZN Wildlife	Manager Communication Services	(033) 845 1743		mtambom@kznwildlife.com		Email
Moonsamy Z	DWA	Assistant Director	(031) 336 2846	(082) 808 0208	moonsamyz@dwaf.gov.za		Email and SMS
Nerissa Pillay	Ezemvelo KZN Wildlife				nerissa.pillay@kznwildlife.com		Email
Noluthando Dlamini	Ezemvelo KZN Wildlife				Noluthando.Dlamini@kznwildlife.com		Email
Andy Blackmore	Ezemvelo KZN Wildlife				Andy.Blackmore@kznwildlife.com		Email
Dominic Weiners	EKZNW		(033) 845 144		weinersd@kznwildlife.com		Email
Peter Woolf	Department of Human Settlement	Senior Manager	(031) 336 5145	(071) 298 0210	Mbali.mhlongo@kzndhs.gov.za		Email and SMS

Vryheid IAP List

Name and surname	Organisation/Farm and portion	Designation	Tel	Cell	Email	Address	Notification method
Vanessa Maclou	KZN Department of Agriculture and Environmental Affairs				Vanessa.Maclou@kzndae.gov.za		Email
Thulani Zungu	Department of Rural Development & Land Reform	Deputy Director	(034) 312 8460	(082) 450 7525	douglas.zungu@drdlr.gov.za		Email and SMS
Lizzane Rungasamy	Commission on restitution on Land Rights	Head Office: Deputy Commissioner	(051) 430 0444		lizzane.rungasamy@drdlr.gov.za		Email
Jeffrey Maivha	Department of Agriculture, Forestry and Fisheries (DAFF)	Communication Services	(033) 392 733		jeffreyMAI@daff.gov.za		Email
Rodney Harrylal	Transnet	Key account Executive	(031) 361 2404	(083) 284 6274	Rodney.Harrylal@transnet.net		Email and SMS
Thabisile Sakyi	Department of Health	CEO	(034) 328 0048		Thabisile.sakyi@kznhealth.gov.za		Email
Thando Tubane	Department of Cooperative Governance and Traditional Affairs	HOD	(033) 395 2035	(082) 886 5451	thando.tubane@kznco-gta.gov.za		Email and SMS

Appendix 2.2: Notification Letter of Project

Date: 18/02/2020

ATTENTION: INTERESTED & AFFECTED PARTIES

REF: KZN 30/5/1/1/2/10921 PR

Dear Sir/ Ma'am

ILAHLE 4 KZN (PTY) LTD

NOTICE OF BASIC ENVIRONMENTAL IMPACT ASSESSMENT **APPLICATION FOR A PROSPECTING RIGHT FOR COAL AND PSEUDOCOAL** near **VRYHEID**, kwazulu natal province

Introduction

Ilahle 4 KZN (Pty) Ltd (Ilahle 4 KZN) has submitted a prospecting right application for coal and Pseudocoal on various farm approximately 41 km east of Vryheid. The properties included in the prospecting right application are illustrated in Figure 1 below.

Prospecting and its associated activities trigger activities 20 and 27 in GNR 983 (Listing Notice 2) and therefore require an Environmental Authorisation in terms of Section 24 of the National Environmental Management Act, No. 107 of 1998 (NEMA). Therefore the proposed activities require an Environmental Authorisation (EA) in terms of Section 24 of the National Environmental Management Act No 107 of 1998 (NEMA) prior to commencement. A Basic Assessment Process in terms of Regulation 19 of Environmental Impact Assessment (EIA) Regulation 982, 2014 of NEMA (as amended in 2017) must be undertaken in support of the EA application. In addition to environmental authorisation, a prospecting right in terms of the Mineral and Petroleum Resources Act No 28 of 2002 needs to be obtained prior to commencement.

Ilahle 4 KZN has submitted the prospecting right EA application to the Department of Mineral Resources (KwaZulu Natal) which have been assigned Reference KZN 30/5/1/1/2/10921 PR.

EXM Advisory Services has been appointed as an independent Environmental Assessment Practitioner, responsible for undertaking the BA and Public Participation Process on behalf of the applicant Ilahle 4 KZN (Pty) Ltd.

Purpose

This document serves to:

- Notify you of the application for authorisation.
- Describe the environmental assessment process.
- Inform you how you can provide input into the process.

Your Role

As an interested and affected party, your role is to:

- Ask questions, raise issues and concerns.
- Review and provide comment on environmental reports.

ILANHLE 4 KZN (PTY) LTD

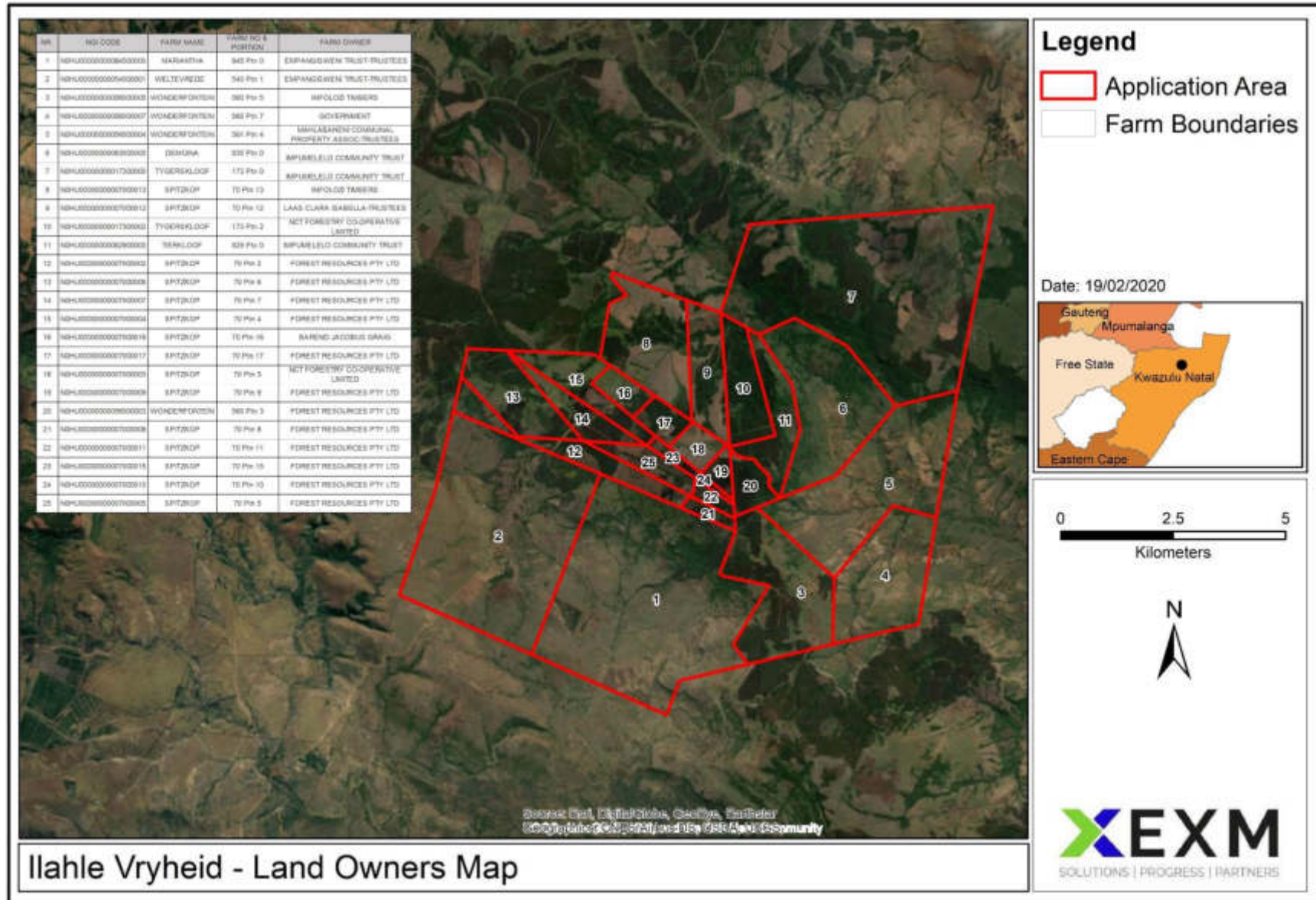


Figure 1: Location of the Prospecting Right Application Area

what does the PROSPECTING ACTIVITIES INVOLVE?

Ilahle 4 KZN (Pty) Ltd proposes to undertake prospecting activities in three phases over a period of 4 years. The different phases (a-c) are illustrated below and explained further.



The prospecting right will likely be valid for three (3) years, after which the right holder has the option to extend it for a further two (2) years.

Desktop Study

The desktop study will be undertaken which will involve the review of historical data from the Council of Geoscience. The purpose of the desktop study is to determine the presence of coal and pseudocoal within the area and its surrounds. A geomagnetic survey will then be undertaken to determine the presence of igneous intrusions. The survey will make use of a handheld magnetometer (no site disturbance) to determine changes in the earth's magnetic field. Readings will be taken every 20m (min) along traverse lines. Upon completion of the survey and desktop assessment, the drilling programme will be developed to further analyse the geology of the area.

Site Drilling

It is proposed that various core boreholes will be drilled at predetermined locations according to the results of the desktop study. Site drilling is an invasive activity and will involve mobilisation of one (1) drill rig (see Plate 1) that is accompanied by approximately six personnel to operate the rig. The total area of the prospecting right is approximately 7900 hectares while the drill site footprint is generally smaller than 500 m². The drilling method will be diamond drilling. A diameter core drill will be used to drill geological boreholes. It is anticipated that drilling will last for 48 months, depending on the outcomes and the rock samples.



Plate 1: Typical Drill Site

Geological cores as shown in Plate 2 will be logged and potential viable seam sent for initial raw analysis. Further specialised analysis may be conducted for Ash Fusion Temperature, Abrasive Index, Hardgrove Grindability Index, Ash Analysis and Ultimate Analysis.



Plate 2: Geological Core Samples from Prospecting Drilling

Reporting

Data collected during the desktop and core drilling phase will be processed, modelled and analysed by technical consultants. Reporting is not an invasive site activity and will be conducted by consultants in their offices. The report will be submitted to Ilahle 4KZN on conclusion of prospecting activities. The reporting stage may advise further drilling to take place and the three-stage process will be repeated during the lifespan of the prospecting right. A renewal for the prospecting right may also be applied for. The report will be used to determine the economic pre-feasibility of the project. Should it show favourable results, the project will proceed to the mining right application phase.

BASIC ASSESSMENT PROCESS

A Basic Impact Assessment (BA) is a study that is undertaken to determine the effect that the planned prospecting activities will have on the environment and surrounding communities.

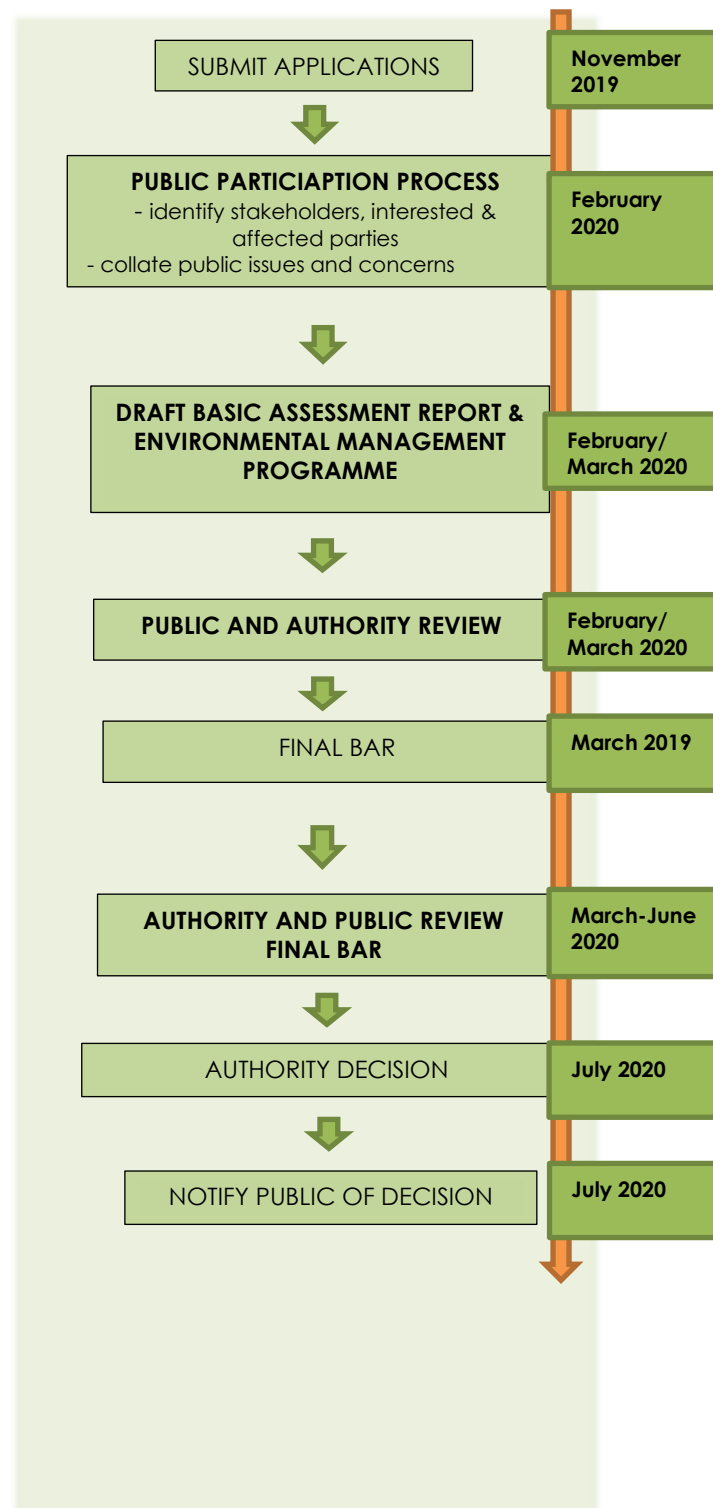
Basic Assessment Process

The BA Process involves the identification of the project impacts taking into consideration issues raised by the Interested and Affected Parties (IAPs) and specialist (where applicable). IAPs are identified during the public participation process which involve notifications and advertisements.

The findings of the impact assessment and the proposed measures identified to mitigate such impacts will be documented in the Basic Assessment Report (BAR). The findings are circulated to IAPs for review. IAPs will be notified via email and/or SMS when the draft report is available for public comment.

Environmental Management Programme

The Environmental Management Programme (EMPr) contains mitigation measures that will aim at preventing/minimising environmental impacts identified and reducing risks to acceptable levels. The EMPr will be made available for public review together with the BAR.



public participation process

Interested & affected parties (IAPs) are invited to participate in the BA process. You can provide input by:

- Registering as an IAP
- Asking questions and raising concerns by completing and returning the response sheet (attached)
- Reviewing and providing comment on the Basic Assessment Report
- Reviewing environmental authorisations.

Should you wish to register as an IAP and obtain further information, **please contact:**

Trevor Hallatt

Reference: Ilahle 4 KZN (Vryheid)

EXM Advisory Services

Cell: 071 689 2229

Fax: 086 616 0443 Email: trevor@exm.co.za

PO Box 1822, Rivonia, 2128

All comments, issues and concerns will be incorporated into a basic environmental impact assessment report for consideration by the Department of Mineral Resources.

Appendix 2.3: Proof of Site Notices







2.4: Proof of Newspaper Advert

CLASSIFIEDS

Market Place

Call 034 9813930
Email: classifieds@vryheid.co.za

PLACE AN AD

GENERAL
YOUR WEEKLY JOB FINDER

0600 NOTICES

0605 DEATHS

IN LIEFDEVOLLE HERINNERING
Willem Engelbrecht

Geboort op 25/04/1932
en overleed op 13/02/2020
ou 87 jaar

Willem was 87 jaar
ou 18 maande

DIENS IS VRYDAG
21 FEBRUARIE 2020
OM 10:00 BY DIE
NED. GEBR. KIEK
VRYHEID-STR.
OP DIE HOEK
VAN HEREN- EN
WESSTRAAT

TO ADVERTISE
CONTACT
034-9813930

0300 SERVICES

0348 GENERAL REPAIRS

HLASA ELECTRICAL AND CONSTRUCTION (PTY) LTD
Electrical Installations; Certificate of Compliance; Maintenance and Repairs; Aircon; and painting installations; Construction work and plumbing.

24 Hour
183 Zulu 084 526 0030 /
RE Group 079 018 1308.
06308860

KAMBULA ELECTRICAL
For all your electrical requirements. Maintenance, repairs and installation work. Electrical gate motors and fencing. Cable fault finding and repairs. Bare hole and pump installations. Tel: 034-9805504 / 072 410 7248. 06308862

0360 MISCELLANEOUS

CAUTION
Readers should carefully examine all services offered, quotes and deposits requested before accepting any of them. It remains the consumer's responsibility to check the credentials of all advertisers with whom they are doing business. As Caron offers a service to advertisers to market their products or services, it cannot be held responsible for any damages or misleading claims.

Classified Ads really sell

HENRY'S ELECTRICAL
Electrical installations and maintenance. Certificate of Compliance
Tel: 034 981 6025 / 072 938 3358.
06308861

0378 REMOVALS & STORAGE

SATISFACTORY CARRIAGE Republic wide furniture removals and storage. Tel: 034-9806201 or 060 700 8609 / Email: satisfactoryremovals.net / Fax: 060 662 8996. 06308864

0400 FOR SALE

0468 MISCELLANEOUS

AQUA DRY CLEANING & GAS SUPPLIERS
225 Church Street
034 981 4991
06308863

0700 MOTORING

0725 NEW CAR SALES

PERFORMANCE DRIVES INNOVATION
L.T. JONGHVISSE
SALES EXECUTIVE
034 982 2191 - 03 738 3485
Riviera Ford Vehicle
224 Church Street

Classified Ads really sell

CASE II
GEKwalifiseerde
Tegnikus
ANESCO CASE PAULPIETERSBURG

MINIMUM VEREISTERS:
Minimum van 3-jaar werksonderervinding
SUKSESVOLLE APPLICANTE SAL DIE VOLGENDE ONDERVINDING:

- Ruim, skoon werkwinkel met al die nodige toerusting.
- Werksters verstaan 'n helper om hand by te sit met swaar items
- Wendelike medewerker in suksesvolle kliente basis
- Pensioenfond en Mediese fondas met % bydra van Maatskappij tot die maandelike premie
- Gereelde oploeding op die nuutste tegnologie van die implemente wat ons verkoop

Salaris en salaris struktuur onderhandelbaar
KONTAK: Heinz Hambrock 082 523 8175 /
Waldo Meyer 062 944 9129
STUUR CV'S na: hansesco@anesco.co.za /
admin@anesco.co.za

MARKET PLACE
Public Notices, Auctions & Legals

SPATIAL PLANNING AND LAND USE MANAGEMENT ACT (ACT 16 OF 2013) AND ITS REGULATIONS READ WITH THE ABQAZULU LOCAL MUNICIPALITY SPATIAL PLANNING AND LAND USE MANAGEMENT BY-LAW, 2018

INVITATION TO COMMENT

Notice is hereby given in terms of the Spatial Planning and Land Use Management Act (Act 16 of 2013) and its Regulations read with the Abaqazulu Local Municipality Spatial Planning and Land Use Management By-law, 2018 that an application has been lodged with the Abaqazulu Municipal Council, for:-

Consolidation of the Erv 2481 with Erf 2492 to Create Erf 6048 Vryheid and Subsequent Special Consent in Terms of Clause 4.8 Of The Vryheid Town Planning Scheme for the proposed Forensic Mercury.

The property is located at 20 & 22 Handel Street, Vryheid. Copies of the application documents are available for inspection by interested members of the public during office hours at the office of the Abaqazulu Municipality Town Planning, corner of Mark & Mason Street, Vryheid.

Any person having an interest in the above matter must lodge written comments within 30 days from the date of this notice to the Manager, Town Planning, Mrs S. Vandyay, P.O. Box 57 Vryheid, 3100 or by email at svandyay@abqazulu.gov.za. Persons or parties failing to adhere within the said time will be excluded from further participating in the application process. Enquiries relating to this publication can be directed to Ms S. Vandyay-Doodhral at 034-9822133 x 2259, during normal office hours, Mon - Thurs (07h00 - 16h30) and Fri (07h30 - 13h30).

It pays to advertise in the Classifieds!

ESTATE NOTICE
Estate Number 284820/SPMB
In the Testate Estate of the late: **JAN JOHANNES MARKOWAT**, Identity Number: 640104 2008 08 7, a gentleman of 223 South Street, VRYHEID, who was married out of Community of Property to **ELMARIE MARKOWAT**, Identity Number: 735226 6009 08 1, with the application of the Auctor.

In terms of Section 35(5) of Act 98 of 1965, notice is hereby given that copies of the First and Final Liquidation and Distribution Account in the above Estate, will be open for inspection/audit, at the offices of the Magistrate, VRYHEID, and the Master of the High Court, PETERMARITZBURG.

Should no objection thereto be lodged with the Master of the High Court, Petermaritzburg, during the specified period, the Executor will proceed to make payments in accordance with the account.

ANDRÉ DREYER ATTORNEYS
Attorneys for Executor
PO Box 34, VRYHEID, 3100

éDumbe Local Municipality
10 Hoog Street, Private Bag X308, PAULPIETERSBURG 3100
Tel: (034) 985 1650 Fax: (034) 985 1192 edumbe2011@mweb.co.za

MUNICIPAL NOTICE NO. EDMN-10/2019/20
PUBLIC NOTICE CALLING FOR INSPECTION OF VALUATION ROLL AND LODGING OF OBJECTIONS

Notice is hereby given in terms of Section 48(1)(a)(i) of the Local Government Municipal Property Rates Act, of 2004 (Act No.6 of 2004 as amended), hereinafter referred to as the "Act", that the valuation roll for the financial years 1 July 2020 to 30 June 2025 is open for public inspection at the office of the Chief Financial Officer (Rates Department), 10 Hoog Street Paulpietersburg, during office hours 07:30 to 16:30 (Mondays to Thursdays) and 07:30 to 13:30 on Fridays from 22 February 2020 to 31 March 2020. In addition the valuation roll will be available on the Municipal website www.edumbe.gov.za.

An invitation is hereby made in terms of Section 48(1)(a)(ii) of the Act that any owner of property, or other person who so desires, should lodge an objection with the Municipal Manager in respect of any matter reflected in, or omitted from, the valuation roll within the abovementioned period.

Attention is specifically drawn to the fact that in terms of Section 50(2) of the Act, an objection must be in relation to a specific individual property and not against the valuation roll as such.

The forms for lodging of objections are obtainable at the following address: municipal records office, or on the Municipal website www.edumbe.gov.za. Completed forms must be returned to: The Municipal Manager, éDumbe Municipality, 10 Hoog Street Paulpietersburg.

For enquiries please telephone (034) 985 1650 or e-mail mm@edumbe.gov.za

NOTICE IS HEREBY GIVEN IN TERMS OF REGULATION 3 (B) OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT NO 107 OF 1998); ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS 2014 (as amended); TOGETHER WITH SECTION 12 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2008 (ACT NO 48 OF 2008) AS AMENDED

DETAILS OF APPLICATION:
DMR REF: KZN 30/5/1/2/10921 PR
INDONGO MINING GROUP (PTY) LTD
Merits Applied for: Coal

NATURE OF ACTIVITY: Application for Mining Permit and Environmental Authorisation in terms of the MPRDA and NEMA acts.

LOCATION: The application covers the 18 Portion 4 of the farm Vrengskop 171 HU situated in the Abaqazulu Local Municipality, Zululand District, KwaZulu Natal Province. The project area is approximately 35km East of Vryheid.

REGISTRATION OF INTERESTED AND AFFECTED PARTIES: In terms of regulations 42 & 43 of the EIA Regulations published in Government Gazette No. 303 of 08 December 2014 the public is invited to register as interested and affected parties (I&AP) express interest, comment and participate in the Public Participation Process (PPP). Please submit your written concerns within 30 days of this notice. Draft I&AP will be available for comment from the 20th of February 2020 at the Vryheid Library.

Registration, queries and written comment should be submitted to: Jomela Consulting (Pty) Ltd, Poesel Box 210, Private Bag 41, Woodhill, Gauteng, 0010.
Email: info@jomela.co.za or zack@jomela.co.za
Tel/Cel: 012 722 366/071 389 9813
Fax: 012 326 4939
Contact Person: Khosa Ntshole

DEADLINE FOR ADVERTISING IS TUESDAY @ 10:00

ILAHLE 4 KZN (PTY) LTD
NOTIFICATION OF BASIC ENVIRONMENTAL IMPACT ASSESSMENT FOR AN APPLICATION FOR A COAL PROSPECTING RIGHT NEAR VRYHEID, KWAZULU NATAL

DMR reference: KZN 30/5/1/2/10921 PR

Ilahle 4 KZN (Pty) Ltd has submitted a prospecting right application for Coal and Pseudo-coal on various farms indicated below approximately 41 km east of Vryheid in KwaZulu Natal.

Portion 2 and the Remainder (Whole Area) of the Farm Tyggerskloof No. 173-HU
A Portion of the Farm Demoina No. 830-HU
Portion 3, 4, 5 and 7 (Whole Area) of the Farm Wonderfontein No. 560-HU
Farm Marianita No. 845-HU
Farm Waltveredde 540-HU
A Portion Of the Farm Tienkoff 829-HU
Portions 4-7, 13 and 16, Portions 2-17 of the Farm Spitzkop No. 70-HU

Prospecting and its associated activities trigger activities 20 and 27 in GNR 963 (Listing Notice 2) and therefore require an Environmental Authorisation in terms of Section 24 of the National Environmental Management Act, No. 107 of 1998 (NEMA).

Notice is hereby given of a Basic Environmental Impact Assessment process being undertaken in support of the prospecting right application by Ilahle 4 KZN (Pty) Ltd. You are hereby invited to register as an interested and affected party to receive further information on the project and to raise environmental issues and concerns. Interested persons can submit their contact details to:

ILAHLE 4KZN (PTY) LTD
Attention: Thevo Hallat
EXM Advisory Services (Pty) Ltd
Tel: 071 689 2229 Post: PO Box 1622, Rivonia, 2128
Email: thevo@exm.co.za

All reports will be available for review and comment for 30 days. Please contact us to register as an interested parties or to obtain the relevant documentation.

ISAZISO SOPHAKATHI SOKUHOLOA UMQULU WAMANANI EMIZI KANYE NOKUFAKA IZIPHIKISO

Izaziso ngokwesigaba 48(1)(a)(i) somthetho wobulumeni wezinhlalo wezintlele zomaspala, ka 2004 (Umlithetho Nombuzo 6 ka 2004 ngenqubo uchwibhalele), ngemva kwakokhu kubizwa ngokuthi "Umlithetho", wokuThi Umqulu wamanani weminyaka yezimali kusukela ngo-1 Julayi 2020 kuya ku-30 Juni 2025 uvulelelile ukuthi umphakathi ukwazi ukawuhlobo ehhovisi lo-Chief Financial Officer (Rates department), 10 Hoog Street Paulpietersburg, ngokukhethi zomsebenzi ngo-07: 30 kuya ku-16: 30 (uMambuzuko kuya NgoLwesine) kanye no-07: 30 kuya ku-13: 30 ngolweshHlanu kusukela kuya zingama-22 kuFebhuwari 2020 kuya kumhla zingama-31 kuMasa ngo-2020. Ngaphesvu kwakokhu uhlalo lokugawwa kwemali lucothokha kwenzindaweni sikaMasipala esithi: www.edumbe.gov.za

Lesimamo senziwe ngokwesigaba 48(1)(a)(ii) somthetho sokuthi noma yimuphi umnikazi wempahla, noma omunye umuntu ofisa karpalo, kubaneke afake isakhaziso kuMenera kaMasipala moqondana nanoma yiluphi udaba olukhonziswe, noma olungathokaki, kumqulu wamanani emizi singakapheli sikhathi esebekiwe ngasetha.

Sigale kwimigomo ethokakala kwisigaba 50(2) somthetho, ukuphikisa kumele kugondane nomuzi othile kungathi ukuphikisa komqulu wamanani wokhona. Amalomu okufaka ukhaziso ayathokakala kufanele kufanele. Ihovisi lamarekhodi kamaspala, noma kwenzindaweni sikaMasipala esithi: www.edumbe.gov.za. Amalomu agcwaliswe kufanele abizathwe kuMenera kaMasipala, kuMasipala waseDumbe, 10 Hoog Street Paulpietersburg.

Ngembuzo sithinte kuleombolo (034) 985 1650 or e-mail: mm@edumbe.gov.za

MP KHATHIDE - MUNICIPAL MANAGER
EDUMBE MUNICIPALITY
PRIVATE BAG X 308, PAULPIETERSBURG 3100

Phonenumber	Status	SentData
27633075434	DELIVRD	Ilahle proposes to conduct coal prospecting activities 41 km east of Vryheid. A Basic Impact Assessment is conducted to obtain environmental authorisation for the project. Please contact us at trevor@exm.co.za or 0716892229 if you wish to register as a stakeholder or raise comments.
27786383404	DELIVRD	Ilahle proposes to conduct coal prospecting activities 41 km east of Vryheid. A Basic Impact Assessment is conducted to obtain environmental authorisation for the project. Please contact us at trevor@exm.co.za or 0716892229 if you wish to register as a stakeholder or raise comments.
27823019751	DELIVRD	Ilahle proposes to conduct coal prospecting activities 41 km east of Vryheid. A Basic Impact Assessment is conducted to obtain environmental authorisation for the project. Please contact us at trevor@exm.co.za or 0716892229 if you wish to register as a stakeholder or raise comments.
27823844242	DELIVRD	Ilahle proposes to conduct coal prospecting activities 41 km east of Vryheid. A Basic Impact Assessment is conducted to obtain environmental authorisation for the project. Please contact us at trevor@exm.co.za or 0716892229 if you wish to register as a stakeholder or raise comments.
27825201621	DELIVRD	Ilahle proposes to conduct coal prospecting activities 41 km east of Vryheid. A Basic Impact Assessment is conducted to obtain environmental authorisation for the project. Please contact us at trevor@exm.co.za or 0716892229 if you wish to register as a stakeholder or raise comments.
27827766296	DELIVRD	Ilahle proposes to conduct coal prospecting activities 41 km east of Vryheid. A Basic Impact Assessment is conducted to obtain environmental authorisation for the project. Please contact us at trevor@exm.co.za or 0716892229 if you wish to register as a stakeholder or raise comments.
27828222496	DELIVRD	Ilahle proposes to conduct coal prospecting activities 41 km east of Vryheid. A Basic Impact Assessment is conducted to obtain environmental authorisation for the project. Please contact us at trevor@exm.co.za or 0716892229 if you wish to register as a stakeholder or raise comments.
27828865451	DELIVRD	Ilahle proposes to conduct coal prospecting activities 41 km east of Vryheid. A Basic Impact Assessment is conducted to obtain environmental authorisation for the project. Please contact us at trevor@exm.co.za or 0716892229 if you wish to register as a stakeholder or raise comments.
27829009593	DELIVRD	Ilahle proposes to conduct coal prospecting activities 41 km east of Vryheid. A Basic Impact Assessment is conducted to obtain environmental authorisation for the project. Please contact us at trevor@exm.co.za or 0716892229 if you wish to register as a stakeholder or raise comments.
27836377747	DELIVRD	Ilahle proposes to conduct coal prospecting activities 41 km east of Vryheid. A Basic Impact Assessment is conducted to obtain environmental authorisation for the project. Please contact us at trevor@exm.co.za or 0716892229 if you wish to register as a stakeholder or raise comments.

Appendix 2.5b: Proof of Notification letters Hand delivery

Ilahle 4 KZN PTY LTD. Vryheid

ATTENDANCE REGISTER FOR PUBLIC NOTIFICATION

25 February 2020

NAME / NAAM	FARM/COMPANY/ PRIVATE / PLAAS/ MAATSKAPPY/PRIVAAT	PHONE / FOON	EMAIL / EPOS	SIGNATURE / HANDTEKENING
Xulu Melusi		0721300547	—	
Xulu Ndumiso		0788277592	—	
ThokoZani		0765469943	—	
Nompilo Mqoliso		0728660708	—	
MZ Mankile Mankiso		0769496700	—	
Sipho Khomalo	Qumalelo Trust	0714374115	—	
MT Buthezi (Chief)	Qumalelo Trust	0823109750	—	
Chief Zando			—	

Appendix 2.5d: Proof of Notification letters registered post

LIST OF REGISTERED LETTERS
Lys van GEREgistreerde Briewe
(with an insurance option/met 'n versekeringsopsie)
Full tracking and tracing/Volledige volg en spoor



Name and address of sender:
 Naam en adres van afsender: EXM ADVISORY SERVICES
PO BOX 1822, RIVONIA, 2128

Enquiries/Navrae
 Toll-free number
 Tolvry nommer
0800 111 502

No	Name and address of addressee Naam en adres van geadresseerde	Insured amount Versekerde bedrag	Insurance fee Versekeringsgeld	Postage Posgeld	Service fee Diensgeld	Affix Track and Trace customer copy Plak Volg-en-Spoor-klaintafel	
1	LNR BOERDERY CC, PO BOX 135, PIET RETIEF, 2380					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sags.co.za RC370887625ZA CUSTOMER COPY 301028R	
2	STEFLO BOERDERY, PO BOX 16, VRYHEID, 3100					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sags.co.za RC370887603ZA CUSTOMER COPY 301028R	
3	K W KOHRS BOERDERY PTY LTD, PO BOX 604, GILLITS, 3603					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sags.co.za RC370885151ZA CUSTOMER COPY 301028R	
4	FULL CIRCLE FARMING, PO BOX 56, PONGOLA KNAZULUNATAL, 3170					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sags.co.za RC370885125ZA CUSTOMER COPY 301028R	
5	FULL CIRCLE FARMING, ^{70 HANS} BOERDERY STRE, PONGOLA, KZN, 3170					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sags.co.za RC370885094ZA CUSTOMER COPY 301028R	
6	DONS FAMILY TRUST, PIETERMARITZBURG , 44 FOXON RD, HAYFIELDS, 3201					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sags.co.za RC370887585ZA	
7	EINWANGISWENI TRUST-TRUSTEES, PO BOX 3, SWART WIMFOLOZI, KZN, 3115					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sags.co.za RC370887577ZA CUSTOMER COPY 301028R	
8	MAHLABENI COMMUNAL PROPERTY ASSOC-TRUSTEES, 157 HIGH STREET, VRYHEID, 3100					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sags.co.za RC370887563ZA CUSTOMER COPY 301028R	
9	MAHLABENI COMMUNAL PROPERTY ASSOC-TRUSTEES, PO BOX 16, VRYHEID, 3100					REGISTERED LETTER (with a domestic insurance option) ShareCall 0800 111 502 www.sags.co.za RC370887550ZA CUSTOMER COPY 301028R	
10							
Number of letters posted Getal briewe gepos		Total Totaal		R	R	R	R

Signature of client
 Handtekening van kliënt _____

Signature of accepting officer
 Handtekening van aanneembeampte _____

The value of the contents of these letters is as indicated and compensation is not payable for a letter received unconditionally. Compensation is limited to R100,00. No compensation is payable without documentary proof. Optional insurance of up to R200,00 is available and applies to domestic registered letters only.

Die waarde van die inhoud van hierdie briewe is soos aangedui en vergoeding sal nie betaal word vir 'n brief wat onder voorbehoud ontvang word nie. Vergoeding is beperk tot R100,00. Geen vergoeding is sonder dokumentere bewys betaalbaar nie. Opsionele versekering van tot R2 000,00 is beskikbaar en is slegs op inelandse geregistreerde briewe van toepassing.



Appendix 2.5d: Proof of Notification letters EMAIL

From: [Trevor Hallatt](mailto:Trevor.Hallatt@exm.co.za)
To: [Trevor Hallatt](mailto:Trevor.Hallatt@exm.co.za)
Bcc: corporateservice@abaqulusi.gov.za; municipalmanager@abaqulusi.gov.za; skunema@zukuland.org.za; mms@zukuland.org.za; mnshandu@zukuland.org.za; govenders@dvs.gov.za; bernadetrn@amafapmd.co.za; bheki.mb@drdlr.gov.za; bhekumuzi.mathenjwa@kzndtea.gov.za; AmkelaC@daff.gov.za; ThembalakheS@daff.gov.za; rob.crankshaw@amamarketing.co.za; hodpa@kzndard.gov.za; bheki.mb@drdlr.gov.za; musa.metamo@kznwildlife.com; hod.pa@kzndard.gov.za; BuhleM@daff.gov.za; gerald.willismith@kzndae.gov.za; moonsamy@dwaf.gov.za; weinersd@kznwildlife.com; Mbal.mhlongo@kzndhs.gov.za; BuhleM@daff.gov.za; Vanessa.Maclou@kzndae.gov.za; douglas.zungu@drdlr.gov.za; lizzane.rungasamy@drdlr.gov.za; jeffreyMA@daff.gov.za; Rodney.Harrylal@transnet.net; Thabisile.sakivi@kznhealth.gov.za; thando.tubane@kzncogta.gov.za
Subject: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Friday, 21 February 2020 11:47:00
Attachments: [Comment sheet Vryheid.docx](#)
[Ilahle Vryheid Prospecting BAR and EMP Draft 21022020.pdf](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION NEAR VRYHEID, KWAZULU NATAL

Ilahle 4 KZN (Pty) Ltd (Ilahle 4 KZN) proposes to conduct prospecting activities for coal and Pseudocoal on various properties approximately 41 km east of Vryheid, KwaZulu Natal. Prospecting and its associated activities require an Environmental Authorisation (EA) in terms of the National Environmental Management Act, No. 107 of 1998 (NEMA). A Basic Environmental Impact Assessment (BA) process must be undertaken in support of the EA application.

EXM Advisory Services has been appointed as an independent Environmental Assessment Practitioner, responsible for undertaking the BA and Public Participation Process on behalf of the applicant Ilahle 4 KZN (Pty) Ltd.

Attached please find the draft Basic Assessment Report (BAR) which contain all relevant information regarding the proposed project and the EA application process. The BAR is also available for review at the following locations:

Hard copy: Hard copy at the Vryheid Library (Cnr. of Mark and High Streets, Vryheid)

Electronic copy: trevor@exm.co.za (on request)

If you wish to register as an Interested and/or Affected Party or raise any comments, please completed the attached comment sheet and return within **30 days** from this notification.

Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 616 0443

Email: trevor@exm.co.za

Kind regards

Trevor

From: [Trevor Hallatt](#)
To: [Trevor Hallatt](#)
Bcc: ["sekunema@izululand.org.za"; "Bernadet"](mailto:sekunema@izululand.org.za)
Subject: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Friday, 21 February 2020 11:53:00
Attachments: [Comment sheet Vryheid.docx](#)
[Ilahle Vryheid Prospecting BAR and EMP Draft 21022020.pdf](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

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Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 616 0443

Email: trevor@exm.co.za

Kind regards

Trevor

From: [Trevor Hallatt](#)
To: [Trevor Hallatt](#)
Bcc: hayley@forestrysa.co.za; buthulezi.derrick317@gmail.com; anita@nctforest.com; jacqs.craig2019@gmail.com
Subject: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Friday, 21 February 2020 11:56:00
Attachments: [Comment sheet Vryheid.docx](#)
[Ilahle Vryheid Prospecting BAR and EMP: Draft 21022020.pdf](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION NEAR VRYHEID, KWAZULU NATAL

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Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 616 0443

Email: trevor@exm.co.za

Kind regards

Trevor

From: [Trevor Hallatt](mailto:Trevor.Hallatt@exm.co.za)
To: bhekumzi.mathenjwa@kznedtea.gov.za; gerald.kzndae.gov.za; mbali.mhlongo@kzndhs.gov.za; musa.mntamo@kznwildlife.com; weinersd@kznwildlife.com; bheki.mbili@drrdr.gov.za; AmkeleC@daff.gov.za; BuhleM@daff.gov.za; ThembakheS@daff.gov.za; jeffreyMAT@daff.gov.za; mnshandu@zulu.land.org.za; buthelzi.derrick317@gmail.com; skunema@zulu.land.gov.za; skunema@zulu.land.gov.za
Subject: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Friday, 21 February 2020 12:18:00
Attachments: [Ilahle Vryheid Prospecting BAR and EMP: Draft 19022020.pdf](#)
[Comment sheet Vryheid.docx](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION NEAR VRYHEID, KWAZULU NATAL

Ilahle 4 KZN (Pty) Ltd (Ilahle 4 KZN) proposes to conduct prospecting activities for coal and Pseudocoal on various properties approximately 41 km east of Vryheid, KwaZulu Natal. Prospecting and its associated activities require an Environmental Authorisation (EA) in terms of the National Environmental Management Act, No. 107 of 1998 (NEMA). A Basic Environmental Impact Assessment (BA) process must be undertaken in support of the EA application.

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Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 616 0443

Email: trevor@exm.co.za

Kind regards

Trevor

From: [Trevor Hallatt](mailto:Trevor.Hallatt@amafapmb.co.za)
To: bernadeta@amafapmb.co.za
Subject: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Friday, 21 February 2020 13:03:00
Attachments: [Ilahle Vryheid Prospecting BAR and EMP: Draft 19022020.pdf](#)
[Comment sheet Vryheid.docx](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION NEAR VRYHEID, KWAZULU NATAL

Ilahle 4 KZN (Pty) Ltd (Ilahle 4 KZN) proposes to conduct prospecting activities for coal and Pseudocoal on various properties approximately 41 km east of Vryheid, KwaZulu Natal. Prospecting and its associated activities require an Environmental Authorisation (EA) in terms of the National Environmental Management Act, No. 107 of 1998 (NEMA). A Basic Environmental Impact Assessment (BA) process must be undertaken in support of the EA application.

EXM Advisory Services has been appointed as an independent Environmental Assessment Practitioner, responsible for undertaking the BA and Public Participation Process on behalf of the applicant Ilahle 4 KZN (Pty) Ltd.

Attached please find the draft Basic Assessment Report (BAR) which contain all relevant information regarding the proposed project and the EA application process. The BAR is also available for review at the following locations:

Hard copy: Hard copy at the Vryheid Library (Cnr. of Mark and High Streets, Vryheid)

Electronic copy: trevor@exm.co.za (on request)

If you wish to register as an Interested and/or Affected Party or raise any comments, please completed the attached comment sheet and return within **30 days** from this notification.

Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 616 0443

Email: trevor@exm.co.za

Kind regards

Trevor

From: [Trevor Hallatt](mailto:Trevor.Hallatt@exm.co.za)
To: dominic.weiners@kznwildlife.com
Subject: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Friday, 21 February 2020 13:06:00
Attachments: [Ilahle Vryheid Prospecting BAR and EMP: Draft 19022020.pdf](#)
[Comment sheet Vryheid.docx](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION NEAR VRYHEID, KWAZULU NATAL

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Cell phone nr: 071 689 2229

Fax: 086 616 0443

Email: trevor@exm.co.za

Kind regards

Trevor

From: [Trevor Hallatt](mailto:Trevor.Hallatt@exm.co.za)
To: richardl@nctforest.com
Subject: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Monday, 24 February 2020 12:10:00
Attachments: [Ilahle Vryheid Prospecting BAR and EMP: Draft 19022020.pdf](#)
[Comment sheet Vryheid.docx](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION NEAR VRYHEID, KWAZULU NATAL

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Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 616 0443

Email: trevor@exm.co.za

Kind regards

Trevor

From: [Trevor Hallatt](mailto:Trevor.Hallatt)
To: ntuthumlaba@gmail.com
Subject: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Tuesday, 25 February 2020 11:00:00
Attachments: [Ilahle Vryheid Prospecting BAR and EMP Draft 19022020.pdf](#)
[Comment sheet Vryheid.docx](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

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Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 616 0443

Email: trevor@exm.co.za

Kind regards

Trevor

From: [Trevor Hallatt](mailto:Trevor.Hallatt@telkomsa.net)
To: Pro889@telkomsa.net
Subject: FW: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Thursday, 05 March 2020 12:54:00
Attachments: [Comment sheet Vryheid.docx](#)
[Ilahle Vryheid Prospecting BAR and EMPr Draft 02032020.pdf](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

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Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 616 0443

Email: trevor@exm.co.za

Kind regards

Trevor

Appendix 2.6: Comments and response

From: [nooba@umede](#)
To: [Trevor Hallatt](#)
Subject: I&APs Registration Request
Date: Monday, 24 February 2020 13:22:13

Dear Mr Hallatt

I'm responding to your public notice on the last week edition of the Vryheid Herald.
RE: DMR reference :KZN 30/5/1/1/2/10921 PR.

Kindly registe me as an interested and affected individual. I'm looking forward to business and employment possible arising opportunities.

Kind Regards
S. Sibiya

From: [Trevor Hallatt](mailto:Trevor.Hallatt)
To: nqobagumede00@gmail.com
Subject: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Monday, 24 February 2020 13:37:00
Attachments: [Ilahle Vryheid Prospecting BAR and EMP: Draft 19022020.pdf](#)
[Comment sheet Vryheid.docx](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

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Electronic copy: trevor@exm.co.za (on request)

If you wish to register as an Interested and/or Affected Party or raise any comments, please completed the attached comment sheet and return within **30 days** from this notification.

Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 616 0443

Email: trevor@exm.co.za

Kind regards

Trevor

From: [Calvin Matlala](#)
To: [Trevor Hallett](#)
Subject: REGISTRATION AS I&AP: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION NEAR VRYHEID, KWAZULU NATAL
Date: Tuesday, 03 March 2020 08:10:50
Attachments: [image001.png](#)
[Register as I&AP_2.pdf](#)

Dear Mr Hallett

We refer to your telephonic conversation with Nicole of our offices.

As mentioned, we would like to correct our error wherein NCT Forestry Co-Operative Limited ("**NCT**") was reflected as the property owner of several properties. In fact, NCT is only the registered owner of portion 3 of Wonderfontein. The remainder of the properties (i.e. Spitzkop portions 2 – 12, 15, 17 and 19) are owned by Forest Resources (Pty) Limited ("**Forest Resources**"). Forest Resources is a wholly owned subsidiary of Bayfibre (Pty) Limited which in turn is a wholly owned subsidiary of NCT.

We represent both NCT and Forest Resources.

Accordingly, we have completed an updated registration form in order to register both clients as interested and affected parties.

We note further that you have not, and do not intend to generate a screening report. In this regard we request that you kindly advise us as to the date on which the application was submitted to the Department of Mineral Resources and Energy, and provide us with proof thereof. You will appreciate that this is important as if the application was lodged on or after 4 October 2019, it would have been compulsory to attach in screening report.

We look forward to hearing from you.

Kind Regards

Kind Regards

CALVIN MATLALA
Candidate Attorney
M: 084 757 6389
T: (010) 880 3285
E: matlala@nsdv.co.za

-
18 Hurlingham Road, Illovo, Sandton 2193
www.nsdvinc.co.za

From: [Trevor Hallatt](#)
To: [Calvin Matlala](#)
Cc: [Jean Simpson](#); [Lili Nupen](#); [Nicole Limberis](#)
Subject: RE: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Wednesday, 04 March 2020 08:23:00
Attachments: [Ilahle_10921 PR DEA Screening Report.pdf](#)
[image001.png](#)
[image002.png](#)
[image003.png](#)

Good day Mr. Matlala,

Thank you for the communication regarding the BA process in support of a prospecting right application near Vryheid. NCT and NSDV have been added to the list of registered IAPs. Please find attached a copy of the DEA screening report generated for the site as requested. Please note that no specialist studies (apart from the closure documents) have been undertaken as part of the BA process. I have communicated your request for the acceptance letter to the client.

Please do not hesitate to contact me if you have any further queries.

Kind regards
Trevor Hallatt



TREVOR HALLATT
ENVIRONMENTAL SCIENTIST
MA ENVIRONMENTAL MANAGEMENT

T: +27 (0) 10 007 3617

M: +27 (0) 71 689 2229

W: WWW.EXM.CO.ZA

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From: Calvin Matlala <Matlala@nsdv.co.za>
Sent: Monday, 24 February 2020 15:53
To: Trevor Hallatt <trevor@exm.co.za>
Cc: Jean Simpson <jean@nctforest.com>; Lili Nupen <nupen@nsdv.co.za>; Nicole Limberis <limberis.ritchie@nsdv.co.za>
Subject: RE: Public Participation Process - Basic Environmental Impact Assessment near Vryheid

Dear Mr Hallet

We represent NCT Forestry Co-Operative Limited ("Our Client").

Our Client has provided us with a copy of the Draft BAR and application form to register as an interested and affected party, in respect of an application made by Ilahle 4 KZN (Pty) Limited for environmental authorisation in respect of prospecting activities near Vryheid, KZN.

Our Client is the registered owner of Spitzkop portions 2 – 12, 15, 17, 19 and Wonderfontein portion 3.

Accordingly, our client wishes to register as an interested and affected party. The completed registration form is attached.

Would you kindly furnish Our Client with copies of:

- the prospecting right application and acceptance letter from the Department of Mineral Resources and Energy;
- any relevant specialist reports not attached to the draft BAR; and
- a copy of the Department of Environment, Forestry and Fisheries' screening report.

We request that you direct all future correspondence both to Our Client, as well as to us, at the email addresses provided on the attached registration form.

We look forward to receipt of the request documents.

Kind regards

CALVIN MATLALA

Candidate Attorney

M: 084 757 6389

T: (010) 880 3285

E: matlala@nsdv.co.za

-

18 Hurlingham Road, Illovo, Sandton 2193

www.nsdvinc.co.za

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From: Anita Nicholson <anita@nctforest.com>

Sent: Friday, 21 February 2020 12:07

To: Jean Simpson <jean@nctforest.com>; Jacob Kotze <jacob@nctforest.com>; Rob Thompson <rob@nctforest.com>

Subject: FW: Public Participation Process - Basic Environmental Impact Assessment near Vryheid

Morning, all – I'm not sure who will deal with this and whether it affects NCT at all.

Regards, Anita

From: [Nicole Limberis](#)
To: [Trevor Hallatt](#)
Cc: [Lili Nupen](#)
Subject: RE: Public Participation Process - Basic Environmental Impact Assessment near Vryheid
Date: Friday, 20 March 2020 12:34:50
Attachments: [image005.png](#)
[image007.png](#)
[image008.png](#)
[image009.png](#)
[Objection to B&B_Final for Submission.pdf](#)
[Annexure A.pdf](#)
[Annexure B.pdf](#)

Hi Trevor

Kindly find attached, our clients' comments in respect of the application for environmental authorisation submitted by Ilahle 4 KZN (Pty) Limited under Department of Mineral Resources and Energy reference KZN 30/5/1/1/2/10921 PR.

Kind regards

Nicole

NICOLE LIMBERIS-RITCHIE
Senior Associate
M: 074 171 9924
T: (010) 880 3285
E: limberis.ritchie@nsdv.co.za

-
18 Hurlingham Road, Illovo, Sandton 2193
www.nsdvinc.co.za

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From: Trevor Hallatt <trevor@exm.co.za>
Sent: Wednesday, 04 March 2020 08:24
To: Calvin Matlala <Matlala@nsdv.co.za>
Cc: Jean Simpson <jean@nctforest.com>; Lili Nupen <nupen@nsdv.co.za>; Nicole Limberis <limberis.ritchie@nsdv.co.za>
Subject: RE: Public Participation Process - Basic Environmental Impact Assessment near Vryheid

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Please do not hesitate to contact me if you have any further queries.

Kind regards
Trevor Hallatt



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MA ENVIRONMENTAL MANAGEMENT

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We request that you direct all future correspondence both to Our Client, as well as to us, at the email addresses provided on the attached registration form.

We look forward to receipt of the request documents.

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Candidate Attorney

M: 084 757 6389

T: (010) 880 3285

E: matlala@nsdv.co.za

-

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Sent: Friday, 21 February 2020 12:07

To: Jean Simpson <jean@nctforest.com>; Jacob Kotze <jacob@nctforest.com>; Rob Thompson <rob@nctforest.com>

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Regards, Anita

NCT Anita Nicholson
Public Relations and Communications Officer
+27 82 906 4246
+27 33 897 8507
www.nctforest.com

NCT FORESTRY CO-OPERATIVE LIMITED

P O Box 12263 Cascade 3242 South Africa . 37 McCarthy Drive Montrose Pietermaritzburg 3201 South Africa

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From: Trevor Hallatt <trevor@exm.co.za>

Sent: Friday, 21 February 2020 12:00

To: Trevor Hallatt <trevor@exm.co.za>

Subject: Public Participation Process - Basic Environmental Impact Assessment near Vryheid

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

ILAHLE 4 KZN (PTY) LTD

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION NEAR VRYHEID, KWA ZULU NATAL

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Electronic copy: trevor@exm.co.za (on request)

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Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 616 0443

20 March 2020

PER EMAIL

Mr Trevor Hallatt
EXM Advisory Services

Email: trevor@exm.co.za

Dear Mr Hallatt

OBJECTION IN RESPECT OF ILAHLE 4 KZN PTY LTD KZN 30/5/1/1/2/10921 PR

- 1 As you are aware, we represent NCT Forestry Co-operative Limited and Forest Resources (Pty) Limited ("our clients").
- 2 NCT Forestry Co-operative Limited is the registered owner of Tygerskloof Portion 2 and Spitzkop Portion 3 and Forest Resources (Pty) Limited owns Wonderfontein Portion 3 and Spitzkop Portions 2, 4–12, 15, 17 and 19. Our clients' properties fall within the proposed project area and as such our clients duly registered as interested and affected parties ("I&APs") in respect of the application for environmental authorisation apparently submitted by Ilahle 4 KZN (Pty) Limited ("Ilahle") in November 2019 ("the Application") under Department of Mineral Resources and Energy ("DMRE") reference KZN 30/5/1/1/2/10921 PR.
- 3 Our clients object to the Application for reasons more fully set out below.

Background

- 4 Ilahle, through their environmental consultants EXM Advisory Services ("EXM") submitted an application for environmental authorisation to the DMRE in terms of the National Environmental Management Act, 1998 ("NEMA") read with the Environmental Impact Assessment Regulations, 2014 ("the EIA Regulations") for the prospecting of coal and pseudocoal and related listed activities.

- 5 It appears that the application was submitted in November 2019, however, this is unclear and despite requesting these details from yourself, as the environmental assessment practitioner ("EAP") leading the project, no response has been forthcoming.
- 6 The proposed project falls within the Zululand Magisterial District. Our clients' properties mentioned above fall within the footprint of the proposed project area.

Procedural irregularities

- 7 As mentioned, it is unclear precisely when the Application was submitted. However, Appendix 2.2. to the Basic Assessment Report ("BAR") contains a flow chart which indicates that the Application was submitted in November 2019.

Failure to include the Screening Report

- 8 On 5 July 2019 and in GN 560, the Minister responsible for environmental affairs published notice of the requirement to submit a report generated by the national web-based environmental screening tool ("the Screening Report") in terms of section 24(5)(h) of the NEMA read with regulation 16(1)(b)(v) of the EIA Regulations ("the Notice").

- 9 The Notice reads as follows:

"I, Barbara Dallas Creecy, Minister of Environment, Forestry and Fisheries, hereby give notice that the submission of a report generated from the national web-based environmental screening tool, as contemplated in Regulation 16(1)(b)(v) of the Environmental Impact Assessment Regulations, 2014, published under Government Notice No. R982 in Government Gazette No. 38282 of 4 December 2014, as amended, will be compulsory when submitting an application for environmental authorisation in terms of regulation 19 and regulation 21 of the Environmental Impact Assessment Regulations, 2014 after 90 days from the date of publication of this Notice. Until such time, the screening tool will be available for voluntary use."

- 10 The ninety-day period referred to in the Notice ended 3 October 2019 and accordingly all applications submitted on, or after, 4 October 2019 must be accompanied by a Screening Report.
- 11 Our clients therefore submit that, although the EAP eventually provided the Screening Report to our client on 4 March 2020 as we had requested same, the fact that it was not attached to the Application is a fatal flaw as it renders the Application non-compliant with the Notice. In addition, this impacts on I&APs ability properly and completely to comment on the Application,

including the BAR, because as will become evident, there are unexplained discrepancies between the Screening Report and the BAR.

- 12 Accordingly, the Application as it stands is defective for non-compliance with the Notice and the public participation process has been compromised.

Possible Lapse of Application

- 13 Appendix 2.2. to the BAR purports to be notification of the Application given to IAPs on 18 February 2019. However, as discussed above, it appears that the application was submitted during November 2019. It is possible that the reference to 2019 should read 2020, but to the extent that the notification was provided during February 2019, our clients deny receiving same, and the Application would have since lapsed.
- 14 For this reason alone, it is imperative that I&APs are provided with the date on which the Application was submitted. Without this date, I&APs are unable to determine whether the Application is procedurally compliant.

Public Participation Process

- 15 Appendix 5 to the BAR is titled supplementary management plan. The project information sheet included within Appendix 5 states that the environmental management plan ("EMP") included in the Application is final. It is unclear how this can be so, since the first time that the Application, including the EMP, has been subjected to public comment appears to be when an email was sent by the EAP to our clients on 21 February 2020.
- 16 This must be explained, and to the extent that the EMP purports to be final it is submitted that this is procedurally flawed.

Failure to include specialist studies

- 17 The Screening Report identifies the following 9 specialist studies as being necessary due to the sensitivities detected within the proposed prospecting area:
- 17.1 Agricultural impact assessment;
- 17.2 Archaeological and cultural heritage impact assessment;
- 17.3 Palaeontology impact assessment;
- 17.4 Terrestrial biodiversity impact assessment;

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- 17.5 Aquatic biodiversity impact assessment;
- 17.6 Noise impact assessment;
- 17.7 Radioactivity impact assessment;
- 17.8 Plant species assessment; and
- 17.9 Animal species assessment.
- 18 Not one of these studies was conducted and the EAP provides no adequate motivation as to why they were deemed unnecessary. Indeed, it appears that absolutely no ground truthing was conducted to inform the EAP's statement at page 57 of the BAR in which he states as follows:
- "No specialist studies were undertaken as the EAP was confident in the status of the proposed site. The project team consists of qualified environmental assessment practitioners that have sufficient experience to inform the report on potential impacts and the baseline environment. The EAP also considered the temporary nature and limited footprint of the proposed project drill sites."*
- 19 With respect, this bald and unsubstituted statement holds no weight, and the EAP and his team's apparent experience is no substitute for ground truthing a particular site, particular where the site has been identified as having various significant sensitivities.
- 20 Our clients accordingly contend that the BAR is flawed as it lacks the required specialist studies.

Proposed prospecting method/ bulk sampling

- 21 It is unclear from the BAR whether the applicant intends to use trenching as a method of bulk sampling. This must be clarified. Insofar as trenching is intended, our clients vehemently oppose this method and contend that the risks of trenching have not been assessed.

Environmental sensitivities

Climate change impact assessment

- 22 To the extent that the BAR discusses the climate (see page 23), in the absence of a climate change impact assessment our client submits that this information is meaningless.
- 23 Insofar as the EAP may contend that no climate change impact assessment is required in respect of prospecting applications, it must be stressed that prospecting paves the way to

mining and it cannot therefore be considered in isolation. This was recognised in *Save the Vaal Environment and Others* [1999] 2 All SA 381 (A) wherein, in relation to the granting of a mineral right under the predecessor of the MPRDA, the Minerals Act, 1991 the court said that "*the grant of the mineral right which precedes the application for a mining licence and then the preparation of an environmental management plan "sets in motion a chain of events which can, and in the ordinary course of events might well, lead to the commencement of mining operations. It is settled law that a mere preliminary decision can have serious consequences in particular cases, inter alia where it lays ...'the necessary foundation for a possible decision ... ' which may have grave results."*

- 24 In fact, the EAP deemed it appropriate to take the eventual mining activities into account when dealing with the need and desirability thereby acknowledging the chain of events. Our client submits that the EAP cannot use the mining activities where it strengthens the BAR and ignore these activities where it would weaken it.
- 25 Accordingly, our clients submit that a climate change impact assessment is required in respect of both the impacts of the proposed project on the climate as well as the impacts of climate change on the proposed project. This should permeate the BAR.

Impacts on water resources

- 26 The BAR recognises that the proposed prospecting area comprises several wetlands including Valley Floor, Bench wetlands and Slope wetlands (see for example, figure 9 and pages 29 – 30). This is according to the National Freshwater Priority Areas ("NFEPA") database.
- 27 According to the BAR, the area is also recognised as part of the Thukela River Water Management Area (see for example page 30), which has been recognised as one of nine water management areas in South Africa (see GN 1056 of 16 September 2016). However, it is our clients' submission that the proposed prospecting area falls within the Umfolozi catchment and not the Thukela catchment and that it is within the headwaters of this catchment, meaning that if pollution to this watercourse occurs, this will negatively impact many downstream users. Please see attached marked "A", a map of indicating this.
- 28 Accordingly, the incorrect catchment has been assessed. This is a critical error because the impacts on the Umfolozi catchment have not been considered. This being so, many of the conclusions in the BAR will be incorrect.

- 29 It is imperative that this error is rectified, and thereafter our client must be provided with a further opportunity to comment.
- 30 If regard is had to page 12 of the Screening Report, the sensitivity of the proposed prospecting area from a water resource perspective becomes clear. The Screening Report clearly shows the proposed mining area is of high sensitivity, *inter alia*, because it is within 500m of an important river and within an important wetland. Mention is made on page 11 of the Screening Report of the area comprising a strategic water source area.
- 31 Notwithstanding this wealth of information depicting the importance of the area and despite the direction in the Screening Report, no wetland assessment or any hydrological studies have been carried out. This is a serious flaw in the BAR.
- 32 Insofar as paragraph (c) at page 37 states that "*Prospecting sites will be located to avoid wetlands, dams and associated buffer zones*" without ground-truthing the precise location of these sensitive areas and conducting a specialists studies, it is impossible to know whether the proposed 100m buffer (see page 44) is sufficient to minimise and guard against negative impacts in an important catchment area.
- 33 Accordingly, it is submitted that these statements in respect of mitigation are meaningless.

Biodiversity

- 34 The BAR notes (on page 33) that the following fall within the proposed prospecting area:
- 34.1 Ngoma Mistbelt Grassland and Forest threatened ecosystem covers a large portion of the site, but most of the area has been transformed by forestry; and
- 34.2 certain areas are classified as critical biodiversity areas ("CBAs") (both optimal and irreplaceable).
- 35 Recommendations in the BAR are made to the effect that that no activities take place within irreplaceable CBAs, nothing is said in respect of the optimal CBAs (i.e. no mitigation whatsoever is proposed).
- 36 Again, the Screening Report identifies the proposed prospecting area as an area of very high aquatic biodiversity importance (page 11) and high sensitivity in respect of animal and plant species present in the area (pages 10 and 15.) Accordingly, the Screening Report calls for the relevant specialist studies to be done (i.e. terrestrial and aquatic biodiversity impact assessments). Such assessments are required to understand the fauna and flora which may

be, or are, present and to determine what the impacts of the proposed prospecting may be on the affected species.

- 37 These specialist studies have not been conducted.
- 38 Our client submits that BAR is defective on this basis alone and it would be impossible to purport to include mitigation and management measures when impacts have not been assessed. In addition, our client points out that absolutely no measures have been put in place in respect of optimal CBAs.

Air Quality and Noise

- 39 The statement made by the EAP on page 34 of the BAR, that the air quality is good is again baseless; there is absolutely nothing to support this statement.
- 40 The same applies in respect of noise. As mentioned above, the Screening Report directed that a noise impact assessment be carried out. The fact that this was not conducted is again a fatal flaw in the BAR.

Archaeological and cultural

- 41 At page 34 of the BAR it states as follows: "*It is possible that some graves and graveyards occur in the general area. It is likely that some historical buildings may occur in the area from the site survey. 50m buffers must be established around the sites.*" In addition, the table at page 65 of the BAR reflects various unknowns, as no ground truthing or specialist studies have been conducted.
- 42 Yet again the Screening Report states that an archaeological and cultural and heritage impact assessment is required. If one has regard to the map on page 12 of the Screening Report, it is clear that the proposed prospecting area contains large areas of medium and high archaeological and cultural heritage sensitivity due, among others, to the fact that the proposed prospecting area falls within 500m of a heritage site, within 1km of a protected area and within a mountain or ridge. None of these impacts have been assessed. Accordingly, it is unclear where the buffers will be placed, and it is also unclear whether a 50m buffer is sufficient.
- 43 It is submitted that the BAR is defective on this basis alone.

Agriculture

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- 44 The Screening Report identified agriculture to be of very high sensitivity (i.e. the highest sensitivity rating). No assessment has done in respect of how the proposed activities will impact on the agricultural potential of, or current agricultural activities taking place within, the proposed prospecting area.
- 45 Without this specialist study required by the Screening Report, the BAR is fatally flawed.

General

- 46 The EAP appears to look for a way around complying with the legal requirements. That this is so appears from a statement on page 45 of the BAR to the effect that the environmental control officer, appointed once authorisation has been obtained, will consider the various aspects prior to approving drilling locations. This is not, and can never be, a proper interpretation of the law. The sensitivities must properly be considered at the outset in order holistically to ascertain the viability of the project taking all risks into account.

Socio-economic impact assessment

- 47 This assessment barely scratches the surface. Job creation will be low (page 64), there is also no indication of the community's reliance on the affected land and water resources and how this may be affected by the proposed prospecting (and potentially future mining) activities.
- 48 Again, a proper assessment in this regard is required.

Need and desirability

- 49 Under this heading, and on page 15 of the BAR, the EAP refers to future mining operations when considering the need and desirability of the proposed prospecting activities. Indeed, the possible future mining operations are considered in respect of socio-economic arguments put forward in favour of mining. Why then are the impacts of mining on the environment, as well as the negative impacts on those reliant on the land and water resources that may be affected, not considered at all elsewhere in the BAR?
- 50 Our client submits that this is a fatal flaw and that the BAR should be revised to consider the potential negative impacts of future mining activities on affected communities and their environmental resources.

Potential listed activities that may be triggered and have not been identified

51 Kindly consider the following listed activities set out in Listing Notice 1 of 2014 (GNR 983) which may be applicable in addition to those activities identified:

51.1 Activity 12; and

51.2 Activity 19.

Financial Provision

52 Given that the impacts of the activities are in fact unknown due to the lack of specialist input, it follows that the financial provision cannot be said to be accurate.

53 Furthermore, it does not follow, as contended in the BAR, that because only six boreholes will be disturbed at any given time, financial provision can be made only in respect of those 6. On the contrary, the applicant is required to put up financial provision for intended disturbance or the entire project.

54 The financial provision calculations must therefore be reworked, and the proposed financial provision increased.

Environmental Management Plan

55 No comment on the EMPr has been provided, this is because without the relevant studies no appropriate management measures can be determined as the impacts themselves have not properly been determined.

Impact of the proposed activities on our clients' business

Forest Stewardship Council Requirements

56 Our clients are committed to responsible environmental management and its plantations have international certification under the Forest Stewardship Council ("FSC"), which requires that it strictly controls all activities on its land in an environmentally responsible and lawful manner. To be certified means that all generic forestry activities have been classified in a risk assessment matrix developed in the FSC Forest Management standard for South Africa, where the impact of the forestry activities on the environmental values have been assessed. FSC is a performance-based standard which requires that our clients ensure compliance with FSC Principles and Criteria. Accordingly, our clients must demonstrate that other persons or entities that are permitted on our clients' property does so for the benefit of the management unit in compliance with the requirements of the FSC Principles and Criteria. Our clients' implement

sustainable forest management practices, to ensure both environmental preservation and the long-term sustainability of its business.

- 57 The impacts of the proposed activities on our client's FSC certification has not been considered. Such consideration is required and for these purposes we have attached the FSC performance standards. We have also attached, for your convenience, the related management system that NCT Forestry Co-operative Limited requires its members to follow. If you use the FSC standards directly you would need to work through the document (there are 10 principles which inform 100+ criteria and these criteria are developed into 200+ indicators against which NCT is audited). NCT's members generally find it easier to follow the NCT management system which we have included for convenience.

Fire insurance

- 58 Our client requires that the applicant holds public liability insurance to cover, among others, the spread of fire, in the sum of fifty million Rand.

Drilling sites

- 59 Page 13 of the BAR contains the drill site layout plan. It indicates that 625m² will be required per drill hole. Given the large surface area required, our clients' tree planting spacing will not accommodate any drilling within timber compartments and drill sites must therefore take this into account.
- 60 In addition, our clients' properties contain many open areas which are managed as conservation sites, these areas must be avoided by any drilling activities. See attached map marked "B".

Conclusion

61 Our client submits that due to the lack of necessary information, particularly in the form of ground-truthing and specialist reports, the BAR in its current form fails to meet the legal requirements as it is not an accurate reflection of the impacts that the proposed activities are likely to have. The financial provision in turn cannot be viewed as accurate since the true impacts remain unknown.

Yours faithfully



Nicole Limberis-Ritchie
Senior Associate
NUPEN STAUDE DE VRIES INC.

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Response to the above comments were provided in the BAR that was distributed as part of the extended PPP consultation period

14 September 2020

PER EMAIL

Mr Trevor Hallatt
EXM Advisory Services

Email: trevor@exm.co.za

Dear Mr Hallatt

OBJECTION IN RESPECT OF ILAHLE 4 KZN (PTY) LTD KZN 30/5/1/1/2/10921 PR

- 1 As you are aware, we represent NCT Forestry Co-operative Limited and Forest Resources (Pty) Limited ("our clients").
- 2 NCT Forestry Co-operative Limited is the registered owner of Tygerskloof Portion 2 and Spitzkop Portion 3; and Forest Resources (Pty) Limited owns Wonderfontein Portion 3 and Spitzkop Portions 2, 4 –12, 15, 17 and 19 ("the Properties"). The Properties fall within the proposed project area and as such our clients duly registered as interested and affected parties in respect of the application for environmental authorisation apparently submitted by Ilahle 4 KZN Limited ("Ilahle") on 30 August 2019 ("the Application") under Department of Mineral Resources and Energy ("DMRE") reference KZN 30/5/1/1/2/10921 PR.
- 3 Our clients submitted comments in respect of the Application on 20 March 2020 during the first public participation process ("Previous Comments"). The draft Basic Assessment Report ("BAR") was thereafter apparently revised to incorporate certain comments and to include a comments and responses table. A further public comment period was then opened from 14 August 2020 to 14 September 2020.
- 4 Our clients have elected to submit comments during this further review period because they are of the view that the responses to the Previous Comments are largely inadequate and the

concerns which they raised have not sufficiently been incorporated into the revised Basic Assessment Report ("BAR").

Procedural irregularities

- 5 The EAP has advised that the application was submitted on 30 August 2019¹ but that the acceptance letter, which apparently dictated the procedural requirements and timeframes for the basic assessment process, is dated 1 November 2019 ("Acceptance Letter").
- 6 On 1 September 2020, we addressed correspondence to yourself in which we requested a copy of the Acceptance Letter. On 7 September 2020 you replied and advised that you have requested the Applicant to provide us with a copy of the Acceptance Letter.
- 7 Given that comments are due on Monday 14 September 2020, on 9 September the writer called and advised you that a copy of the Acceptance Letter was required to ascertain whether or not the Application had lapsed. You responded that it was the DMRE's job to ensure that the Application met the prescribed timeframes and advised that extensions had been granted. However, you similarly refused to provide us with a copy of such extension letters.
- 8 Regulation 40(2) of the Environmental Impact Assessment Regulations, 2014 provides that "*the public participation process contemplated in this regulation must provide access to all information that reasonably has or may have the potential to influence any decision with regard to an application unless access to that information is protected by law.*" Given that an application lapses if a timeframe has not been met, it is imperative that interested and affected parties are provided with information which may impact on such timeframes.
- 6 Accordingly, the public participation process is defective in that our clients, who are registered interested and affected parties, have not been provided with all information as required.
- 7 In our clients' view, and in the absence of information to the contrary, the BAR has not been submitted in the required timeframes and the Application has thus lapsed.

¹ Page 21 of the BAR.

Failure to include specialist studies

8 The Screening Report identifies the following 9 specialist studies as being necessary due to the sensitivities detected within the proposed prospecting area:

- 8.1 Agricultural impact assessment;
- 8.2 Archaeological and cultural heritage impact assessment;
- 8.3 Palaeontology impact assessment;
- 8.4 Terrestrial biodiversity impact assessment;
- 8.5 Aquatic biodiversity impact assessment;
- 8.6 Noise impact assessment;
- 8.7 Radioactivity impact assessment;
- 8.8 Plant species assessment; and
- 8.9 Animal species assessment.

9 Not one of these studies was conducted and the EAP persists in his failure to provide an adequate motivation as to why they were deemed unnecessary. Indeed, absolutely no ground truthing was conducted to inform the EAP's statement at page 57 of the BAR in which he states as follows:

"No specialist studies were undertaken as the EAP was confident in the status of the proposed site. The project team consists of qualified environmental assessment practitioners that have sufficient experience to inform the report on potential impacts and the baseline environment. The EAP also considered the temporary nature and limited footprint of the proposed project drill sites."

10 With respect, this bald and unsubstituted statement holds no weight, and the EAP and his team's apparent experience is no substitute for ground truthing of a particular site, especially where the site has been identified as having various significant sensitivities.

11 In the EAP's responses to our clients' concern in the revised BAR, the EAP states as follows:

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"The non-invasive phase of the prospecting activities, including the geophysical survey to be undertaken, will determine which of the drilling sites initially identified are feasible for prospecting, taking into consideration the environmental buffers generated as part of this report. Ground truthing of individual site sensitivity will be conducted once the feasible drill sites have been established. Preference will be given to sites that have been disturbed by anthropological activities.

No specialist studies needed as the implementation of the mitigation measures contained in the EMPr will successfully avoid and mitigate potential impacts. The focus will be to prevent impacts on sensitive areas and to implement a range of mitigation measures that will minimise potential other impacts.

A suitably qualified Environmental Control Officer (ECO) will be appointed to check the feasible sites prior to commencement of drilling to verify any fatal flaws to prevent impacts on sensitive environmental features." [Underlining provided.]

- 12 The EAP's response entirely fails to address our clients' concern.
- 12.1 It is clear from the response that no ground truthing whatsoever will be done by the necessary specialists prior to a decision on the Application being taken by the DMRE and accordingly prior to the proposed environmental authorisation ("EA") being granted (or refused). This is simply unacceptable in circumstances where the Screening Report has identified that the proposed prospecting area is environmentally sensitive and requires nine (9) different specialist studies to determine the feasibility of the proposed project in line with these sensitivities. The decision maker simply will not have the requisite information required to take a decision;
- 12.2 given that no specialist studies have been conducted, the accuracy with which the environmental buffers have been determined is questionable. For example, the EAP states that buffers will be placed around wetlands, but without a wetland delineation study, how will these buffers adequately be determined given that a desktop screening is only a guide? In this regard, the EAP refers our clients to "Figure 14" which does not exist in the revised BAR. Insofar as the EAP intends to refer to "Figure 4" at page 77, we note that the entire proposed prospecting area contains numerous NEPA wetlands and watercourses. If these are to be avoided proper delineation must be completed through specialist studies, a desktop study is simply insufficient, as is confirmed by the screening report;

- 12.3 it is entirely unclear how an Environmental Management Programme ("EMPr") can contain mitigation measures in circumstances where possible impacts have not adequately been identified and assessed through the requisite specialist studies;
- 12.4 the EAP suggests that the Environmental Control Officer ("ECO") will be responsible, after the grant of the EA, to determine no go areas and to identify fatal flaws.² However, the role of an ECO is not to undertake *ex post facto* studies once the activities in question have been authorised, but rather to ensure compliance with the conditions of the EA, and which would include ensuring that the sensitivity on the ground is in line with the findings of the environmental impact assessment as the activities progress, but not to the degree proposed by the EAP.
- 13 Our clients therefore persist in their submission that the BAR is fatally flawed as it lacks the required specialist studies. As set out above, the EAP has provided no adequate justification as to why none of the identified studies should be undertaken.

Environmental sensitivities

- 14 Our clients repeat paragraphs 22 to 46 of the Previous Comments.
- 15 The proposed project will take place in an area with:
- 15.1 Very high agricultural sensitivity;
- 15.2 high sensitivity in terms of animal species present;
- 15.3 very high aquatic sensitivity;
- 15.4 high archaeological sensitivity;
- 15.5 high palaeontology sensitivity;
- 15.6 high plant species sensitivity; and
- 15.7 very high terrestrial sensitivity,

yet the EAP has decided that no specialist studies are required because the EMPr includes adequate safeguards to mitigate these impacts; the EAP is suitably qualified and an ECO will

² Page 29 of the BAR.

be appointed to check the feasible sites prior to commencement of drilling to verify any fatal flaws to prevent impacts on sensitive environmental features. For reasons detailed above, this is no answer.

Final Rehabilitation, Decommissioning and Mine Closure Plan - Appendix 6

- 16 In the Previous Comments our clients advised the EAP that the incorrect catchment had been assessed. Our clients note that while the correct Mfolozi catchment has now been referred to in the BAR, the Thukela catchment is still referred to in the Final Rehabilitation, Decommissioning and Mine Closure Plan - Appendix 6 - which renders it defective.

Financial Provision

- 17 We reiterate that the applicant is required to put in place financial provision for intended disturbance of the entire project.
- 18 Although our clients do not concede that it would be lawful to do so, to the extent that financial provision is approved on the basis that only six boreholes will be active and/ or unrehabilitated at any given time, our clients submit that this must be included as a condition of the EA.
- 19 The condition should also require that rehabilitation of each borehole is signed off by the competent authority prior to a new borehole being drilled.
- 20 If the condition is not inserted into the EA, there is no safeguard for the proposal that only six boreholes will be active at any one time and accordingly, the financial provision proposed will be wholly inadequate.

Environmental Management Programme

- 21 Our clients reiterate that it is nonsensical to be expected to provide comment on an EMP, which talks to the management of environmental impacts in circumstances where the relevant studies have not been undertaken and the impacts are therefore largely unknown.

Impact of the proposed activities on our clients' business

Forest Stewardship Council Requirements

- 22 Our clients repeat paragraphs 56 and 57 of the Previous Submission and continue to await the Applicant's response.

Fire insurance

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Associate: Sanjee Maharaj
Consultants: Carmen de Villiers, Helyn Herholdt

- 23 Our client requires that the Applicant holds public liability insurance to cover, among others, the spread of fire, in the sum of fifty million Rand (R50 000 000). This must be included as a condition of the EA.

Drilling sites

- 24 Kindly clarify the proposed sites on our clients' Properties where drilling is expected to take place.

Conditions

- 25 In the event that an EA is granted, our clients submit that it is imperative that the following conditions are included in the EA:
- 25.1 a buffer of 100 meters from riparian zone fire-belts and a buffer of 500 metres from any housing owned or utilised by our clients on the Properties must be in place;
- 25.2 no roads or permanent structures (including but not limited to bund walls) may be constructed on the Properties;
- 25.3 the Applicant must register with the Council for Geoscience and provide our clients, as landowners, with a copy of such results and proof of such registration;
- 25.4 the Applicant shall comply with the Forest Stewardship Council requirements in respect of the Properties;
- 25.5 all drilling lubricants used by the Applicant, its representatives and contractors must be biodegradable; and
- 25.6 the Applicant may not drill on predicted orange or red fire danger index days or during the fire season as determined by the Vryheid Fire Protection Association.
- 25.7 The above conditions, amongst others are, also contained in an access agreement which must be signed upon the granting of the EA. A draft copy is attached for consideration.

Conclusion

- 26 Our clients submit that due to the lack of necessary information, particularly in the form of ground-truthing and specialist reports, the BAR in its current form fails to meet the legal requirements as it is not an accurate reflection of the impacts that the proposed activities are likely to have. The financial provision in turn cannot be viewed as accurate since the true impacts remain unknown.

Yours faithfully



Nicole Limberis-Ritchie
Senior Associate
NUPEN STAUDE DE VRIES INC.

Response to the above comments were provided in the BAR that was distributed as part of the extended PPP consultation period



Agriculture, forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Fi&l : 033 342 8783	DAFF	Mr. T.
Tli : 033 392 7721	Forestry Regulations &	24 February
↓	P/Bag X9029	
	Pietermaritzbur	
	3200	

P.O Box 1822 Rivonia
2128

Attention: Mr. Trevor Hallat

DRAFT BASIC ASSESSMENT REPORT (BAR) AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT (EMPR) FOR PROSPECTING RIGHT APPLICATION ILAHLE PORTION 2 AND THE REMAINDER (WHOLE AREA) OF THE FARM TYGERSKLOOF NO. 173- HU, A PORTION OF THE FARM DEMOINA NO. 830-HU, PORTION 3, 4, 5 AND 7 (WHOLE AREA) OF THE FARM WONDERFONTEIN NO. 560-HU, WHOLE AREA OF THE FARM MARIANTHA NO. 845-HU, WHOLE AREA OF THE FARM WELTEVEREDE 540-HU, A PORTION OF THE FARM TIERKLOOF 829- HU, PORTIONS 4-7, 13, 16, PORTIONS 2-17 AND 19 OF THE FARM SPITZKOP NO. 70-HU, ZULULAND DISTRICT MUNICIPALITY, KWAZULU- NATAL.

This letter serves as a notice of receipt for the above document received on the 21 February 2020. Kindly note that the document will be processed within 30 days from the date of receipt, provided that all requested information is submitted to the department timeously. Should any further

information be required, please do not hesitate to contact this office.

Yours faithfully Mr. T.

ibozana

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.....

Forestry Regulations & Support
KwaZulu-Natal Forestry Management

Appendix 2.7: Proof of consultation with Traditional Authority
ILAHLE 4 KZN (PTY) LTD

APPLICATION FOR A PROSPECTING RIGHT FOR COAL AND PSEUDOCOAL NEAR
VRYHEID, KWAZULU NATAL PROVINCE

RECORD OF TELEPHONIC DISCUSSIONS BETWEEN ZAMA KHUMALO AND PRINCE SIBUSISO ZULU

DATE: 16 JULY 2020

TIME: 14H00

Zama Khumalo phoned Prince Sibusiso Zulu to fulfil the requirements for consultation in support of the prospecting right application: The purpose of the call was to:

- Introduce the proposed prospecting activities; and
- Explain the environmental process undertaken as part of the prospecting right application.

Prince Sibusiso Zulu indicated that he was tired of communities being taken advantage of by big mining companies. He indicated that Ilahle 4KZN has not followed the correct protocol as they have not consulted with them and was therefore not interested.

Zama indicated that the process she was undertaking forms part of the consultation. She indicated that she requires contact details so they can forward further information.

Prince Zulu then replied that Zama acts as a third a party (environmental consultant) and he wants to first talk to the client and not the third party. He indicated that he knows their land has lots of coal but the community will not be taken advantage of and the correct consultation protocol should be followed.

In order to ensure that the correct protocol is followed, Zama asked if the Prince could give the list of communities falling under his Traditional Authority so that they can be included in the IAP database. The Prince indicated that no information will be given to a third party until Ilahle has consulted directly with them. Zama explained that there is a consultation process that she is undertaking and currently there are communities/communal property association that form part of the Interested and Affected Party database that she needs to consult. She then asked if the Prince can

kindly confirm if these communities are a go or no-go area in terms of her consultation process:

- Empangisweni
- Mhlabaneni
- Impumelelo
- Bhukubhu
- Bathenjini

The Prince replied that all the above-mentioned community property association are no-go areas until such a time that Ilahle has consulted with them direct.

Zama noted the Prince's concerns and advised that she will forward to the client. The Applicant has been provided the contact details and will consult with the Traditional Authority.

The contact details of the prince has been provided to the Applicant which will make contact and discuss the project going forward.

Post Phone Note: The number used to consult with the Prince is 072 705 1010

Appendix 2.8: Proof of notification of extension of PPP

Phonenumber	Status	SentData
27633075434	SUBMITD	
27721300547	SUBMITD	
27728660708	SUBMITD	
27769496700	SUBMITD	
27786383404	SUBMITD	
27788277592	SUBMITD	
27823019751	SUBMITD	
27827766296	SUBMITD	
27712980210	DELIVRD	
27714374115	DELIVRD	Please note that the public participation period for the Ilahle Vryheid Prospecting Right application and Basic Impact Assessment (KZN 30/5/1/1/2 10921 PR) has been extended. Please contact Trevor Hallatt at 0716892229 or trevor@exm.co.za to obtain the Basic Assessment Report for review. All comments must be submitted before 14 September 2020.
27727051010	DELIVRD	
27765469843	DELIVRD	
27823281085	DELIVRD	
27823545749	DELIVRD	
27823844242	DELIVRD	
27824192881	DELIVRD	
27824507525	DELIVRD	
27828080208	DELIVRD	
27828865451	DELIVRD	
27829009593	DELIVRD	
27832846274	DELIVRD	
27836377747	DELIVRD	

From: Trevor Hallatt
Bcc: hayley@forestryva.co.za; Magdalena@vhd.derec.co.za; jean@nctforest.com; buthuleni.derrick317@gmail.com; jurie@orainse.co.za
Subject: Bahle Vryheid Basic Impact Assessment - Extended Public Participation Period
Date: Friday, 14 August 2020 16:24:00
Attachments: image001.png

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

DMR reference: KZN 30/5/1/1/2/10921 PR

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION VRYHEID, KWAZULU NATAL

Please note that the public participation period for the above project has been extended. An additional 30 days is allocated for the review of the supporting documents and to provide comments.

The Basic Assessment Report (BAR) is available for review at the following locations:

- **Dropbox electronic link:** <https://www.dropbox.com/sh/bn1rciotou0cgr7/AABvWG5U82P5rZUsvfGCDNNYq?dl=0>
- **Onedrive electronic link:** https://exmadvisoryservices-my.sharepoint.com/:f:/g/personal/trevor_exm_co_za/Epw24YylWq8OvNpnuSw47DABurdtsKEOUztVK4sZmiSEqweSUQVfz

All comments received thus far and responses thereto have been incorporated in the draft BAR.

All new comments must be submitted to the contact details by the **14th of September 2020**

Kind regards
Trevor Hallatt

Contact person: Trevor Hallatt
Cell phone nr: 071 689 2229
Fax: 086 527 4619
Email: trevor@exm.co.za

Kind regards

From: Trevor Hallatt
Bcc: buthuleni.derrick317@gmail.com; richard@nctforest.com; timbers.ritchie@radv.co.za; nsoen@radv.co.za; hayley@forestryva.co.za; jean@nctforest.com; jacca.craig2019@gmail.com
Subject: Bahle Vryheid Basic Impact Assessment - Extended Public Participation Period
Date: Friday, 14 August 2020 16:22:00
Attachments: image001.png

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

DMR reference: KZN 30/5/1/1/2/10921 PR

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION VRYHEID, KWAZULU NATAL

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- **Onedrive electronic link:** https://exmadvisoryservices-my.sharepoint.com/:f:/g/personal/trevor_exm_co_za/Epw24YylWq8OvNpnuSw47DABurdtsKEOUztVK4sZmiSEqweSUQVfz

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Kind regards
Trevor Hallatt

Contact person: Trevor Hallatt
Cell phone nr: 071 689 2229
Fax: 086 527 4619
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Kind regards
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From: [Trevor Hallatt](mailto:Trevor.Hallatt@kznmwildlife.com)
Bcc: "teresa.uller@kznmwildlife.com"; "[Noluthando Dlamini@kznmwildlife.com](mailto:Noluthando.Dlamini@kznmwildlife.com)"
Subject: Ilehle Vryheid Basic Impact Assessment - Extended Public Participation Period
Date: Friday, 14 August 2020 16:27:00
Attachments: [image001.png](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

DMR reference: KZN 30/5/1/1/2/10921 PR

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION VRYHEID, KWAZULU NATAL

Please note that the public participation period for the above project has been extended. An additional 30 days is allocated for the review of the supporting documents and to provide comments.

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- **Onedrive electronic link:** https://exmadvisoryservices-my.sharepoint.com/:f/g/personal/trevor_exm_co_za/Epw24YyIWqBQvNpnuSw47DABurdtsKEOUztVK4s7miSEaw?e=SUQVIZ

All comments received thus far and responses thereto have been incorporated in the draft BAR.

All new comments must be submitted to the contact details by the **14th of September 2020**

Kind regards

Trevor Hallatt

Contact person: Trevor Hallatt

Cell phone nr: 071 689 2229

Fax: 086 527 4619

Email: trevor@exm.co.za

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Bcc: "sandle.nicola@dmr.gov.za"; "mtuthumhahle@gmail.com"; "corporateservice@abaqulusi.gov.za"; "municipalmanager@abaqulusi.gov.za"; "skunema@zululand.org.za"; "sandle.nicola@dmr.gov.za"; "mncstans@zululand.org.za"; "Mthahane@kzns.gov.za"; "bernadette@amafanisi.co.za"; "bhek.mali@dmr.gov.za"; "nery.mfwa@zmda.gov.za"; "suzie.mthahane@dmr.gov.za"; "meh.ema.methemwa@zmda.gov.za"; "Amsele@daff.gov.za"; "Thembakhe5@daff.gov.za"; "rob.crankshaw@amamarketing.co.za"; "suzie.mthahane@dmr.gov.za"; "BuhleM@daff.gov.za"; "gerald.willson@zmda.gov.za"; "thodda@kzndard.gov.za"; "hod.pe@kzndard.gov.za"; "msemburi@kzwildlife.com"; "mooosamy@dwa.gov.za"; "weiners@kzwildlife.com"; "Hsal.mhlongo@zmda.gov.za"; "Vanessa.MacLoud@zmda.gov.za"; "dovotes.zuma@dmr.gov.za"; "lizane.nogosemy@dmr.gov.za"; "JeffreyMA@daff.gov.za"; "Rodney.Hamvwa@transnet.net"; "Thabisi.sakvi@kzhealth.gov.za"; "thando.tubane@kzncopa.gov.za"
Subject: Ilahle Vryheid Basic Impact Assessment - Extended Public Participation Period
Date: Friday, 14 August 2020 16:25:00
Attachments: [image001.png](#)

ATTENTION: INTERESTED AND AFFECTED PARTY / COMMENTING AUTHORITY

DMR reference: KZN 30/5/1/1/2/10921 PR

PROJECT: BASIC ENVIRONMENTAL IMPACT ASSESSMENT IN SUPPORT OF ENVIRONMENTAL AUTHORISATION AND PROSPECTING RIGHT APPLICATION VRYHEID, KWAZULU NATAL

Please note that the public participation period for the above project has been extended. An additional 30 days is allocated for the review of the supporting documents and to provide comments.

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- **Onedrive electronic link:** https://exmadvisoryservices-my.sharepoint.com/:f/g/personal/trevor_exm_co_za/Epw24YyWqBOvNpnuSw47DABurdfsKFOUztVK4sZmiSEaw?e=sUQVtZ

All comments received thus far and responses thereto have been incorporated in the draft BAR.

All new comments must be submitted to the contact details by the **14th of September 2020**

Kind regards
Trevor Hallatt

Contact person: Trevor Hallatt
Cell phone nr: 071 689 2229
Fax: 086 527 4619
Email: trevor@exm.co.za

Kind regards
Trevor



TREVOR HALLATT
ENVIRONMENTAL SCIENTIST
MA ENVIRONMENTAL MANAGEMENT

Appendix 3: Environmental Impact Assessment Tables

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Topography	Change in natural topography of the site.	Construction	2	3	2,5	2	2,25	0,8	1,8	<ul style="list-style-type: none"> Stockpile soils removed for rehabilitation. Rehabilitate sites to original landform. 	0,6	1,08
Geology	Creation of conduits between geological strata.	Operations	1	4	2,5	3	2,75	0,6	1,65	<ul style="list-style-type: none"> Boreholes to be sealed with concrete. 	0,4	0,66
Soils	Potential loss of topsoil.	Operations	2	3	2,5	2	2,25	0,6	1,35	<ul style="list-style-type: none"> Keep the footprint of disturbance as small as practicably possible. Vegetation to be left in place to protect soils where possible. Where vegetation clearance cannot be avoided, storm water management measures to be put in place if there is a risk of soil erosion. Erosion protection where cut and fill and levelling of the drill site occurred. 	0,6	0,81
	Potential loss of soil resource.	Construction & Operation	3	3	3	2	2,5	0,6	1,5	<ul style="list-style-type: none"> Utilise existing access roads as far as possible. Keep the footprint of disturbance as small as practicably possible. Access roads to follow slope contours where possible. Vegetation to be left in place at the sides of the road to protect the soils. 	0,6	0,9

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
	Risk of soil contamination.	Construction, Operation and Closure	3	3	3	2	2,5	0,8	2	<ul style="list-style-type: none"> Impermeable liners or surfaces to be provided in areas where hydrocarbons are managed Diesel storage areas to be bunded and regularly checked. Drip trays to be used when any vehicle maintenance is undertaken. Spill kits to be available at drill sites. Contaminated soil to be remediated in situ. 	0,6	1,2
Surface water resources	Contamination of surface water.	Construction, Operation and Closure	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Bunded areas are to be created for the storage of all hazardous chemical substances (fuel, oil, lubricants and chemicals). Temporary bunds are to include an impervious floor (e.g. plastic sheeting) and earth/sandbag walls. 	0,6	1,44
	Increase in sediment loads as a result of erosion and heavy rainfall.	Construction, Operation and Closure	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Implement measures for soil erosion control in accordance with risk assessment. Boreholes to be situated outside of the 1 in 100 year floodline or 100m from the edge of a watercourse whichever is greater. 	0,6	1,44

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
	General and human waste.	Construction , Operation and Closure	2	2	2	3	2,5	0,6	1,5	<ul style="list-style-type: none"> Contractors may only use designated toilets and waste disposal facilities. Separate, marked receptacles are to be provided for the storage of hazardous and general wastes at the waste generation points. Littering is not to be permitted. Measures for waste avoidance, minimisation, reuse and recycling must be implemented. All items that have come into contact with any hazardous chemical substance (including fuels/oils/greases/laboratory chemicals, sludge) are to be disposed as hazardous waste. All waste are to be disposed of as general waste 	0,4	0,6
	Disturbance of surface water resources.	Construction	4	4	4	3	3,5	0,8	2,8	<ul style="list-style-type: none"> Boreholes to be situated outside of the 1 in 100 year floodline or 100m from the edge of a watercourse whichever is greater. Keep the footprint of disturbance as small as practicably possible 	0,6	1,68

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
Hydrogeology (Groundwater)	Seepage of fuels, oils and lubricants.	Construction, Operation and Closure	2	4	3	3	3	0,6	1,8	<ul style="list-style-type: none"> Impermeable floor or surfaces to be provided in areas where hydrocarbons are stored managed. Diesel storage areas to be bunded and regularly checked. Drip trays to be placed under vehicles susceptible of dripping oil. Spill kits to be available at drill sites. Bunded areas are to be created for the storage of all hazardous chemical substances (fuel, oil, lubricants and chemicals). Temporary bunds are to include an impervious floor (e.g. plastic sheeting) and earth/sandbag walls. 	0,6	1,08
	Cross contamination of aquifers due to borehole construction.	Operation & Closure	2	4	3	3	3	0,4	1,2	<ul style="list-style-type: none"> Boreholes that will not be used again will be backfilled with cement and sealed. Mitigation will entail the use of biodegradable or eco friendly drilling liquid. Alternatively, a drilling sock can also be used to soak up any contamination remaining after drilling operations have been completed. Purging of the borehole upon completion or to seal the borehole to prevent further use. The borehole 	0,4	0,48

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
										can also be sealed to prevent use of the water for potable purposes.		
Noise	Increase in ambient noise levels. Disturbance to people and animals.	Construction, Operation and Closure	3	4	3,5	3	3,25	0,8	2,6	<ul style="list-style-type: none"> Avoid travelling past residences. Speed limit of 40km/h will be enforced Liase with landowner on areas sensitive to noise. Provide a buffer of 100m from households. Drilling to take place during daylight hours. Borehole site and access route selection to minimize impacts on noise receptors 	0,6	1,56
Air Quality	Release of gaseous emissions.	Construction, Operation and Closure	2	4	3	3	3	0,4	1,2	<ul style="list-style-type: none"> No unnecessary revving of vehicles should take place. No vehicle must stand idling when not in use. 	0,4	0,48
	Dust fallout and fine particular matter emissions.	Construction, Operation and Closure	2	4	3	3	3	0,6	1,8	<ul style="list-style-type: none"> Restrict travelling speed of vehicles to reduce vehicle entrainment of dust. Wet gravel roads if dust is found to be excessive. 	0,6	1,08
Land Use and Land Capability	Intrusion due to drilling and prospecting activities in an area where agricultural uses are prominent.	Construction & Operation	3	4	3,5	3	3,25	0,8	2,6	<ul style="list-style-type: none"> Drilling sites must be selected to minimize disturbance of current land use. Relevant agreements must be in place with landowners to define location and extent of drilling sites and rehabilitation measures that will be undertaken at the end of drilling. 	0,4	1,04
	Reduction in land capability.	Construction	3	4	3,5	3	3,25	0,6	1,95	<ul style="list-style-type: none"> An access agreement with relevant land owners is to 	0,6	1,17

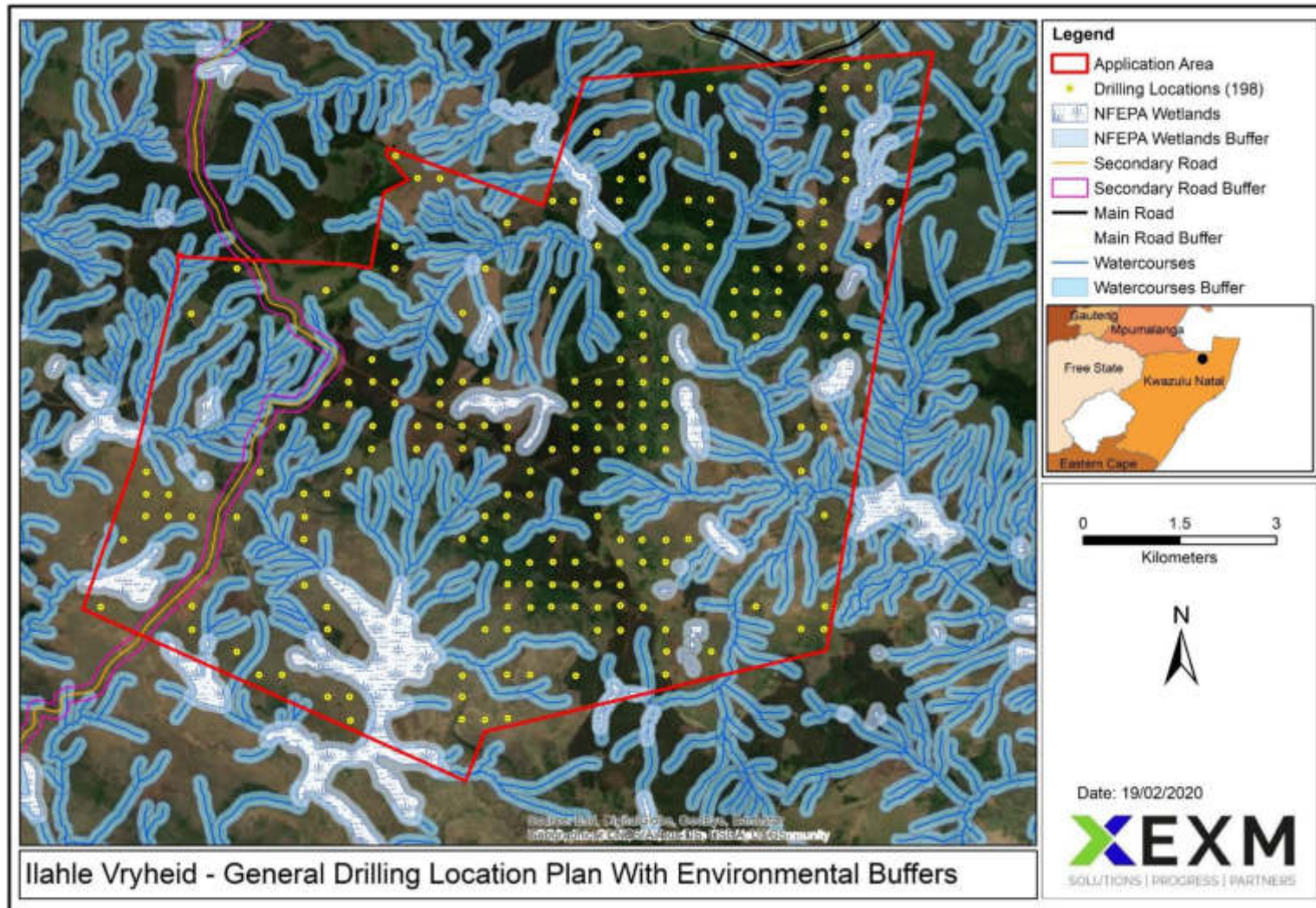
IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
										<p>be drafted and implemented once the EA has been issued.</p> <ul style="list-style-type: none"> Rehabilitation of drill sites and access roads. No permanent structures will be established on site. 		
Fauna, Flora and Ecology	Removal/damage of natural vegetation due to fires and	Construction	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Preference should be given to already disturbed areas, if possible. No-go areas to be identified. No prospecting to be conducted on ridges or valleys. Environmental awareness training of all employees responsible for drilling. Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. No activities to be conducted within the 100m buffer zones around wetlands Site selection aimed at minimising disturbance to natural vegetation.No smoking at the drilling sites. Code of conduct to include measures for the prevention of fires. Emergency equipment and procedures for fire fighting to be in place. Adhere to emergency procedures. 	0,6	1,44

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
	Establishment of drilling sites and access routes.	Construction, Operation & Closure	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. 	0,6	1,44
	Disturbance/ poaching of animals	Construction	3	3	3	3	3	0,6	1,8	<ul style="list-style-type: none"> Drilling contractors are only allowed to move within the designated drilling area. Environmental awareness training should include poaching and disturbance of animals 	0,6	1,08
	Encroachment of Alien Invasive Plants	Construction, Operation & Closure	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Monitor areas for proliferation of Alien Invasive Plants during operations and after rehabilitation has been undertaken Eradication of Alien Invasive Plants as required Disturbance must be minimized and only be allowed in demarcated areas 	0,6	1,4
Sensitive and Protected Areas	Degradation and destruction of sensitive biodiversity	Construction, Operation & Closure	3	3	3	3	3	0,8	2,4	<ul style="list-style-type: none"> Preference should be given to already disturbed areas, if possible. No-go areas to be identified. No prospecting to be conducted on ridges or valleys. Environmental awareness training of all employees responsible for drilling. Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. 	0,6	1,44

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
										<ul style="list-style-type: none"> No activities to be conducted within the 100m buffer zones around water courses. Site selection aimed at minimising disturbance to natural vegetation. 		
Heritage Resources	Cultural heritage resources may be found within the study area	Construction and Operation	3	3	3	3	3	0,6	1,8	<ul style="list-style-type: none"> A 50 meter buffer zone must be established around any heritage site observed during site establishment. 	0,6	1,08
Economic Development	Contribution to the economy.	Construction and Operation	2	4	3	2	2,5	0,4	1	<ul style="list-style-type: none"> Preference to be given to the use of local employment, contractors and local suppliers. 	1	1
Visual and Sense of Place	Loss of sense of place due to prospecting activities	Construction, Operation & Closure	2	3	2,5	3	2,75	0,8	2,2	<ul style="list-style-type: none"> Implement measures to reduce the visual impacts of prospecting activities, i.e. rehabilitation of drill sites and access roads. Buffers around residential units must be implemented. 	0,6	1,32
Safety and Security	Movement of drilling contractors and influx of workers - increase in crime	Construction and Operation	3	4	3,5	4	3,75	0,6	2,25	<ul style="list-style-type: none"> Drilling contractors not allowed moving outside of designated areas. Access of personnel related to the prospecting operations will only be allowed on approval by the project manager. 	0,6	1,35
	Overnight accommodation of drilling contractors - increase in crime	Construction, Operation & Closure	3	4	3,5	4	3,75	0,6	2,25	<ul style="list-style-type: none"> All personnel that have access to the property will be provided with access cards. 	0,6	1,35

IMPACT CATEGORY	POTENTIAL IMPACT	PHASE	INTENSITY	DURATION	CONSEQUENCE	EXTENT	SEVERITY	PROBABILITY	SIGNIFICANCE WITHOUT MITIGATION	MITIGATION	MITIGATION CONFIDENCE	SIGNIFICANCE WITH MITIGATION
										<ul style="list-style-type: none"> All personnel that have access to the property need to be made visible. Drilling contractors to be housed off site. 		
Stakeholder Acceptability	Prospecting on private property	Construction, Operation & Closure	4	4	4	3	3,5	0,8	2,8	<ul style="list-style-type: none"> Comply with the MPRDA & NEMA Implement and Comply with the EMP 	0,6	1,68
Social impact	Prospecting seen as a predecessor to mining and this raises a risk to various environmental impacts	Construction, Operation & Closure	4	4	4	4	3,75	0,8	3,2	<ul style="list-style-type: none"> An application for a mining right will require a separate EIA and public participation process and IAPs will be provided with the opportunity to raise their concerns. This report should form part of the feasibility study towards a mining right application to ensure the current information and sensitivities identified in this process is considered 	0,4	1,28

Appendix 4: Final Drill Site Layout



Appendix 5: Supplementary Environmental Management Plan

Ilahle 4 KZN (Pty) Ltd

Project **Ilahle 4 KZN (Pty) Ltd**
Project: **Vryheid Prospecting**
Report **Environmental Management Plan**
Name:
Report Status: **Draft for comment**

Revision No: **00**
Report Date: **17 February 2020**
Prepared by: **EXM Advisory Services**
For Submission to: **KwaZulu Natal Department of Mineral Resources**
Reference No: **KZN 30/5/1/1/2/10921 PR**

PROJECT INFORMATION SHEET

COMPETENT AUTHORITY:

Kwa-Zulu Natal Department of Mineral Resources

Prospecting Right Application Ref: KZN 30/5/1/1/2/10921PR

REPORT DETAILS:

Report Name: Environmental Management Plan

Report Status: Final

Revision No: 00

Date: 15 September 2020

PROJECT APPLICANT:

Ilahle 4 KZN (Pty) Ltd

Contact Person: Alfred Sibisi

Designation: Director

Tel: 013 656 5351

Postal Address: Stand No.3310-66; Jordaanstroom; Ingogo; Newcastle; Kwazulu-Natal; 2940

PROJECT CONSULTANT:

EXM Advisory Services (Pty) Ltd

Contact Person: Trevor Hallatt

Designation: Environmental Assessment Practitioner

Tel: 071 689 2229

Fax: 086 407 9911

Email: trevor@exm.co.za

Postal Address: PO Box 926, Ballito, 4420

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1. Introduction

Ilahle 4 KZN (Pty) Ltd has applied for a prospecting right in terms of Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA). This application includes the prospecting for Coal in the AbaQulusi Local Municipality in Kwa-Zulu Natal on the properties indicated Table 1 below:

Table 2 Farm portions within the prospecting right application

Farm Name:	Portion 2 and the Remainder (Whole Area) of the Farm Tygerskloof No. 173- HU, A Portion of the Farm Demoina No. 830-HU, Portion 3, 4, 5 and 7 (Whole Area) of the Farm Wonderfontein No. 560-HU, Whole Area of the Farm Mariantha No. 845-HU, Whole Area of the Farm Welteverede 540-HU, A Portion Of the Farm Tierkloof 829-HU, Portions 4-7, 13, 16 and 19, Portions 2-17 and 19 of the Farm Spitzkop No. 70-HU
Application area (ha)	7 900 ha
Magisterial district:	Zululand Magisterial District
Distance and direction from nearest town	The area is about 41 km east of Vryheid
21-digit Surveyor General Code for each farm portion	N0HU0000000000400000 N0HU0000000007020000 N0HU0000000007770000 N0HU0000000007690000 N0HU0000000006890000 N0HU00000000051800005 N0HU00000000051800000 N0HU00000000051800004 N0HU00000000030100000 N0HU00000000054100001 N0HU00000000042700000 N0HU00000000042700001 N0HU00000000027700002 N0HU00000000027700004 N0HU00000000027700000 N0HU0000000005200003

This application was acknowledged by the KZN Department of Mineral Resources (DMR) with reference number: KZN 30/5/1/1/2/10921 PR

The Prospecting Right Application is subject to the following Acts:

- the National Environmental Management Act, 1998 (Act No.107 of 1998) (“NEMA”); and,
- the Mineral and Petroleum Resources Development Act, 2002 (act no.28 of 2002) (“MPRDA”).

In terms of the MPRDA an application for a Prospecting Right is subject to an application for environmental authorisation in terms of NEMA.

The following listed activities are applicable to the proposed project, and thus the application is subject to a Basic Assessment ("BA") and Environmental Management Plan report.

- NEMA GN 983, Listing Notice 1, Activity Number 20: Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the MPRDA, including associated infrastructure, structures and earthworks, directly related to the prospecting of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the MPRDA.

EXM Advisory (Pty) Ltd has been appointed as the Independent Environmental Assessment Practitioners ("EAP") to review the BA Report and to oversee the PPP for the Prospecting Right Application.

This report purpose is supplementary to the Basic Assessment Report submitted; as part of the application for environmental authorisation in terms of NEMA.

Environmental Strategy

Objectives

This EMP provides for the environmental management of all prospecting activities to be undertaken in the Ilahle prospecting area. The objective of the EMP is to detail actions required to address the potential impacts resulting from the identified activities to be undertaken during the establishment, operation and rehabilitation of drilling sites within the prospecting right area. This EMP elaborates on the implementation of the mitigation measures documented in the detailed EMP.

Environmental Impacts

The aim of the EMP is to reduce the significance of negative impacts and enhance positive impacts as far as practicably possible. The overall objectives are thus to:

- Minimize disturbance on the physical environment including the protection of soils, surface water and groundwater during drilling operations;
- Minimize disturbance to the ecological environment and prevent disturbance to sensitive sites;
- prevent disturbance of sites of cultural and historical importance;
- Minimize disturbance to current land uses and neighboring activities;
- Provide for a forum for consultation with land owners and affected parties; and
- Facilitate socio-economic development where practicable.

Rehabilitation

Prospecting activities are to be undertaken in a manner which facilitates site rehabilitation and the restoration of pre-disturbance land capabilities. The primary objectives for rehabilitation include the:

- Removal of all infrastructure and material introduced to site;
- Removal of all wastes and their appropriate disposal;
- Promotion of the rapid re- establishment of natural vegetation and the restoration of site ecology;
- Facilitation of the re-establishment of the land use and land capability to as close as reasonably possible to the original conditions.

Action Plan

The various actions that need to be implemented, to ensure that the environmental objectives are met, are detailed in the EMP. The actions are aimed at preventing or mitigating environmental impacts and implementing the rehabilitation plan. The management actions are stated in a manner that ensures that they can be audited during the performance assessment programme.

1.1.1 Time Schedule

Time-frames detail the implementation schedule of management actions. The successful implementation and commencement within the timeframes is to be monitored as part of the performance assessment programme.

1.1.2 Requirements for Implementation

Additional measures that will need to be put in place to allow for the successful implementation of the action plan are listed where relevant.

Environmental Management Plan

The EMP presents the actions that need to be implemented to address the potential impacts resulting from the identified activities to be undertaken during the establishment, operation and rehabilitation of drilling sites within the prospecting right area. The management actions are stated in a manner that ensures that they can be audited during the performance assessment programme. Once approved by the relevant authorities, the provisions of the EMP are legally binding on the project applicant and all its contractors and suppliers.

Programme

Table 3: Environmental Management Programme

POTENTIAL IMPACT	OBJECTIVES	PERFORMANCE CRITERIA (TARGETS)	MITIGATION MEASURE(S)	REQUIREMENTS FOR IMPLEMENTATION	MONITORING AND INSPECTIONS	RESPONSIBLE PERSON / PARTY	TIME-FRAME
Biodiversity							
Removal of vegetation and potential impact on protected species.	Minimise disturbance of natural habitat	None	<ul style="list-style-type: none"> • Preference should be given to already disturbed areas, if possible. • No-go areas to be identified. • No prospecting to be conducted on ridges or valleys. • Environmental awareness training of all employees responsible for drilling. • Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas. 	Part of training and awareness during environmental induction programme	On-going	Contractor	During prospecting and site establishment

POTENTIAL IMPACT	OBJECTIVES	PERFORMANCE CRITERIA (TARGETS)	MITIGATION MEASURE(S)	REQUIREMENTS FOR IMPLEMENTATION	MONITORING AND INSPECTIONS	RESPONSIBLE PERSON / PARTY	TIME-FRAME
			<ul style="list-style-type: none"> • No activities to be conducted within the buffer zones around wetlands • Site selection aimed at minimising disturbance to natural vegetation. No smoking at the drilling sites. • Code of conduct to include measures for the prevention of fires. • Emergency equipment and procedures for fire fighting to be in place. • Adhere to emergency procedures. • Site selection aimed at minimising disturbance to sensitive animal habitats and breeding areas • Drilling contractors are only allowed to move within the designated drilling area. • Environmental awareness training should include poaching and disturbance of animals • Monitor areas for proliferation of Alien Invasive Plants during operations and after rehabilitation has been undertaken • Eradication of Alien Invasive Plants as required • Disturbance must be minimized and only be allowed in demarcated areas 				

POTENTIAL IMPACT	OBJECTIVES	PERFORMANCE CRITERIA (TARGETS)	MITIGATION MEASURE(S)	REQUIREMENTS FOR IMPLEMENTATION	MONITORING AND INSPECTIONS	RESPONSIBLE PERSON / PARTY	TIME-FRAME
Current Land Use							
Intrusion due to drilling and prospecting activities in an area where agricultural uses are prominent.	Minimise disturbance of current land use	Prevent impacts on land use	<p>Drilling sites must be selected to minimize disturbance of current land use.</p> <p>Existing farm tracks will be used as far as possible.</p> <p>Relevant agreements must be in place with landowners to define location and extent of drilling sites and rehabilitation measures that will be undertaken at the end of drilling.</p> <p>An access agreement with relevant land owners is to be drafted and implemented once the EA has been issued.</p> <p>Concurrent rehabilitation of drill sites.</p> <p>No permanent structures will be established on site.</p> <p>Implement measures to reduce the visual impacts of prospecting activities, i.e. rehabilitation of drill sites and access roads.</p> <p>Appropriate buffers around residential units must be implemented.</p>	Access agreement to be implemented		Contractor	During site establishment

POTENTIAL IMPACT	OBJECTIVES	PERFORMANCE CRITERIA (TARGETS)	MITIGATION MEASURE(S)	REQUIREMENTS FOR IMPLEMENTATION	MONITORING AND INSPECTIONS	RESPONSIBLE PERSON / PARTY	TIME-FRAME
Cultural and heritage resources							
Destruction of cultural and heritage resources	Prevent destruction of cultural and heritage resources	None	Correct procedures must be followed if heritage resources are found on-site.	Part of training and awareness during environmental induction programme	On-going	Contractor	During site establishment
			The Environmental Officer (EO) must conduct a site visit prior to commencement of work to ensure no heritage resources are present on site.				
			Establish 50m buffer where heritage resources are found				
Air quality							
Activities: Vehicles travelling on gravel roads. Windblown dust from bare surfaces.							
Dust fallout and fine particular matter	To reduce the magnitude and extent of dust dispersion.	None	Prospecting vehicles are to travel on gravel at speeds that reduce the potential for entrained dust production (less than 40 km/hr on private gravel roads).	Part of training and awareness during environmental induction programme	On-going	Contractor	During prospecting and site establishment

POTENTIAL IMPACT	OBJECTIVES	PERFORMANCE CRITERIA (TARGETS)	MITIGATION MEASURE(S)	REQUIREMENTS FOR IMPLEMENTATION	MONITORING AND INSPECTIONS	RESPONSIBLE PERSON / PARTY	TIME-FRAME
emissions.			Wet gravel roads and exposed areas if dust is found to be excessive.				
Stormwater and soil contamination							
Activities: Storage and use of hazardous substances							
Stormwater contamination	To contain spillage of hazardous chemical substances and prevent the contamination of soils or water resources	None	<p>Bunded areas are to be created for the storage of all hazardous chemical substances (fuel, oil, lubricants and chemicals).</p> <p>Temporary bunds are to include an impervious floor (e.g. plastic sheeting) and earth/sandbag walls.</p> <p>Spill kits must be available on site.</p>	Environmental Induction Programme	On-going	Contractor	During prospecting

POTENTIAL IMPACT	OBJECTIVES	PERFORMANCE CRITERIA (TARGETS)	MITIGATION MEASURE(S)	REQUIREMENTS FOR IMPLEMENTATION	MONITORING AND INSPECTIONS	RESPONSIBLE PERSON / PARTY	TIME-FRAME
Groundwater contamination							
Activities: Establish borehole, use of drilling fluid							
Cross contamination of aquifers	Prevent or minimise aquifer contamination	Proper remediation of contamination if required. SANS drinking water standards/ livestock watering	Boreholes that will not be used again will be backfilled with cement and sealed. Mitigation will entail the use of biodegradable or eco friendly drilling liquid. Alternatively, a drilling sock can also be used to soak up any contamination remaining after drilling operations have been completed. Purging of the borehole upon completion or to seal the borehole to prevent further use. The borehole can also be sealed to prevent use of the water for potable purposes.	Environmental Induction Programme	On-going	Contractor	During and after prospecting
Waste management							
Activities: generation and management of general and hazardous waste							
Poor waste management - wind blown litter/environmental pollution	To ensure the appropriate disposal of solid waste to prevent the contamination of soils and water	None	Separate, marked receptacles are to be provided for the storage of hazardous and general wastes at the waste generation points. Littering is not to be permitted.	Appropriate housekeeping	Inspect waste storage area on a weekly basis	Contractor ECO	During prospecting

POTENTIAL IMPACT	OBJECTIVES	PERFORMANCE CRITERIA (TARGETS)	MITIGATION MEASURE(S)	REQUIREMENTS FOR IMPLEMENTATION	MONITORING AND INSPECTIONS	RESPONSIBLE PERSON / PARTY	TIME-FRAME
	resources.		Measures for waste avoidance, minimisation, reuse and recycling must be implemented. All items that have come into contact with any hazardous chemical substance (including fuels/oils/greases/laboratory chemicals, sludge) are to be disposed as hazardous waste. All other substances are to be disposed of as general waste.				
Natural resources							
Activities: Construction activities and footprint of the site							
Use of natural resources such as water and electricity	Minimise resource consumption	None	No running taps to be left unattended. Switch off lights when not in use.	Awareness	None	Contractor ECO	During prospecting
Noise generation							
Activities: Health and safety							
Noise Pollution Occupational exposure	Non-exceedance of prescribed noise levels	Occupational exposure limits	Keep noise levels as low as possible. Maintain complaints register PPE must be provided to all employees	Employees must be informed	None	Contractor ECO	During prospecting

Table 4: EMPr for Rehabilitation

POTENTIAL IMPACT	OBJECTIVES	PERFORMANCE CRITERIA	MITIGATION MEASURE(S)	MONITORING AND INSPECTIONS	RESPONSIBLE PARTY	TIME-FRAME
Rehabilitation						
Activities: Drilling						
Land degradation	To return land to a condition as close as is reasonably possible to pre-prospecting land use potential.	None	Remove all waste, temporary structures, equipment and surplus materials upon completion of prospecting activities.	Inspect site to monitor success of rehabilitation	ECO Operational manager	Within 2 weeks of completion of prospecting activities at any particular site.
			Requests from landowners to retain infrastructure created during prospecting activities may be considered.			
			Areas contaminated with hydrocarbons are to be treated in situ using a commercially available bio-remediation product.			
			Soil and topsoil is to be returned to areas from where it was removed and the land shaped to its original form.			
			Waste is to be removed from site and disposed of at a recognised facility.			
			Appropriate, locally adapted vegetation should be established on all disturbed sites (unless the site is located in croplands).			

POTENTIAL IMPACT	OBJECTIVES	PERFORMANCE CRITERIA	MITIGATION MEASURE(S)	MONITORING AND INSPECTIONS	RESPONSIBLE PARTY	TIME-FRAME
Monitoring and Maintenance						
Activities:						
Water contamination	To monitor use of drilling water and additives.	None	Record the volume of water added to the drill hole.	Daily	ECO	For the duration of the project
			Record the type and volume of additives used.			
Land degradation	To monitor and maintain rehabilitated sites	Success of vegetation growth	The establishment of vegetation in denuded areas, including invasion by alien vegetation, is to be monitored.	Bi- annually Prior to closure	ECO	Prior to closure
Infestation of alien plants	Prevent spreading of alien plants	None	Alien vegetation is to be physically/chemically removed (depending on the species) from rehabilitated areas.	Bi- annually Prior to closure	ECO	During and after rehabilitation
Soil erosion	Prevent further erosion on	None	The erosion of areas disturbed during drilling is to be monitored.	Bi- annually Prior to closure	ECO	During and after rehabilitation

Ilahle 4 KZN (Pty) Ltd

POTENTIAL IMPACT	OBJECTIVES	PERFORMANCE CRITERIA	MITIGATION MEASURE(S)	MONITORING AND INSPECTIONS	RESPONSIBLE PARTY	TIME-FRAME
	site		Eroded areas must be repaired and measures put in place to limit further erosion.		ECO	During and after rehabilitation
Land degradation	To monitor and maintain rehabilitated sites	Success of vegetation growth	Where vegetation has not established within 6 months of rehabilitation, a locally occurring seed mix/plants and fertilizers are to be used to augment vegetation recovery as required.	Bi- annually Prior to closure	ECO	During and after rehabilitation

1.2 Emergency Procedures

Emergency procedures indicate the actions to be taken in the case of an environmental emergency. An environmental emergency refers to an event that could result in a pollution incident or damage to the biophysical or social environment including surrounding habitats or land use. The environmental emergency procedures required as a result of the proposed prospecting activities have been identified in the EMP (Table 2).

1.2.1 Fire

The requirements of the Vryheid Fire Protection Association must be adhered to during the prospecting activities, where applicable to the specific activities.

The following are to be included as key criteria of the emergency procedure:

- The making of fires for cooking, warmth or any other purposes is strictly prohibited.
- Firefighting equipment, including fire-extinguishers and fire beaters, are to be kept on site.
 - At least one fire extinguisher at the drilling sites.
 - Three fire beaters at both the drilling sites.
- Contact details of the land owner, neighboring land owners as well as the local fire department are to be kept on hand at the drilling sites.

In the event of a fire starting on site, the following steps are to be implemented:

- Attempt to extinguish or contain the fire, using the beaters or extinguishers. Elicit help of staff in the area.
- If the fire cannot be extinguished or contained using these measures, the Site Manager is to be contacted and notified of the location and extent of fire.
- In the case of a fire occurring in close proximity to a methane-rich borehole site, stop the drilling and cap the borehole to prevent gaseous emissions come into contact with the fire.
- All flammable substances in the path of the fire are to be removed.
- Notify the land owner of the fire and elicit assistance in fighting the fire.
- Mobilize staff to utilize the plant equipment and the water cart, plus any other fire extinguishing media to extinguish or contain the fire.
- Contact the local firefighting emergency service to assist in fighting the fire.
- Contact neighboring land owners who have property in the path of the fire.
- The incident is to be reported as part of the incident reporting procedure. The cause is to be investigated and measures put in place to prevent such an incident from re-occurring.

1.2.2 Spillage of a fuel, oil, lubricant or any other chemical substance

The following are to be included as key criteria of the emergency procedure:

- Hydro-carbons and chemicals required on-site must be stored or handled over a bunded, impervious surface.

- Material safety data (MSD) sheets are to be available for all hazardous chemicals stored on site. These should be kept in close proximity to where the chemicals are stored on site. Ensure that the MSD sheets contain sufficient information on environmental risks and clean-up measures.
- Spill kits are to be purchased and kept on site in close proximity to fuel/oil/lubricant storage areas. These should include a bucket, absorbent material (sand or commercial product such as Peatsorb) and a spade.
- A commercially available product for the treatment of soils contaminated with hydrocarbons is to be purchased and kept on site.

In the event of a chemical spill taking place on site, the following actions should take place:

- Close, seal or otherwise prevent further spillage from the source.
- Take reasonable steps to contain the spilled product. This may include the construction of earth berms. Attention should be given to the protection of watercourses and drainage lines.
- Notify the Site Manager of the spill.
- Lift as much of the spilled material as practical.
- In the case of a hydrocarbon spill, add an absorbent material to remove the remaining material.
- In the case of any other chemical spill, handle and remove the material in accordance with the MSD requirements.
- Place all spilled material and absorbent material used in clean-up in a container for disposal as hazardous waste.
- In the case of a hydrocarbon spill, treat any contaminated soil in the footprint area with a suitable, commercially available product for the in situ remediation of such spills.
- The incident is to be reported as part of the incident reporting procedure. The cause is to be investigated and measures put in place to prevent such an incident from re-occurring.

**Appendix 6:
Final Rehabilitation, Decommissioning and Mine Closure Plan**

**FINAL REHABILITATION, DECOMMISSIONING AND MINE
CLOSURE PLAN IN SUPPORT OF A PROSPECTING RIGHT AND
ENVIRONMENTAL AUTHORISATION APPLICATION NEAR
VRYHEID, KWA-ZULU NATAL**

Ilahle 4 KZN (Pty) Ltd

FINAL

DMR REF:

Ilahle Vryheid Prospecting: KZN 30/5/1/1/2/10921 PR

SEPTEMBER 2020

VERSION 01

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Name	Designation	Signature	Date
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1. SCOPE AND PURPOSE

1.1 Project background

Ilhahle 4 KZN (Pty) Ltd (Ilahle) has submitted an application to conduct prospecting activities for coal and pseudocoal in an area approximately 41km east Vryheid in the Magisterial District of Zululand, Kwa-Zulu Natal. The prospecting area covers approximately 7 900 hectares. The proposed prospecting activities trigger activities 20 and 27 listed in GNR 893 (Listing Notice 1 as amended in 2017). Therefore, a Basic Impact Assessment (BA) process must be undertaken as part of an application for Environmental Authorisation (EA).

Regulation 10 of the Financial Provision Regulations of 2015 (GN R.1147 of 2015), published in terms of the National Environmental Management Act (No. 107 of 1998) (NEMA Financial Provision Regulation), requires that a final rehabilitation, decommissioning and mine closure plan must be developed and accompany an EA application.

This report fulfils the requirement stated above and the purpose of the report is to set out actions and measures that need to be conducted in order to adequately rehabilitate an area to achieve final land use. The plan must also contain details regarding financial provision for rehabilitation. This report has been developed in terms of the Annexure 4 of the NEMA Financial Provision Regulation in support of the EA application which contains minimum requirements for a final rehabilitation, decommissioning and mine closure plan.

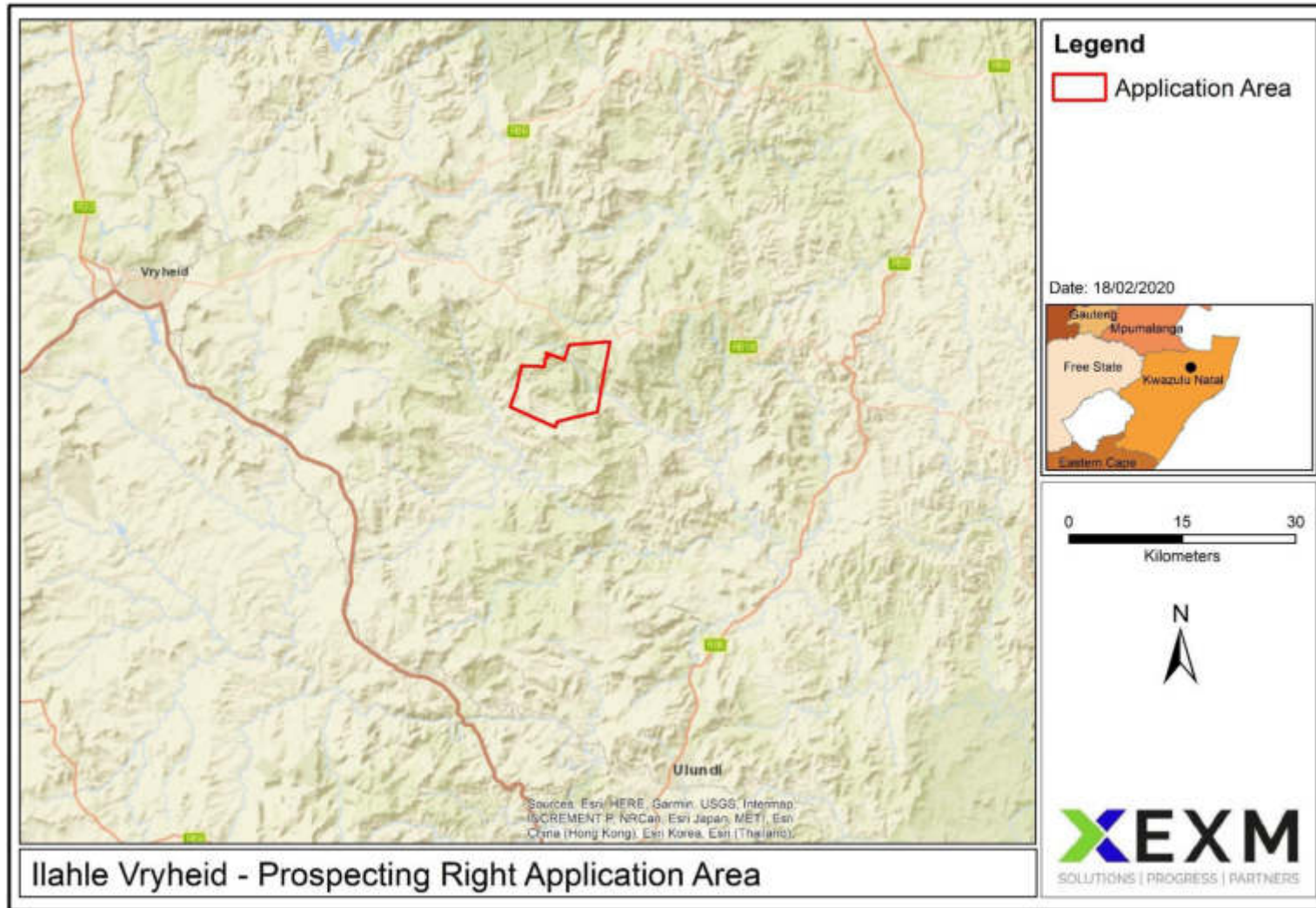


Figure 1-1: General Location of the Ilahle prospecting right area

1.2 Purpose and Aim of the Report

Ilahle appointed EXM Advisory Services (Pty) Ltd (EXM) to develop the required documentation and estimate the financial provision in support of an EA and prospecting right application near Vryheid in Kwa-Zulu Natal. This final rehabilitation, decommissioning and mine closure plan, including the calculation of the required financial provision, has been compiled for the Ilahle Vryheid Prospecting Right Application in terms of Appendix 4 of the NEMA Financial Provision Regulation (GN R. 1147 of 2015).

The overall purpose of this Report is therefore to develop a plan that is measurable and auditable that takes into consideration the proposed post-prospecting end use of the area. The report must contain information that is necessary for the definition of the closure vision, objectives, design and relinquishment criteria, indicating what infrastructure and activities will ultimately be decommissioned, closed, removed and remediated and the risk drivers determining actions, that indicates how the closure actions will be implemented to achieve closure relinquishment criteria. It also indicates the monitoring, auditing and reporting requirements.

1.3 Legal and Governance Framework

Financial provision and its updates were previously regulated under the Mineral and Petroleum Resources Development Act (MPRDA) and its Regulations (GN R. 527 of 2004). In September 2014, all provision related to environmental management in the MPRDA was removed and included in section 24 of the National Environmental Management Act (No 107 of 1998) (NEMA). In November 2015 the Minister of Environmental Affairs promulgated regulations in terms of NEMA pertaining to the Financial Provisioning for Prospecting, Exploration, Mining or Production

Activities listed in regulations published in terms of NEMA must obtain an EA prior to commencement. Activities listed in GNR 983 (Listing Notice 1) and GNR 985 (Listing Notice 3) require a Basic Impact Assessment (BA) to be conducted in order to obtain EA and a full EA must be conducted for activities listed in GNR 984 (Listing Notice 2). The proposed prospecting activities triggers activities 20 and 27 listed in GNR 893 (Listing Notice 1 as amended in 2017), published. Therefore, a Basic Impact Assessment (BA) process must be undertaken as part of an application for Environmental Authorisation (EA).

Regulation 10 of the NEMA financial provision regulations states that an EA applicant must- (a) ensure that a determination is made of the financial provision and the plans contemplated in regulation 6 are submitted as part of the information submitted for consideration by the Minister responsible for mineral resources of an application for

environmental authorisation, the associated environmental management programme and the associated right or permit in terms of the Mineral and Petroleum Resources Development Act, 2002; and

Regulation 6 as referred to above requires the following documents to be developed:

1. Annual rehabilitation, as reflected in an annual rehabilitation plan;
2. Final rehabilitation, decommissioning and closure of the mining operations at the end of the life of operations, as reflected in a final rehabilitation, decommissioning and mine closure plan; and
3. Remediation of latent or residual environmental impacts which may become known in the future, including the pumping and treatment of polluted or extraneous water, as reflected in an environmental risk assessment report.

1.4 Objectives of the Closure Plan

The objectives of the final rehabilitation, decommissioning and mine closure plan, as stated in Appendix 4 of the regulations, are to identify a post mining land use that is feasible through the following:

- Provide a vision, objectives, targets and criteria for final rehabilitation, decommissioning and closure;
- Outline the design principles for closure;
- Explain the risk assessment approach and outcomes and link closure activities to risk rehabilitation;
- Detail the closure actions;
- Provide a detailed schedule, budget, roles and responsibilities for final closure;
- Identify knowledge gaps and how to address these;
- Detail full closure costs for life of project; and
- Outline monitoring, auditing and reporting requirements.

1.5 Details of report writer

Name: Trevor Hallatt

Affiliation: Senior Environmental Advisor, EXM Advisory Services (Pty) Ltd

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1.5.1 Expertise of Independent Assessor

Qualifications

BSc Geography & Environmental Management (NWU)

BA Hons Environmental Management (NWU)


MA Environmental Management (NWU)

Expertise and Experience

Trevor Hallatt has more than 10 years of environmental management experience in mining, power generating, industrial and local government sectors. His duties entail the planning and execution of projects related to environmental management, including ISO 14001: 2004 and legal compliance audits, Environmental Impact Assessments (EIA), Financial Provisioning, Compilation of Environmental Management Programmes, Environmental Risk Assessments and Environmental Management Systems. Furthermore, he performed different functions in the planning and delivery of environmental short courses, including the development of modules and presenting on different topics. Trevor is also a registered Natural Science Professional with the South African Council for Natural Scientific Professions (Reg nr: 300123/15).

1.5.2 Declaration of Independence

The undersigned declare that this report represents an **independent and objective** assessment of the financial provision for Ilahle 4 KZN (Pty) Ltd.

Name	Designation	Signature	Date
Trevor Hallatt	Senior Environmental Advisor		2020/09/17

2. APPROACH AND METHODOLOGY

2.1 Scope of the Report

The scope of the report includes all infrastructure and footprints that are planned to be used, dismantled, abandoned, rehabilitated or mothballed that form part of the Ilahle Vryheid prospecting right area as well as impacts that may occur outside of it.

2.2 Content of the Report

This Final Rehabilitation, Decommissioning and Mine Closure Plan includes the minimum content of a final rehabilitation, decommissioning and mine closure plan as required in Appendix 4 of the NEMA Financial Provision Regulation (Refer to Table 2-1).

It should be noted that this plan forms part of three reports required for closure planning and financial provisioning (refer to Figure 2-1). A separate Latent Environmental Risk Report has been developed. It should be noted that the purpose of an annual rehabilitation plan is to indicate measures that will be taken over the next 12 months to rehabilitate areas already disturbed. No activities have commenced and therefore an annual rehabilitation plan is not required but will be developed as part of the annual revision of the financial provision once activities have commenced.

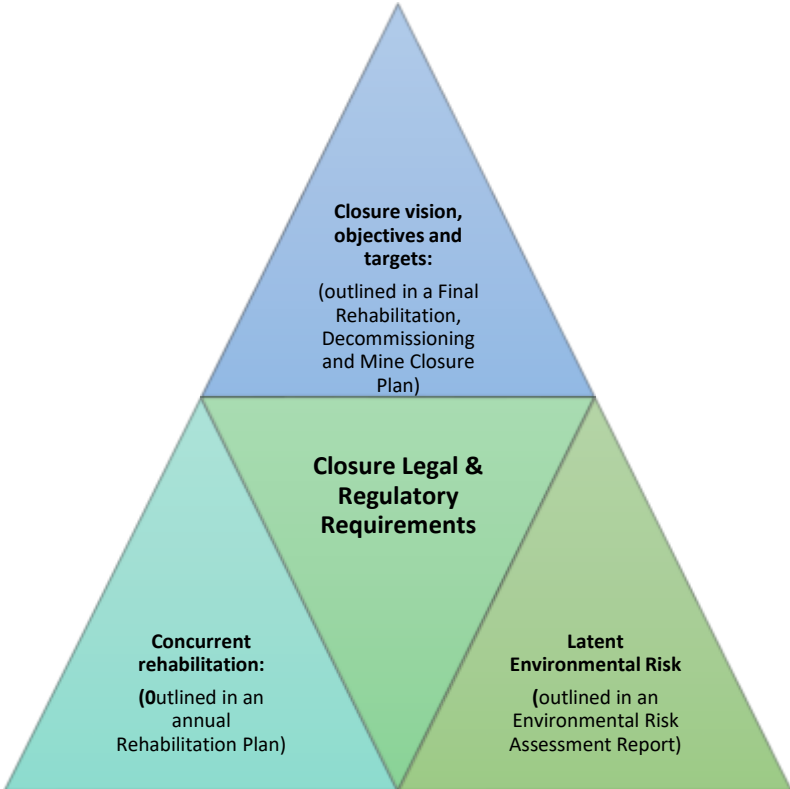


Figure 2-1: Closure Reporting Requirements and integration

Table 2-1: Required Content of the Final Rehabilitation, Decommissioning and Closure Plan according to GNR 1147, 2015.

Minimum Content of A Final Rehabilitation, Decommissioning and Closure Plan (Appendix 4 of GN R. 1147)	
Requirement	Section in Report
The final rehabilitation, decommissioning and mine closure plan must be measurable and auditable and must include—	
(a) details of— (i) the person or persons that prepared the plan; (ii) the professional registrations and experience of the preparers;	Refer Section 1.4 of this report
(b) the context of the project, including— (i) material information and issues that have guided the development of the plan; (ii) an overview of— (aa) the environmental context, including but not limited to air quality, quantity and quality of surface and groundwater, land, soils and biodiversity; and (bb) the social context that may influence closure activities and post-mining land use or be influenced by closure activities and post-mining land use; (iii) stakeholder issues and comments that have informed the plan; (iv) the mine plan and schedule for the full approved operations, and must include— (aa) appropriate description of the mine plan; (bb) drawings and figures to indicate how the mine develops; (cc) what areas are disturbed; and (dd) how infrastructure and structures (including ponds, residue stockpiles etc.) develops during operations;	Refer Section 3-5 of this report
(c) findings of an environmental risk assessment leading to the most appropriate closure strategy, including— (i) a description of the risk assessment methodology including risk identification and quantification, to be undertaken for all areas of infrastructure or activity or aspects for which a holder of a right or permit has a responsibility to mitigate an impact or risk at closure; (ii) an identification of indicators that are most sensitive to potential risks and the monitoring of such risks with a view to informing rehabilitation and remediation activities; (iii) an identification of conceptual closure strategies to avoid, manage and mitigate the impacts and risks; (iv) a reassessment of the risks to determine whether, after the implementation of the closure strategy, the residual risk has been avoided and / or how it has resulted in avoidance,	Refer Section 6 of this report

Minimum Content of A Final Rehabilitation, Decommissioning and Closure Plan (Appendix 4 of GN R. 1147)	
Requirement	Section in Report
<p>rehabilitation and management of impacts and whether this is acceptable to the mining operation and stakeholders; and</p> <p>(v) an explanation of changes to the risk assessment results, as applicable in annual updates to the plan;</p>	
<p>(d) design principles, including—</p> <p>(i) the legal and governance framework and interpretation of these requirements for the closure design principles;</p> <p>(ii) closure vision, objectives and targets, which objectives and targets must reflect the local environmental and socio-economic context and reflect regulatory and corporate requirements and stakeholder expectations;</p> <p>(iii) a description and evaluation of alternative closure and post closure options where these exist that are practicable within the socioeconomic and environmental opportunities and constraints in which the operation is located;</p> <p>(iv) a motivation for the preferred closure action within the context of the risks and impacts that are being mitigated;</p> <p>(v) a definition and motivation of the closure and post closure period, taking cognisance of the probable need to implement post closure monitoring and maintenance for a period sufficient to demonstrate that relinquishment criteria have been achieved;</p> <p>(vi) details associated with any on-going research on closure options;</p> <p>(vii) a detailed description of the assumptions made to develop closure actions in the absence of detailed knowledge on site conditions, potential impacts, material availability, stakeholder requirements and other factors for which information is lacking;</p>	Refer Section 7 of this report
<p>(e) a proposed final post-mining land use which is appropriate, feasible and possible of implementation, including—</p> <p>(i) descriptions of appropriate and feasible final post-mining land use for the overall project and per infrastructure or activity and a description of the methodology used to identify final post-mining land use, including the requirements of the operations stakeholders;</p> <p>(ii) a map of the proposed final post-mining land use;</p>	Refer Section 8 of this report
<p>(f) closure actions, including—</p> <p>(i) the development and documenting of a description of specific technical solutions related to infrastructure and facilities for the preferred closure option or options, which must include all areas, infrastructure, activities and aspects both within the mine lease area and off of the mine lease area associated with mining for which the mine has the responsibility to implement closure actions;</p> <p>(ii) the development and maintenance of a list and assessment of threats and opportunities and any uncertainties associated with the preferred closure option, which list will be</p>	Refer Section 7 and 9 of this report

Minimum Content of A Final Rehabilitation, Decommissioning and Closure Plan (Appendix 4 of GN R. 1147)	
Requirement	Section in Report
used to identify and define any additional work that is needed to reduce the level of uncertainty;	
(g) a schedule of actions for final rehabilitation, decommissioning and closure which will ensure avoidance, rehabilitation, management of impacts including pumping and treatment of extraneous water— (i) linked to the mine works programme, if greenfields, or to the current mine plan, if brownfields; (ii) including assumptions and schedule drivers; and (iii) including a spatial map or schedule, showing planned spatial progression throughout operations;	Refer Section 9 of this report
(h) an indication of the organisational capacity that will be put in place to implement the plan, including— (i) organisational structure as it pertains to the plan; (ii) responsibilities; (iii) training and capacity building that may be required to build closure competence;	Refer Section 10 of this report
(i) an indication of gaps in the plan, including an auditable action plan and schedule to address the gaps;	Refer Section 9 of this report
(j) relinquishment criteria for each activity or infrastructure in relation to environmental aspects with auditable indicators;	Refer Section 11 of this report
(k) closure cost estimation procedure, which ensures that identified rehabilitation, decommissioning, closure and post-closure costs, whether on-going or once-off, are realistically estimated and incorporated into the estimate, on condition that— (i) cost estimates for operations, or components of operations that are more than 30 years from closure will be prepared as conceptual estimates with an accuracy of ± 50 per cent. Cost estimates will have an accuracy of ± 70 per cent for operations, or components of operations, 30 or less years (but more than ten years) from closure and ± 80 per cent for operations, or components of operations ten or less years (but more than five years) from closure. Operations with 5 or less years will have an accuracy of ± 90 per cent. Motivation must be provided to indicate the accuracy in the reported number and as accuracy improves, what actions resulted in an improvement in accuracy; (ii) the closure cost estimation must include— (aa) an explanation of the closure cost methodology; (bb) auditable calculations of costs per activity or infrastructure; (cc) cost assumptions;	Refer Section 12 of this report

Minimum Content of A Final Rehabilitation, Decommissioning and Closure Plan (Appendix 4 of GN R. 1147)	
Requirement	Section in Report
(iii) the closure cost estimate must be updated annually during the operation's life to reflect known developments, including changes from the annual review of the closure strategy assumptions and inputs, scope changes, the effect of a further year's inflation, new regulatory requirements and any other material developments; and	
<p>(l) monitoring, auditing and reporting requirements which relate to the risk assessment, legal requirements and knowledge gaps as a minimum and must include—</p> <p>(i) a schedule outlining internal, external and legislated audits of the plan for the year, including—</p> <p>(aa) the person responsible for undertaking the audit(s);</p> <p>(bb) the planned date of audit and frequency of audit;</p> <p>(cc) an explanation of the approach that will be taken to address and close out audit results and schedule;</p> <p>(ii) a schedule of reporting requirements providing an outline of internal and external reporting, including disclosure of updates of the plan to stakeholders;</p> <p>(iii) a monitoring plan which outlines—</p> <p>(aa) parameters to be monitored, frequency of monitoring and period of monitoring;</p> <p>(bb) an explanation of the approach that will be taken to analyse monitoring results and how these results will be used to inform adaptive or corrective management and/or risk reduction activities; and</p>	Refer Section 13 of this report
(m) motivations for any amendments made to the final rehabilitation, decommissioning and mine closure plan, given the monitoring results in the previous auditing period and the identification of gaps as per 2(i).	Refer Section 14 of this report

3. PROJECT DESCRIPTION AND SCHEDULE

The Prospecting Right application has been submitted to prospect for coal and pseudocoal in respect to the following properties:

- Portion 2 and the Remainder (Whole Area) of the Farm Tygerskloof No. 173- HU
- A Portion of the Farm Demoina No. 830-HU
- Portion 3, 4, 5 and 7 (Whole Area) of the Farm Wonderfontein No. 560-HU
- Whole Area of the Farm Mariantha No. 845-HU
- Whole Area of the Farm Welteverede 540-HU
- A Portion Of the Farm Tierkloof 829-HU
- Portions 4-7, 13, 16, Portions 2-17 of the Farm Spitzkop No. 70-HU

The prospecting right area covers approximately 7 900 ha in extent. The proposed Prospecting Right is located within the AbaQulusi Local Municipality and is located ~41 km east of Vryheid in Kwazulu-Natal.

3.1 Proposed Prospecting Activities

The prospecting activities will be aimed at identifying potential coal and psuedocoal deposits. In order to identify the mineral targets a desktop review phase and invasive drilling phase will be undertaken.

3.1.1 Desktop Review Phase

The desktop studies will involve assessing all available public information on the geology, mineral occurrence and topography of the prospecting right application area, and all information on past work carried out in the area from geophysics, geochemistry, image interpretation, drilling and mining. Any literature assessed will be reviewed, collated and archived for reference. Key information during this phase will be data provided by the Council of Geoscience on historic drilling that has been undertaken within the prospecting area.

3.1.2 Spatial Database Compilation

Spatial information will be compiled into a GIS database for access, correlation and evaluation. The GIS system will be used and maintained for the period of the prospecting right exploration program and regularly updated as new information is generated by the exploration program. All spatial information assessed and collected in the field will be standardized using the WGS84 datum.

3.1.3 Remote sensing

As part of the initial review, public domain aerial photos will be acquired and a detailed geological and structural interpretation will be done on these to aid in identifying target areas that are not readily evident on the ground and to provide an independent interpretation of the geology of the area.

Satellite imagery will also be acquired to provide a more regional viewpoint of the area of interest. As before a detailed geological and structural interpretation will be done on these images to provide a more regional viewpoint on the target areas. Satellite imagery is used to complement the aerial photo interpretations as the combination of multi-spectral bands can be used to highlight certain lithology, vegetation types, soil types, alteration minerals, etc.

3.1.4 Geophysical survey to be undertaken

Both airborne and ground geophysical surveys may be undertaken for the prospecting right area. This is dependent on the results of the desktop study. These surveys will be used in conjunction with the data available to the public from the Council for Geoscience.

A small airborne magnetic/radiometric survey may be carried out over the prospect and surrounding areas to map the structural geology of the area. Follow up ground geophysical surveys will then be carried out on coincident targets from the compilation of geological and geophysical data. These surveys may include ground gravity, ground electromagnetics, IP and controlled source audio magnetotellurics (CSAMT).

On completion of the desktop review a plan detailing the location of invasive drill sites will be completed allowing the holder to commence with borehole drilling to acquire core samples and delineate the minerals. Establishment and operation of the drilling rigs will be undertaken and is the main activities forming part of the invasive drilling phase.

3.2 Proposed Infrastructure

The following infrastructure or areas will be established at each drilling site: (also see Figure 3):

3.2.1 Access Road (if required)

Existing farm tracks and roads will be followed for entry and exit to all drill sites. Site locations will be determined to ensure short and easy access. All access on farms will be conducted in terms of a written agreement with the landowner. In instances where no access road is available to the site location a single track will be chosen on the basis of least

environmental impact on natural habitat considered the last option. Only these tracks will be followed and will not be deviated from.

3.2.2 Parking for light vehicles

The parking area for light vehicles will be established adjacent to the drill site. The extent of this area will be kept to a minimum. Vehicles will only park in the designated area and will make use of one turning track to minimise disturbance to the environment.

3.2.3 Chemical storage area

Storage and use of hydrocarbons and other chemicals may only take place on impermeable surfaces with bunds to contain any accidental spills. Hazardous material will be stored in appropriate containers and clearly marked. Drip trays and/or impermeable surfaces with bunds must be placed under machinery that has the potential to leak. Material Safety Data Sheets will be available for all drilling and other chemicals kept on site.

3.2.4 Water delivery and settling sumps

When core drilling will be undertaken a number of settling sumps will be excavated and lined with impervious plastic sheets. The purpose of these sumps is to recycle water and drilling fluids by means of gravity causing heavier materials (e.g. drill cuttings) to settle and "clean" water being produced for re-use. These sumps will be fenced, where required, to prevent livestock and public access. The plastic sheets will be removed, and sumps will be backfilled on completion of drilling.

3.2.5 Drill rig

In most cases the drill rig will be a self-contained, truck-mounted unit accompanied by a compressor and a generator. The drill rig will be driven to site and mobilised in the desired location, positioned over the drill site and stabilised. The footprint of disturbance for a drill rig and associated equipment is generally smaller than 625 m². Plastic sheets and drip trays will be placed underneath the rig for the duration of the drilling process at each site in order to avoid hydrocarbon spills and contamination. The perimeter of the drill sites will be staked out and the drill crew will not operate beyond these boundaries. Depending on the locality, this perimeter may be fenced, marked with bunting or barricading. Please refer to Figure 3 for a layout plan of the drilling site.

3.2.6 Drill core storage area

During core drilling a laydown area for the extracted core samples will be established within the footprint of the drill site. This area is usually 10m × 2m and is used to place the extracted core in sequence (according to depth) for later analysis by an appointed geologist. Core trays will be used to contain the core samples.

3.2.7 Drill rod storage area

During the drilling process the drill rods are usually kept on trestles (specially built stands) or on the back of a truck for easy access or within the drill site area.

3.2.8 Vegetation and topsoil stockpile areas (if required)

Vegetation and topsoil will only be stockpiled in instances where settling sumps are required i.e. core drilling. During the excavation process the topsoil and available vegetation will be placed adjacent to the sumps. This will also serve as stormwater diversion berms. The excavated material will be backfilled into the rehabilitated sumps on completion of the drilling process.

3.2.9 General and hazardous waste receptacles

Separate, marked receptacles (containers) will be provided for the storage and disposal of hazardous and general wastes at the waste generation points. The purpose of this is to ensure that general and hazardous waste be disposed of separately.

3.2.10 Chemical toilet

Chemical toilets will be provided for the drilling crew. The toilets will be supplied and managed by a specialist contractor and the sewage disposed of at the nearest sewage farm, or as required by the local authority. The toilets will be cleaned on a weekly basis for the duration of the drilling programme.

3.2.11 Safety fencing / barricading

The perimeter of the drill sites will be staked out and the drill crew will not operate beyond these boundaries. Depending on the locality, this perimeter may be fenced, marked with bunting or barricading signage to prevent public or livestock access. The drilling sites will be clearly demarcated as a dangerous working area. The fences will remain until all hazardous machinery and material have been removed and the sumps (if any) backfilled.

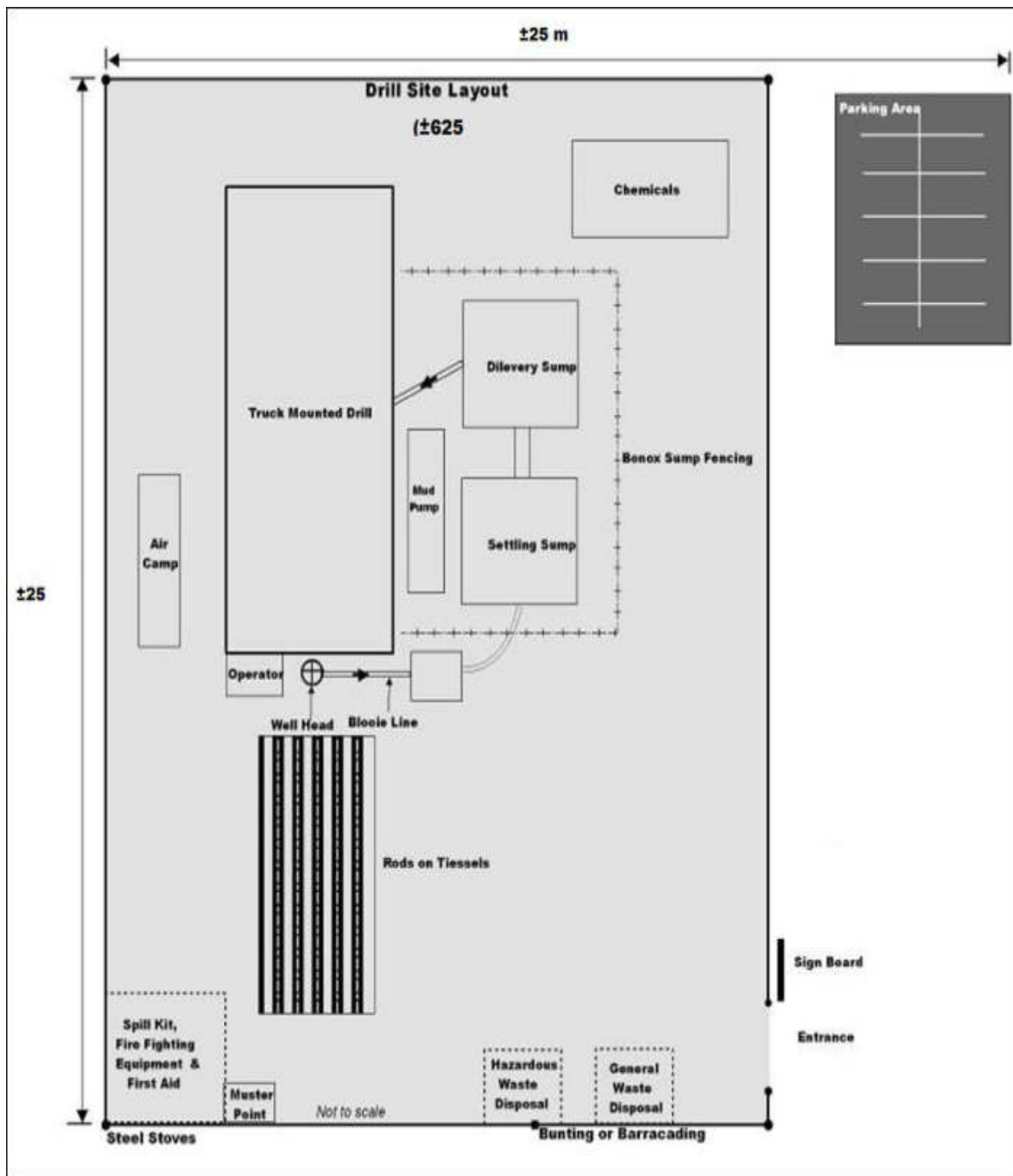


Figure 3-1: Proposed drill rig layout

4. BASELINE ENVIRONMENTAL CONTEXT

This section is based on available information of the study areas' geographical setting. It provides an overview of the current environmental context, to assist in the understanding of key issues that needs to be addressed within the rehabilitation framework.

4.1 Climate

4.1.1 Mean Temperatures and Wind

The project area has an altitude of approximately 1154 metres above sea level. The project area falls in a summer rainfall region with an expected average rainfall of 589mm. Thunderstorms and showers constitute the majority of the summer rainfall. The annual average high in terms of temperature is 21°C, while the annual average low is 12.8°C. Refer to Figure below.

As illustrated in Figure 4-1, precipitation occurs as showers and thunderstorms and falls mainly from September to March with the maximum precipitation occurring in December, and January. Rainstorms are often accompanied by severe lightning, strong winds and hail. The winter months are mostly dry, but the occasional winter shower does happen from time to time.

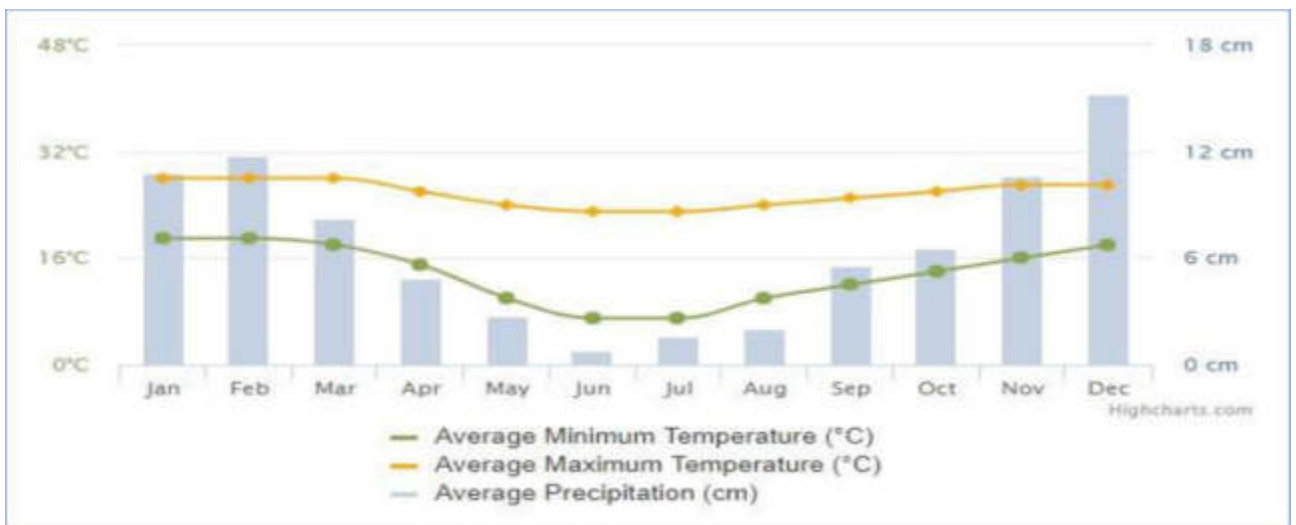


Figure 4-1: Average monthly Rainfall, Average minimum and maximum Temperature for the Vryheid area.

4.2 Geology

Regional Geology

The proposed project falls within the bedrock units of the Vryheid Formation which forms part of the Beaufort Group and Karoo Supergroup. These sedimentary rock units have been intruded by Jurassic aged dolerite dykes and sills which are preserved in the southern and western portions of the study site. The Vryheid Formation is represented by dark-brown in the Figure below with subordinate siltstone and sandstone.



Figure 4-2: Regional geology

Local Geology

The site is situated dominantly on the Madzaringwe formation of the Karoo supergroup. Smaller sections are characterised by the following strata units:

- Karoo Dolerite Suite
- Dwyka group
- Nsuze group
- Pietermaritzburg formation

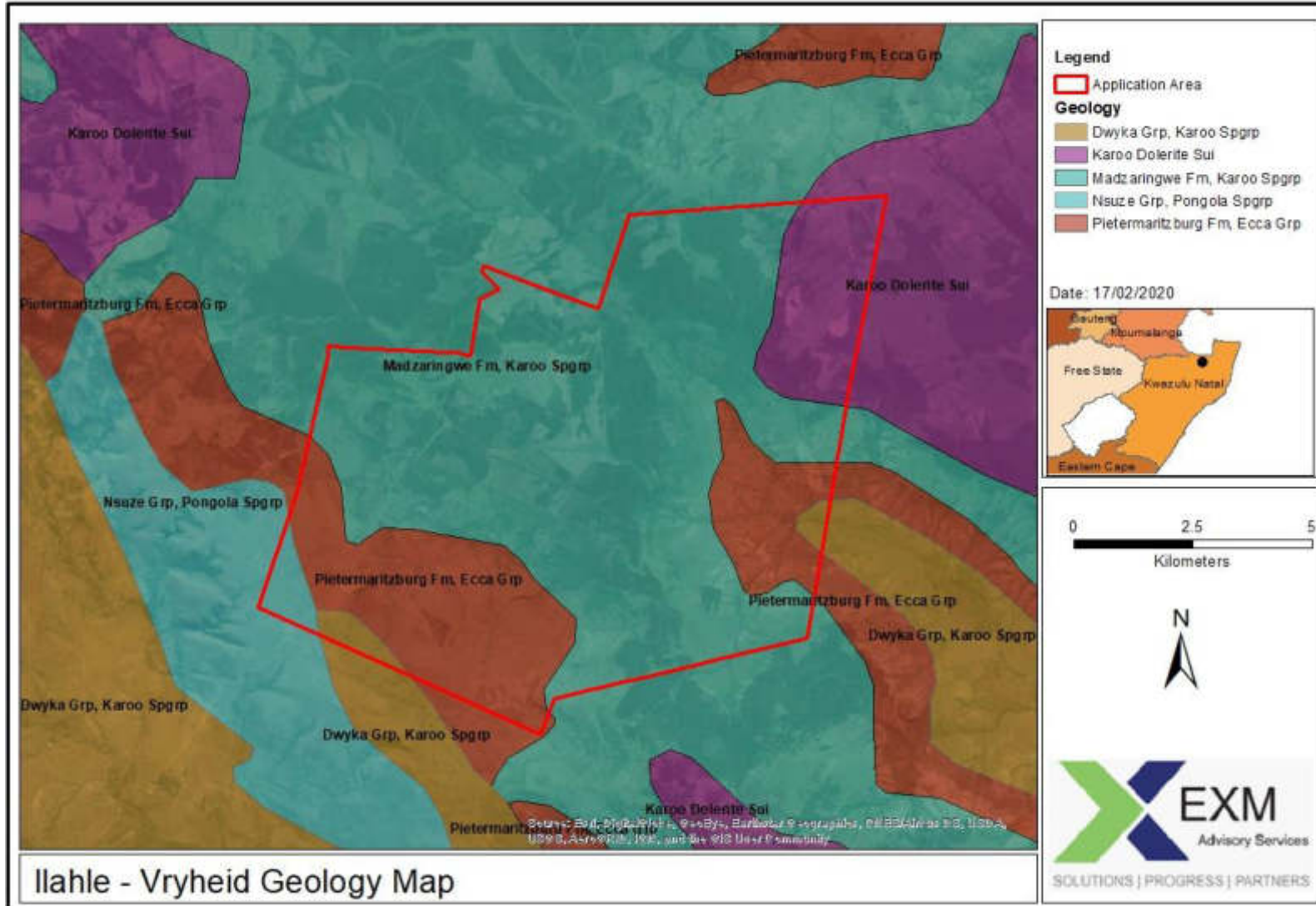


Figure 4-3: Local geology Map

4.3 Land Tenure

Land Tenure

The proposed prospecting area covers numerous properties within the Zululand Magisterial District of the KwaZulu-Natal Province of South Africa. The proposed prospecting rights area covers a surface area of approximately 7 900 ha. A layout plan of the properties is provided in Figure 13. Table 1 describes the properties that are included in the prospecting right area.

Table 4-1: Property ownership and summary of infrastructure

Area of title (ha)	Properties covered	Summary of infrastructure
7 900	<ul style="list-style-type: none"> • Portion 2 and the Remainder (Whole Area) of the Farm Tygerskloof No. 173-HU • A Portion of the Farm Demoina No. 830-HU • Portion 3, 4, 5 and 7 (Whole Area) of the Farm Wonderfontein No. 560-HU • Whole Area of the Farm Mariantha No. 845-HU • Whole Area of the Farm Welteverede 540-HU • A Portion Of the Farm Tierkloof 829-HU • Portions 4-7, 13, 16, Portions 2-17 of the Farm Spitzkop No. 70-HU • Portions 1 and 6 of the Farm Arcadia 2179-GS. • Portions 1, 10, 16, 29 and 30 of the Farm Roodepoort No. 1119 	No prospecting related infrastructure has been established.

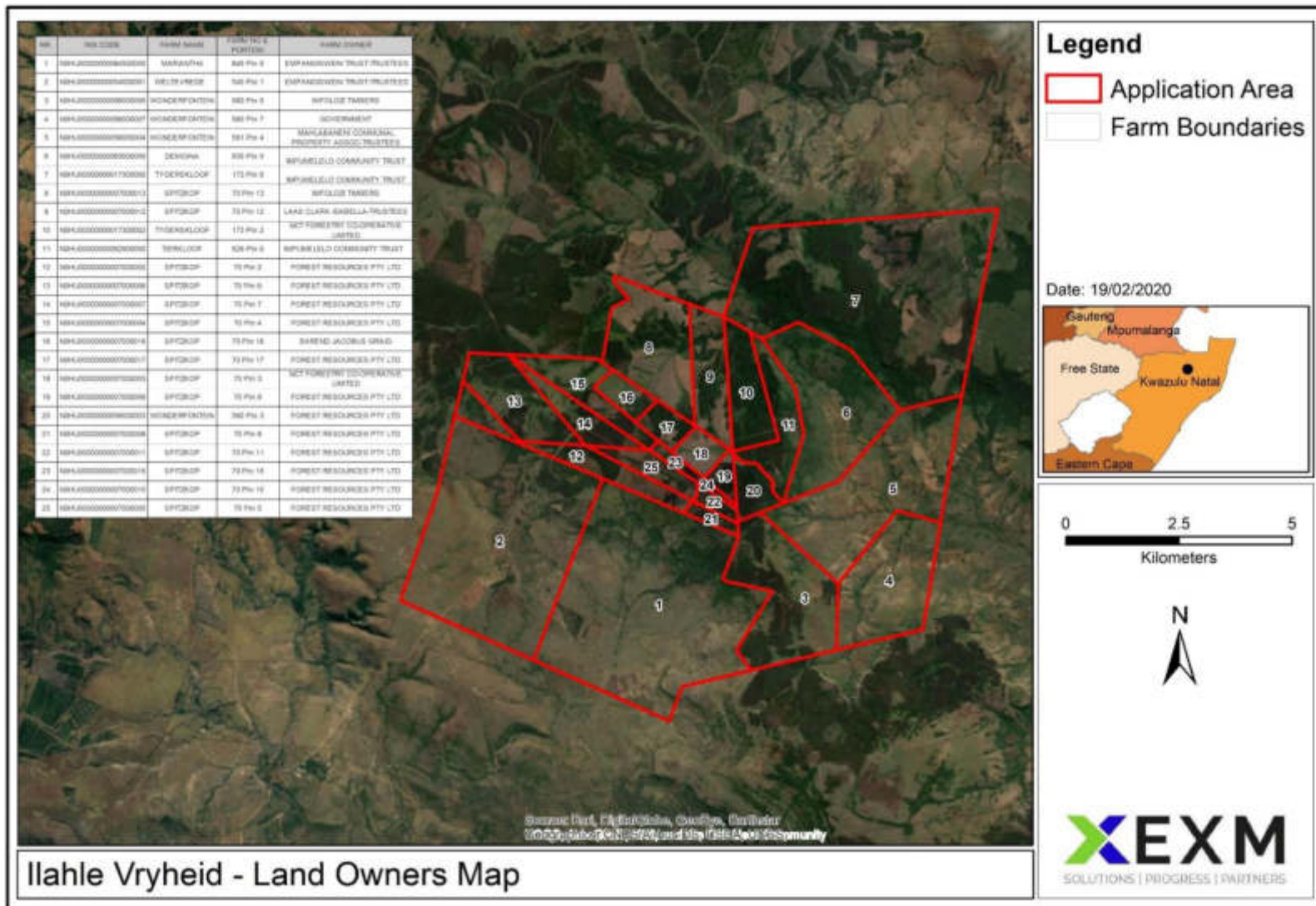


Figure 4-4: Ilahle Vryheid ownership properties

4.4 Topography

The study area is mountainous on the north eastern side with flatter areas towards the south western eastern section with natural surface topography ranging from 1330 masl in the plains to 847 masl on the outcrops and mountain ranges. The site is situated on a water divide, the eastern section drains south east and the western section drains south west. The study area has an average slope of 11.8%-12%. The Topography of the study area, shown in Figure 7, is typical of a Drakensburg area, with close contouring around the mountain valleys and more flat contouring at the valley bottoms.

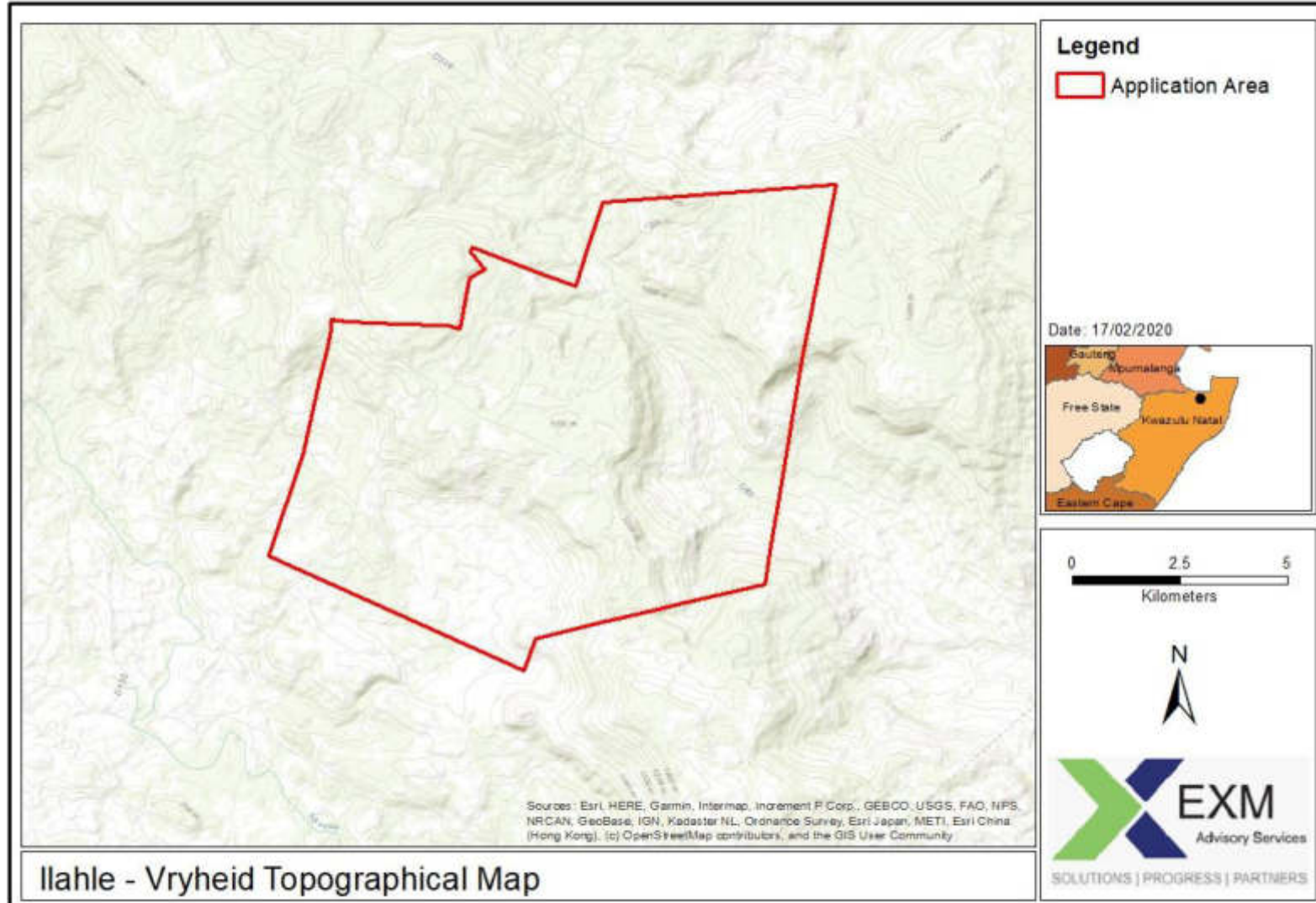


Figure 4-5: Topography

4.5 Soils and Land Use

4.5.1 Soil Characteristics

The dominant soil classes present in the study area are red and yellow soil with low to medium base status. The soil classes associated with the LP2 land type have minimal development, usually shallow, on hard or weathering rock. There is also soils with a marked clay accumulation, strongly structured and non-reddish colour. The terrain is braded by the predominately rolling terrain and the second broken terrain, the slopes range moderately but there are some steep slopes areas. As the municipality is dominated by the Grass and the Savanna biomes there are mainly flat plains and rolling within the escarpment itself. The landscape geology is characterized by mudstones, shales and fine-grained sandstones of the Beaufort and Ecca groups along with Karroo super-group and limited Jurassic dolerite intrusion.

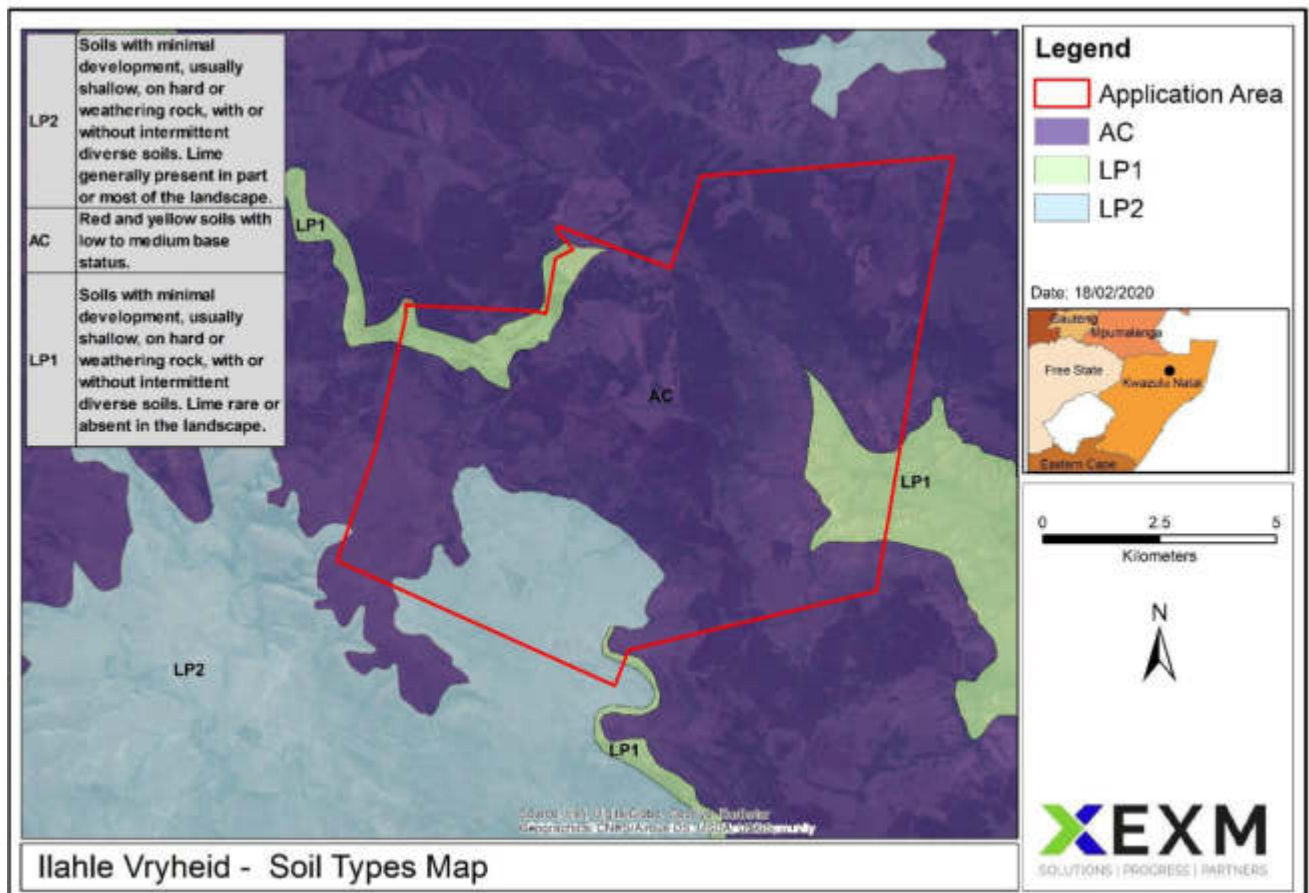


Figure 4-6: Soil Types

4.5.2 Land use:

The Thukela MWA is largely rural in character with forestry, agriculture and eco-tourism forming the primary activities. Land use within the V12F quaternary catchment is generally associated with transformation through urban sprawl, private game reserves, road networks and residential housing as well as subsistence agriculture and livestock grazing. Livestock overgrazing and lack of stormwater control are two major contributors to soil erosion within the catchment. The transformation of biophysical characteristics exacerbates impacts such as erosion, sedimentation and reduced water quality within the catchment.

The land use dominating the study area pertains to forestry/plantation which has disturbed a large section and the remaining sections are used for cultivation. Some areas are still natural with some grazing occurring in various sections.

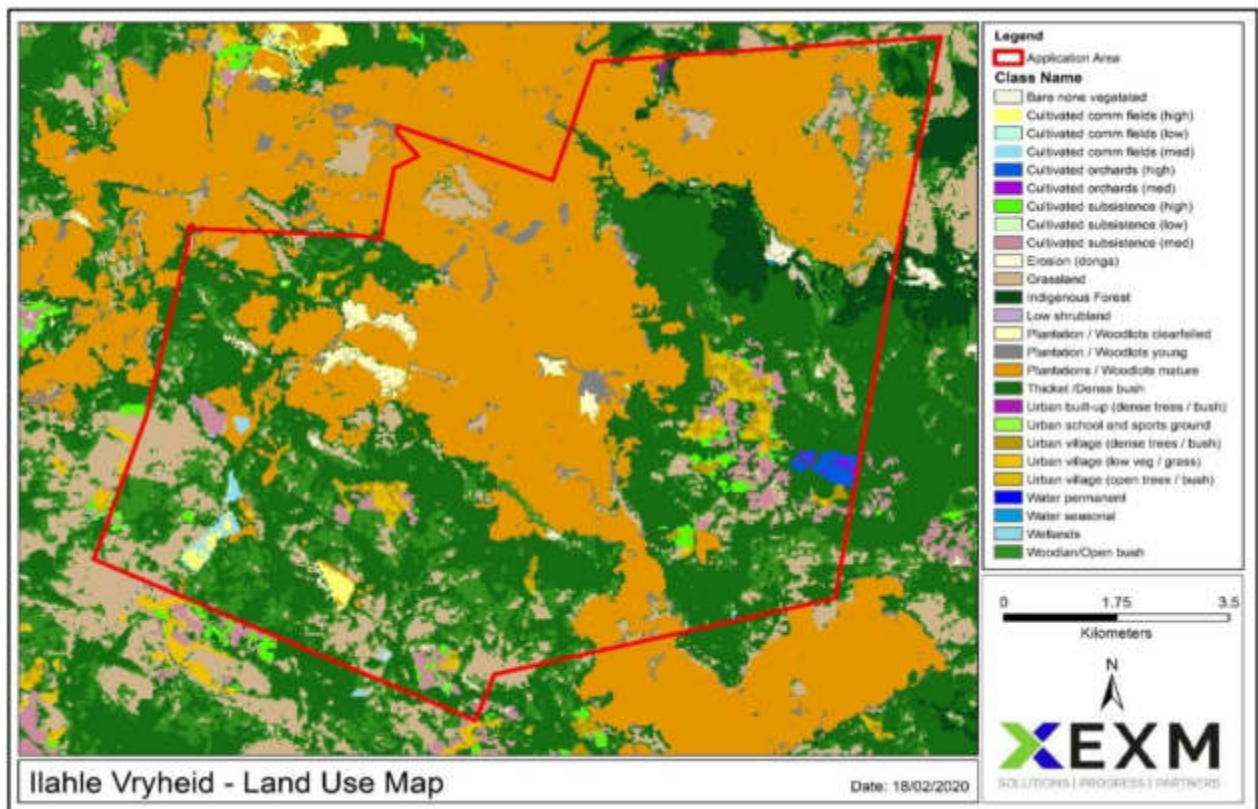


Figure 4-7: Land Use Map

4.6 Groundwater

The proposed prospecting right area is situated in the Thukela Water Management Area. On regional scale the hydrogeology consist of weathered and fractured aquifers of the Vryheid geological formation which intercept beaufort and karoo super groups, as well as

Jurassic dolerite intrusions. Blow yields of 0.5 – 2 l/s can be expected regionally. The aquifer represents an important source for base flow into the streams draining the area.

4.7 Surface Water Resources

The prospecting area is situated in quaternary catchment W22C and W22E which forms part of the Usutu to Mhlathuze Water Management Area. The main rivers in the water management area are the Usutu, Pongola, Mkuze, Mfolozi and Mhlathuze Rivers, which drain adjoining catchments and all flow in a general eastward direction.

The surface area of the management area catchment is approximately 45 000 km² in extent. The site is situated in the Mfolozi catchment consists mostly of communal land, which is used for stock farming, although there is a significant amount of irrigation (72 km²), forestry (435 km²) and dryland sugarcane (65 km²) in the catchment. Richards Bay Minerals occur in this catchment. The Klipfontein Dam is the only major dam in the catchment. The water quality of the Klipfontein Dam is poor due to urban return flows into the dam.

The site is situated on a water divide. Non-perennial streams drain the study area in the eastern section towards the south eastern side into the Siwkebezi River and the western section drains towards the south western side into the Black Mfolozi River. The Figure below shows the surface water resources on site.

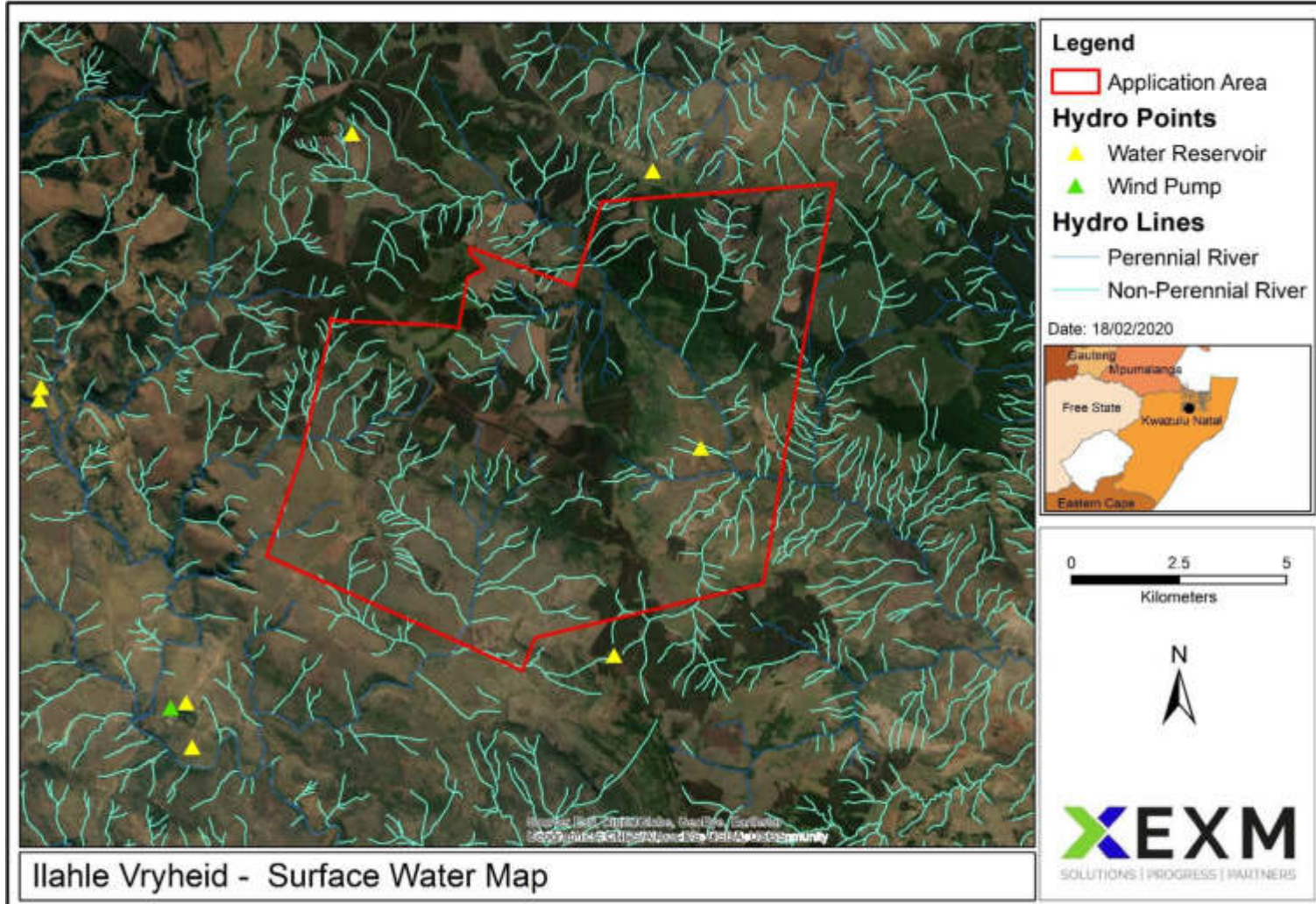


Figure 4-8: Surface Water Resources

4.8 Wetlands

According to the National Freshwater Ecosystem Priority Areas (NFEPA) database, several wetlands are situated within the project area as illustrated in the figure below. The majority of the wetlands are classified as Valley Floor and Bench wetland systems.

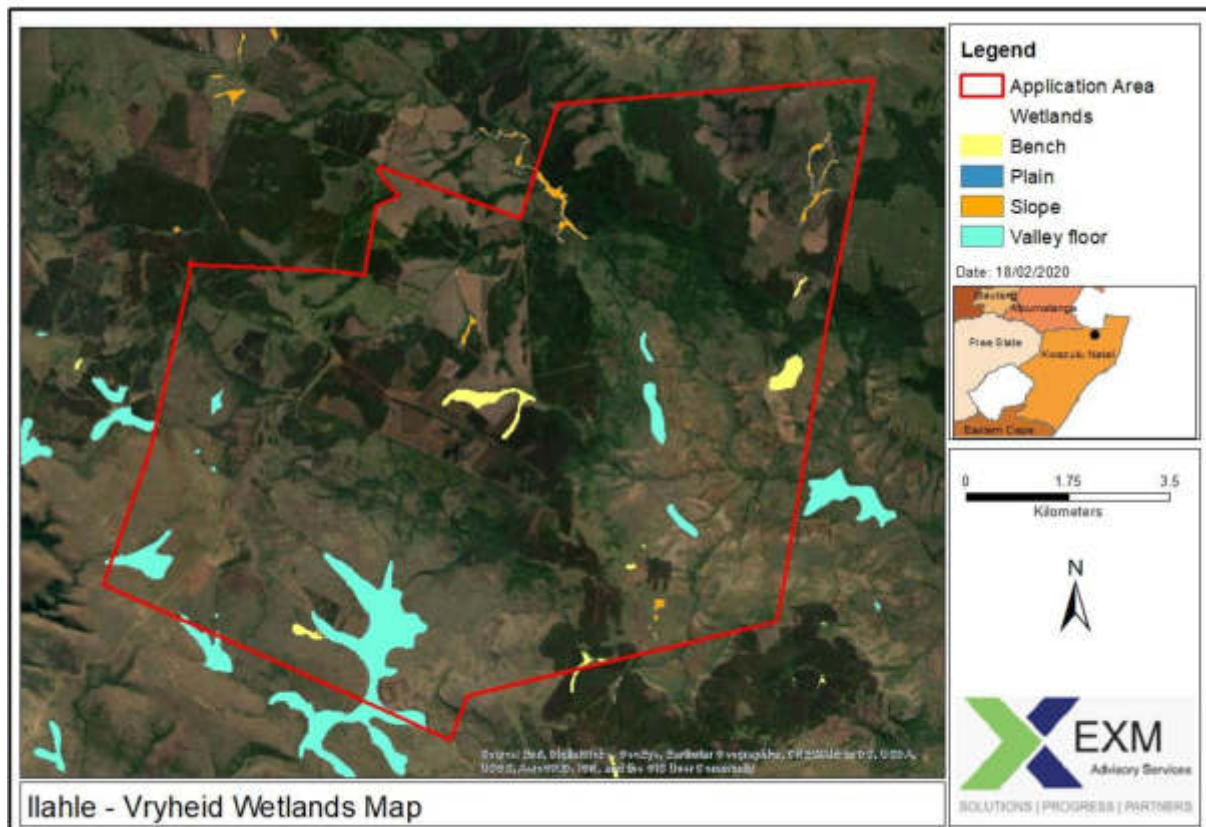


Figure 4-9: NFEPA wetlands

4.9 Biodiversity

4.9.1 Vegetation unit

The study area is covered by three vegetation types, including Southern Mistbelt Forest, Northern Zululand Mistbelt Grassland and Northern Zululand Sourveld. The Northern Zululand Mistbelt Grassland is distributed along crests and slopes of the Ngame Mountain range and the Ngoje Mountain surrounding Louwsburg as well as some smaller mountainous areas. It is characterised by gentle to steep upper slopes of mountains formed by hard dolerite dykes dominated by relatively forb-rich, tall sour Themeda triandra grasslands.

The Northern Zululand Sourveld is distributed from the Lusthof area in Swaziland southwards with scattered patches in northern Zululand in the surrounds of Hlomohlomo, east of Louwsburg, Nongoma and the vicinity of Ulundi including Nkandla. In the HluhluweMfolozi

Park it occurs at highest altitudes in the park. The dominant structural vegetation type is wooded grassland, in places pure sour grasslands and rarely also dense bushveld thickets. Terrain is mainly low, undulating mountains, sometimes highly dissected, and also some moderately undulating plains and hills.

The Southern Mistbelt Forest only occurs in a very small section of the site. In KwaZulu-Natal these forests are found in a wide band sandwiched between the Drakensberg Montane Forests and Northern KwaZulu-Natal Mistbelt Forests at higher altitudes and Eastern Scarp Forests at lower altitudes.

These forests are tall (15-20m tall) and multi-layered (having two layers of trees, a dense shrubby understory and a well-developed herb layer). The forests found on low-altitude scarps are low (in places having the character of a scrub forest), and although less structured into different tree layers, they are still species-rich. The tall forests show a mix of coarse grained, canopy gap/disturbance-driven dynamics and fine-grained, regeneration characteristics.

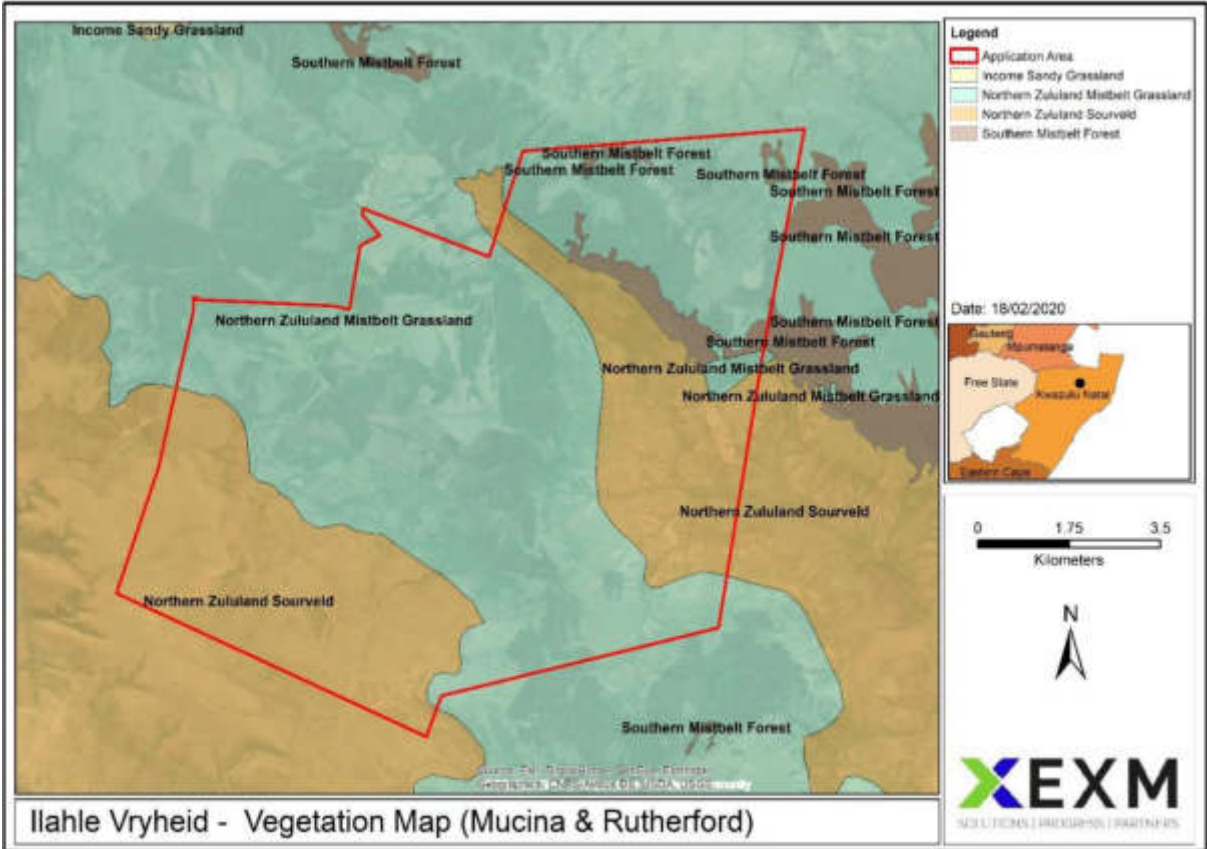


Figure 4-10: Vegetation map

4.9.2 Sensitive Biodiversity

According to SANBI, the Ngoma Mistbelt Grassland and Forest threatened ecosystem covers a large portion of the site, but most of the area has been transformed by forestry. Moreover the Ntendeka Wilderness Area is situated adjacent to the prospecting area, east of the site. According to the KwaZulu Natal Conservation Plan, some sections within the project area are classified as Critical Biodiversity Areas (CBA). Some sections are classified as Irreplaceable CBA and the remainder of the CBAs are optimal, as per the definitions below:

Irreplaceable CBA's: Areas considered critical for meeting biodiversity targets and thresholds, and which are required to ensure the persistence of viable populations of species and the functionality of ecosystems.

Optimal CBA's: Areas that represent an optimised solution to meet the required biodiversity conservation targets while avoiding areas where the risk of biodiversity loss is high Category driven primarily by process but is also informed by expert input.

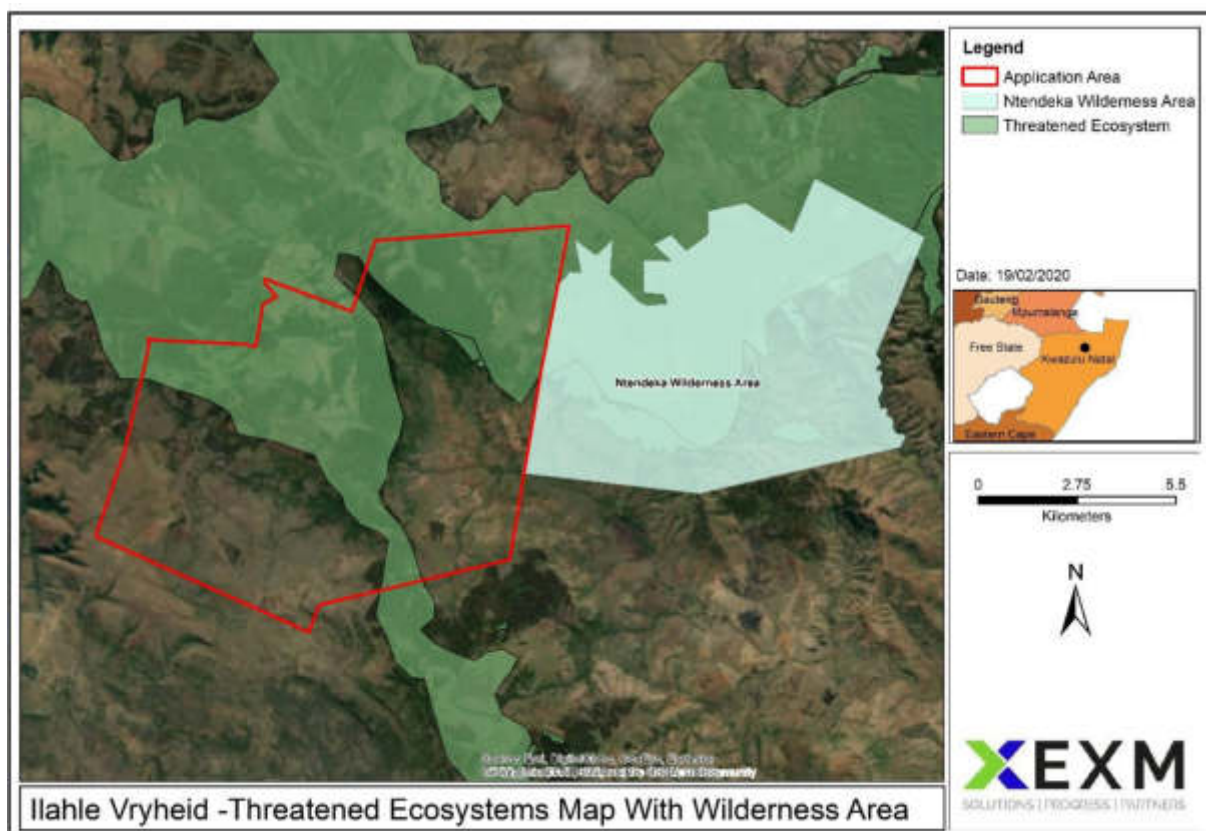


Figure 4-11: Biodiversity Conservation Areas

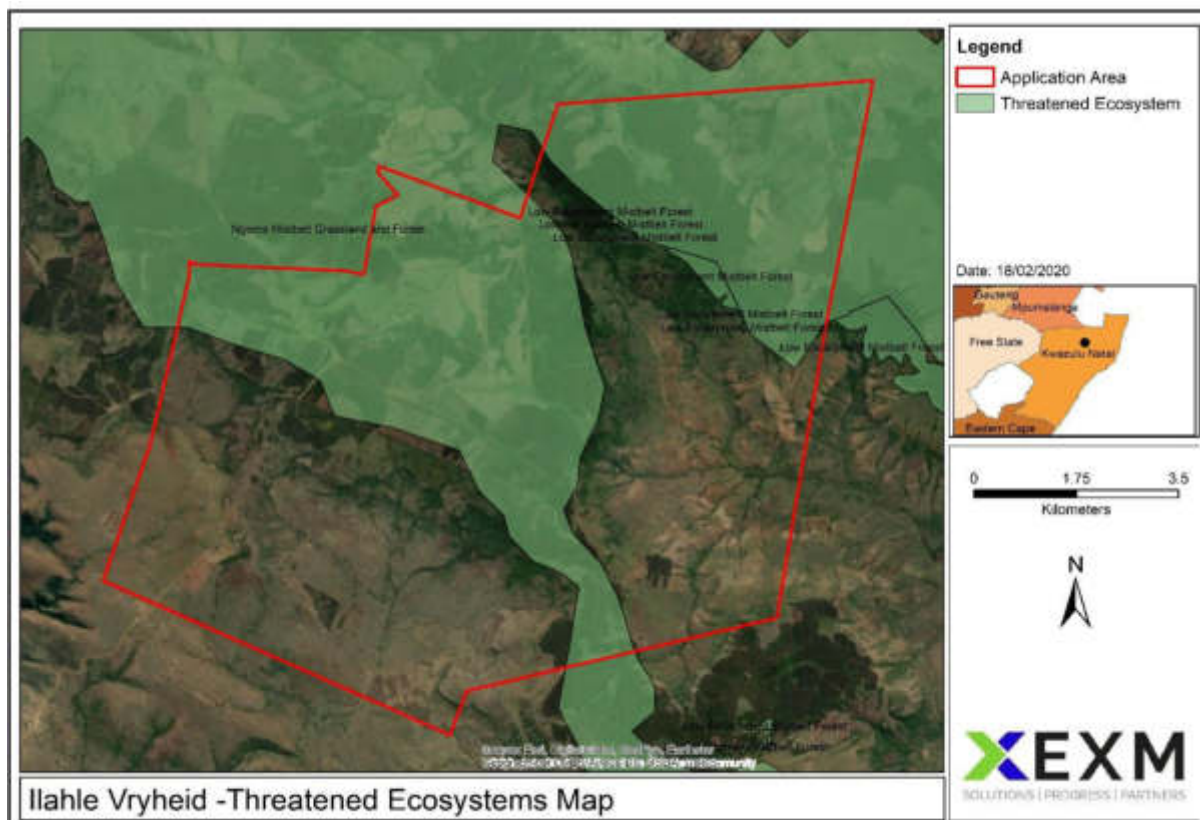


Figure 4-12: Threatened Ecosystems

4.10 Socio-Economic Status

Three main economic sectors are associated with Abaqulusi include that of Community Services, Mining and Finance Services. Community services contributes just 20% to the economy and is regarded as primary contributor to the economy. The potential to further increase the Mining, Agriculture, Trade and Transport sector of the economy is an opportunity that presents itself to Abaqulusi due to its rich history in Mining activities, large agricultural land and diverse productivity and its favourable location to promote trade and transport

There was a slight increase in the intensity of poverty from 41.9% during Census 2011 up to 43.3% during Community Survey 2016c. Youth unemployment was high at about 45% during Census 2011 above the average official unemployment rate for the municipality which was found to be 35.4%. The unemployment rate for females at 38.8% was found to be higher than those of males 32.0% during the Census 2011. Coal mining historically provided a major force into the local economy of Northern KwaZulu Natal. However, over the past 15 years a number of mines in the area ceased operation impacting negatively on the regional economy.

5. STAKEHOLDER ISSUES

Details regarding the public participation process followed; including the concerns raised by interested and affected parties, as part of the project, is contained in the Basic Impact Assessment Report (BAR) in support of the EA application.

6. ENVIRONMENTAL RISK ASSESSMENT

6.1 Risk Assessment Methodology

A risk is the potential for adverse negative affects which may be realised in the future with respect to achieving explicitly established and stated performance requirements, which may be avoided through implementation of preemptive actions or mitigation measures. Risk analysis examines risks in detail to determine the extent of the risks and the relationships among them. Risk analysis also classifies risks into sets of related risks and ranks them according to significance. Furthermore, risk analysis evaluates all identified risks to estimate the likelihood of occurrence, consequence of occurrence, and timeframes for implementation of mitigation actions.

6.1.1 Risk Ranking Criteria

A Risk Matrix is a graphical representation of the likelihood and consequence rating of a risk. For the purpose of this report a "5x5 Matrix" was used which contains criteria divided into five rows and five columns. The rows of a Risk Matrix represent likelihood scores, while the columns represent the consequence scores (refer to Table 6-2). Each cell in the Risk Matrix is represented by a Priority Score (Risk Level), with associated guidelines as indicated in Table 6-1. Once the risk score is determined for each risk identified, adequate management measures (or controls) are identified and the risk assessment process is repeated to determine the risk level after appropriate controls are implemented.

The various risks associated with rehabilitation, decommissioning and closure of the prospecting activities were assessed according to the following categories:

- Environment; Legal, Regulatory and Financial; Social; and Health and Safety.

Table 6-1 Risk Levels

Risk Rating	Risk Level	Guidelines for Risk Matrix
21 to 25	High	A high risk exists that management/ rehabilitation objectives during final Rehabilitation Decommissioning and Mine Closure may not be achieved. Implementation of mitigation measures must be prioritised to avoid severe consequences. A mitigation strategy should include timeframes for implementation and assign responsible departments and/or persons

Risk Rating	Risk Level	Guidelines for Risk Matrix
13 to 20	Significant	A significant risk exists that management/ rehabilitation objectives may not be achieved. Appropriate mitigation strategy to be devised as soon as possible to manage risk. A risk-based approach should be taken when developing strategies for implementation of mitigations measures.
6 to 12	Medium	A moderate risk exists that management's objectives may not be achieved. Appropriate mitigation strategy to be devised as part of the normal management process.
1 to 5	Low	A low risk exists that management's objectives may not be achieved. Monitor risk, no further mitigation required.

Table 6-2: Risk Assessment Matrix

6.2 Environmental Risk Assessment for the final rehabilitation, decommissioning and mine closure

Table 6-3 provides the risk analysis that were developed for the various risk associated with the decommissioning and closure phase of the Ilahle prospecting activities. This is the first revision of the plan and the risk assessment provided below does not contain an explanation of changes to the risk assessment results, as applicable in annual updates to the plan. This will be address in future revisions of this plan.

Table 6-3: Decommissioning and Closure Risk Assessment undertaken for the Ilahle Prospecting Right Application

NO	CONSEQUENCE CATEGORY	ENVIRONMENTAL ASPECT	AREA/ACTIVITY	POTENTIAL RISK	RISK CONSEQUENCE	LIKELIHOOD	CONSEQUENCE	RISK VALUE	RISK LEVEL	MITIGATION	LIKELIHOOD	CONSEQUENCE	RISK VALUE	RISK LEVEL WITH MITIGATION
1	ENVIRONMENTAL, LEGAL/REGULATORY, SOCIAL, HEALTH AND SAFETY	Financial Provisions	Ilahle PR area	Failure to implement the final rehabilitation, decommissioning and closure plan (due to budget restraints and/or shortcomings)	<p>The following environmental consequences were considered:</p> <ul style="list-style-type: none"> Soil compaction. Inadequate establishment of vegetation Soil erosion and contamination Loss of soil, land use and land capability Failure to control alien and invasive plant species Contamination of surface water resources <p>The following Legal and Regulatory consequences were considered:</p> <ul style="list-style-type: none"> Failure to meet relinquishment criteria, as set out in the final rehabilitation, decommissioning and closure plan will result in the prospecting right not being issued a closure certificate Potentially posing risk to humans and animals <p>The following Social / Health and Safety consequences were considered:</p> <ul style="list-style-type: none"> Abandoned areas will be unsafe and pose a risk to humans and animals 	3	2	8	M	<ul style="list-style-type: none"> Ensure that annual updates of the Financial Provision reflect true and accurate assessment of activities and impacts associated with the PR area Adjust the quantum of provisioning required accordingly Liaise with the DMR regarding adjustment of the quantum Provided that sufficient funds are available, undertake concurrent rehabilitation of redundant infrastructure, using operational expenditure to reduce final quantum of liability at the end of LoM 	2	2	5	L
2	ENVIRONMENTAL, LEGAL/REGULATORY, SOCIAL, HEALTH AND SAFETY	Health and Safety, Fauna	Leaving excavations opened	Excavations which are not properly backfilled may pose health and safety risks such as injuries to animals and local community members accessing the site during post closure activities	Excavations which are not properly backfilled may pose health and safety risks such as injuries to animals and local community members accessing the site during post closure activities	3	2	8	M	<ul style="list-style-type: none"> A security fence including a perimeter fence should be retained to limit access during decommissioning. Once prospecting activities are completed, backfilling should be undertaken as soon as practicable possible 	2	2	5	L

NO	CONSEQUENCE CATEGORY	ENVIRONMENTAL ASPECT	AREA/ACTIVITY	POTENTIAL RISK	RISK CONSEQUENCE	LIKELIHOOD	CONSEQUENCE	RISK VALUE	RISK LEVEL	MITIGATION	LIKELIHOOD	CONSEQUENCE	RISK VALUE	RISK LEVEL WITH MITIGATION
3		Soil, Land Use and Land Capability	Demolition of infrastructure and final rehabilitation footprints	1. Soil Contamination; includes all contaminated footprints (hydrocarbon spillages)	Potential hazardous material (, hydrocarbon etc.) could contaminate soil resources. Should mitigation measures not be implemented, the soils subject to contamination and could lose their functions. General waste, as well as demolished infrastructure and materials could contaminate and compact soil resources should the waste not be disposed off or utilised in backfilling sumps.	2	3	9	M	<ul style="list-style-type: none"> All waste should be removed from the area and disposed of at authorised facilities. No waste must be buried or burned. A spill prevention and emergency spill response plan should be developed and implemented to mitigate any hazardous substance spillages. Insitu soil remediation should be conducted. A visual soil contamination assessment must be undertaken post closure to assess the extent of the contamination of all prospecting footprints. 	2	2	5	L
4		Air Quality	1. Vehicle tailpipe: Transport and general decommissioning activities 2. Demolitions of structures and dust generated during rehabilitation activities.	Dust generation and fugitive emissions	Increase in fugitive dust emissions particularly due to an increase in particulate dust levels	2	2	5	L	<ul style="list-style-type: none"> Restrict travelling speed of vehicles to reduce vehicle entrainment of dust. Wet gravel roads if dust is found to be excessive. 	2	2	5	L
5		Groundwater	Final Rehabilitation of each drill site	Groundwater Quality	Rehabilitated prospecting footprints, backfilled/ sumps and contaminated materials which can cause a risk pertaining to groundwater pollution.	3	2	8	M	<ul style="list-style-type: none"> All waste should be removed from the area and disposed of at authorised facilities. No waste must be buried or burned. A spill prevention and emergency spill response plan should be developed and implemented to mitigate any hazardous substance spillages. Insitu soil remediation should be conducted. Use drill sock to remediate hydrocarbon material in top layer of water in borehole. Conduct groundwater sampling and analysis. A visual soil contamination assessment must be undertaken post closure to assess the extent of the contamination of all prospecting footprints. 	2	2	5	L

NO	CONSEQUENCE CATEGORY	ENVIRONMENTAL ASPECT	AREA/ACTIVITY	POTENTIAL RISK	RISK CONSEQUENCE	LIKELIHOOD	CONSEQUENCE	RISK VALUE	RISK LEVEL	MITIGATION	LIKELIHOOD	CONSEQUENCE	RISK VALUE	RISK LEVEL WITH MITIGATION
6		Surface Water and wetlands	General decommissioning and rehabilitation	Surface water quality	<p>Impacts may arise from:</p> <ul style="list-style-type: none"> Erosion of soils during rainfall events, with elevated suspended solids in the runoff water. Resultant elevated suspended solids in the watercourses, as well as sedimentation in the watercourses. Hydrocarbon spillages from fuel storage, servicing areas or construction equipment itself, with resultant elevated hydrocarbon concentrations in runoff water, watercourses and the adjacent pans. Contaminated soils below the plant and stockpiles areas may have long term impact in terms of leaching contaminants to the ground and surface water systems. <p>These impacts are expected to be relatively small, with the resultant impact post decommissioning being positive in comparison with the operational phase.</p>	2	3	9	M	<p>The following mitigation measures will be implemented:</p> <ul style="list-style-type: none"> The footprint of disturbed areas will be minimised. "No-go" zones will be delineated for construction plant and personnel. The storm water management infrastructure will be decommissioned last, if at all, to ensure adequate storm water management during the rehabilitation phase. Servicing of vehicles will not take place onsite. All drill rigs and vehicles will be equipped with drip trays. Bunded containment and settlement facilities will be provided for hazardous materials, such as fuel and oil. Spill-sorb or a similar type product will be kept on site and used to clean up hydrocarbon spills in the event that they should occur. Erosion protection measures will be implemented at steep areas. A waste management plan will be developed which will include the handling of contaminated materials / soils found on site. All traces of hydrocarbons and residual waste will be removed before infrastructure is demolished. Contaminated soils will be excavated and placed on the discard facilities prior to their rehabilitation or removed from site by an appropriately licensed waste contractor. Alternatively, Insitu soil remediation should be conducted. Chemical toilet to be provided at each drill site. These toilets need to be adequately serviced 	2	2	5	L

NO	CONSEQUENCE CATEGORY	ENVIRONMENTAL ASPECT	AREA/ACTIVITY	POTENTIAL RISK	RISK CONSEQUENCE	LIKELIHOOD	CONSEQUENCE	RISK VALUE	RISK LEVEL	MITIGATION	LIKELIHOOD	CONSEQUENCE	RISK VALUE	RISK LEVEL WITH MITIGATION
7		Biodiversity	Demolition of infrastructure	Potential negative impact on biodiversity.	Failure of re-established vegetation on rehabilitated areas. Loss of biodiversity, increased soil erosion, increased siltation of rivers etc.	2	3	9	M	<ul style="list-style-type: none"> Any disturbance of sensitive habitats and species of conservation concern must be actively avoided. In this regard, maintaining migratory corridors and connectivity in the wetland and riparian habitat units is deemed essential; Restrict activities to only designated areas to prevent further destruction of vegetation. Establish an alien invasive control/eradication programme and monitor alien invasive species during the post closure phase. No trapping, collecting or hunting of faunal species must be allowed during any phases of the proposed mining development; Wetland and associated buffer zones adjacent to footprint areas must be designated as No-Go areas and no vehicles, personnel, or any other mining related activities are to encroach upon these areas, as these areas are preferred breeding and foraging habitats. Continuous monitoring and maintenance of rehabilitated areas. Conduct rehabilitation as per the mine's rehabilitation plan. 	2	2	5	L
			Final Rehabilitation	Possibility of failing to control alien invasive species on rehabilitated land.	Loss of biodiversity, as alien species must competing for resources with indigenous vegetation.	2	3	9	M		2	2	5	L
				Permanent loss of biodiversity	Potential ineffective rehabilitation of exposed and impacted areas	2	3	9	M		2	2	5	L
				Biodiversity reestablishment	Failure to implement a well-conceived biodiversity action plan, rehabilitation plan and alien floral control plan during the decommissioning and closure phase	3	2	8	M		2	2	5	L
8	SOCIAL, HEALTH AND SAFETY	Health & Safety	Final Rehabilitation	Possible human access to remnant infrastructure.	Collapse of remnant infrastructure which could lead to human injury or fatality.	2	3	9	M	<ul style="list-style-type: none"> Remove all remnant infrastructure from site during the decommissioning phase. 	2	1	2	L

6.3 Residual Risk Assessment

A risk assessment was also undertaken of the residual risk that may remain after the implementation of the closure strategy and management intervention. The residual risk was determined utilising the same risk assessment methodology as outline in section 6.1. The results of the risk assessment on these residual risks are contained in a separate Environmental Risk Report. The following aspects is regarded as the most significant residual risk to the project:

- Failure to implement the final rehabilitation, decommissioning and closure plan (due to budget restraints and/or shortcomings)
- Proliferation of alien and invasive plant species in rehabilitated areas.
- Erosion risk and sedimentation.

7. MINE CLOSURE DESIGN PRINCIPLES & OBJECTIVES

7.1 Closure Vision, Objectives and Targets

There is no universally accepted understanding of what is needed for closure and what aspects of closure should be addressed in order to achieve a closure certificate. Nevertheless, the evolution of mine closure practice and the accompanying regulations have generally moved up the hierarchy of needs (see Figure 7-1). The elements at the base of the pyramid must be achieved by closure vision. Ilahle 's vision for the Vryheid Prospecting area is:

“To render a safe, stable and non-polluting environment aligned to regulatory and regional requirements, and ultimately provides a sustained post-closure ecosystem service or livelihood, leaving behind a positive post-mining legacy for the receiving community and our shareholders”.

Final closure of the prospecting activities should incorporate rehabilitation of disturbed footprints to ultimately return the post-prospecting land use to a state which emulates the baseline environmental conditions and ensures the protection of the surrounding environment; including human and animal life, groundwater regime, surface water and land capability. In addition to achieving environmental compliance with legislative requirements and stakeholder needs, implementation of rehabilitation initiatives will also reduce the financial liability associated with closure and final rehabilitation. Fulfilling the closure vision will require realisation of certain closure objectives, which necessitates rehabilitation actions to be implemented to ultimately achieve a safe, stable, non-

polluting and sustainable environment. The closure objectives are listed in section 7.1.1 - 7.1.6 below to provide a guideline to fulfil the closure vision.

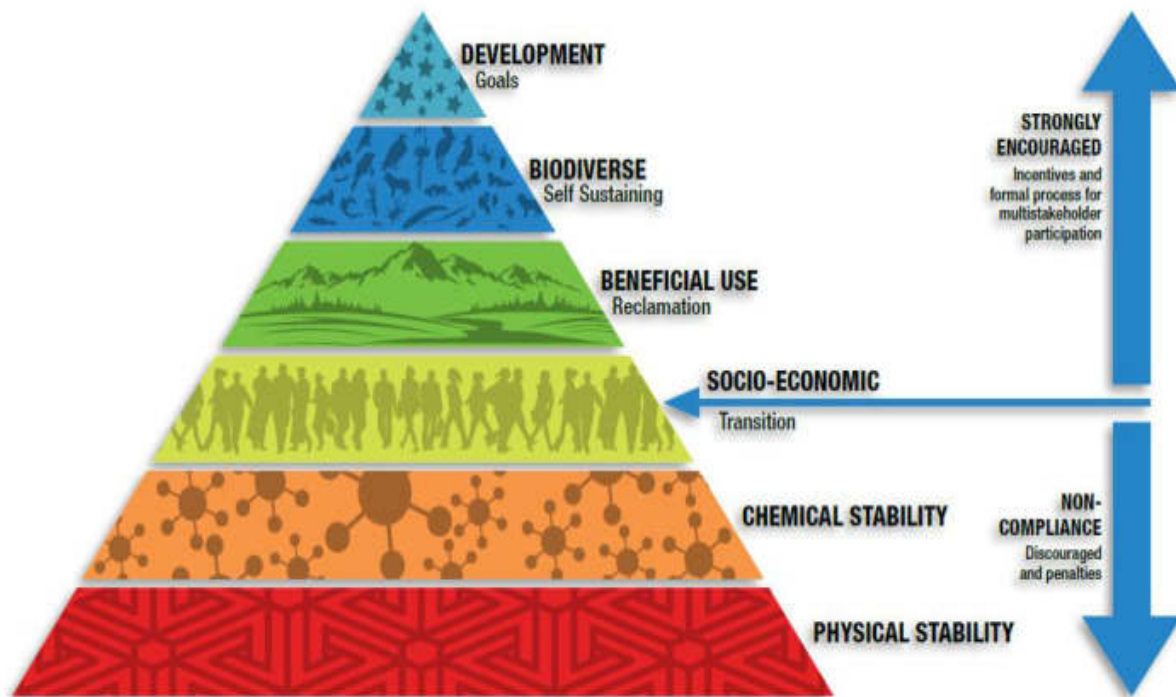


Figure 7-1: Hierarchy of closure needs

7.1.1 Physical stability

To facilitate achievement of the closure vision, all prospecting sites need to be stabilised. The following will need to be undertaken to achieve physical stability of the prospecting sites:

- Disturbed footprint areas need to be stabilised by sloping and reshaping to simulate the local topography. This is done to ensure that the footprint area is free draining and to prevent erosion or ponding.
- The natural vegetation should be re-established by ripping, shaping, and seeding of all prospecting footprint areas.
- All access roads not used by local communities should be rehabilitated;

7.1.2 Environmental quality

The closure vision is to ensure that the surrounding environmental quality is not adversely affected by the potential chemical contamination and physical effects as a result of the prospecting activities. This can be achieved by:

- Adequate groundwater remedial actions should be implemented, if groundwater pollution is detected;
- All hazardous and general waste must be removed and disposed at licenced facilities. All drilling residue must be removed from the sites.
- All hydrocarbon contaminated soil must be removed and disposed as hazardous waste. Alternatively, insitu soil remediation can be implemented with effective products.
- Dust generation during decommissioning of site infrastructure should be limited. This will ensure no health effects or nuisance related impacts affect surrounding communities and landowners;
- The area should also be reshaped to be free draining, without any future erosion risks.

7.1.3 Health and safety

The post-prospecting footprint should be secured to ensure no adverse health and safety risk to humans and animals. Objectives relating to health and safety can be achieved by implementation of the following:

- All infrastructure must be removed from the site;
- The boreholes must be properly sealed to prevent access;
- Dust generation, during rehabilitation, should be limited to ensure no health or nuisance related impacts on surrounding communities and landowners; and
- Environmental monitoring should indicate the acceptability of impacts on humans and animals.

7.1.4 Land capability/land-use

The final land use must ensure the affected area is re-instated to desired land capabilities, by:

- Obtaining stakeholder consensus of desired final land use.
- To ensure the desired land use is re-instated. Indigenous vegetation must be used for rehabilitation purposes.
- Ensuring long-term stability of rehabilitated sites;
- Contaminated soils should be cleaned-up and rehabilitated; and

- Rehabilitation areas should be pre-determined by committing available topsoil.

7.1.5 Aesthetic quality

The overall aesthetic appearance must be re-instated to acceptable levels to mirror pre-prospecting landscape. Rehabilitated areas should re-establish to ensure the area is aesthetically pleasing.

7.1.6 Socio-economic aspects

The final rehabilitation and closure of operations must consider the impacts on local communities and local workforce by:

- Following a comprehensive and transparent consultation and communication process with all stakeholders.

7.2 Alternative Closure and Post Closure Options

Post closure options are available for the proposed prospecting sites, including:

- **Option 1:** Conduct rehabilitation at borehole sites to return the area to its pre-prospecting state. This will entail the rehabilitation of the sites to clean/remediate any residue and waste, ripping compacted areas, sloping and revegetation. The boreholes must be sealed with cement or similar material to prevent surface water ingress and to prevent access to the boreholes.
- **Option 2:** This option will also entail the rehabilitation of the borehole sites to return the area to its pre-prospecting state. The boreholes will however remain intact and can be used by communities to obtain water for potable or commercial/farming purposes. This option must take into consideration potential contamination of groundwater and must be done in consultation with relevant authorities.

7.2.1 Motivation for Preferred Closure Action

Rehabilitation is the restoration of a disturbed area that has been degraded as a result of activities such as mineral prospecting, road construction or waste disposal, to a land use in conformity with the original land use before the activity started. This also includes aesthetical considerations, so that a disturbed area will not be visibly different to the natural environment. This also involves maintaining physical, chemical and biological ecosystem processes in degraded environments. Hence the preferred option of sealing boreholes and rehabilitation of the sites and cover with growth medium to establish vegetation. This option has several advantages as discussed below:

Advantages

- The site will be aesthetically acceptable;
- The site will blend in with the environment;
- The site will go back to being a suitable habitat for fauna and flora;
- The site will be safe and pollution free;
- Revegetating the site will ensure that the site is non-erodible.

Option 2 is not preferable as borehole may pose a risk to community members in terms of safety. Liability for the boreholes will have to be transferred to the community and authorisation will also have to be obtained to use the boreholes for commercial/farming purposes, depending on the volumes required. Training will also be required to ensure that community members can operate the borehole correctly.

7.2.2 Ongoing Research on Closure Options

The methods described in this plan that will be used for the rehabilitation of the borehole sites have been successfully implemented at numerous similar sites and a desirable outcome was achieved. The most adequate product to be used for insitu soil remediation should be investigated to determine the preferable option in terms of effectiveness and associated costs. Different options need to be investigated for the remediation of potential hydrocarbons in the borehole water as a result of prospecting activities. These options include drill socks, shock treatment or eco-tabs and the preferred option will be based on the level of contamination, if any. The seed mix that will be used for re-vegetation must be based on dominant/indigenous species and should be effective to re-establish growth in the area.

8. POST-MINING LAND USE

8.1 Criteria to Identify Final Land Use

The identified final land use is a function of the status of the land, feasibility of rehabilitation options that can be applied to certain infrastructure and feasible surrounding land uses. As part of the closure strategy various objectives have been established to ensure the environmental rehabilitation of the areas can achieve long term sustainability.

The disturbance of surface water resources, as well as decrease in land capability is some of the most significant environmental impacts resulting from prospecting. Prospecting activities is relatively non-intrusive, and the disturbance can easily be restored to pre-prospecting state, if measures are adequately implemented.

The proposed prospecting activities will be conducted in areas dominated by natural veld and/or crop cultivation. If mitigation measures are implemented correctly, it will be possible to restore rehabilitated land at the prospecting sites to natural veld or crops after decommissioning and rehabilitation.

The primary criteria for final land use is therefore as follows:

- a. All impacted footprints within natural veld areas will be rehabilitated to natural veld; and
- b. All impacted footprints within agricultural areas will be rehabilitated to ensure crop cultivation can continue.

Considering the above criteria and objectives set in section 7 above, a final land use map has been developed for the Ilahle Prospecting area (refer to Figure 8-1). The primary objective is to ensure pre-prospecting activities continue afterwards.

8.2 Final Land Use Map

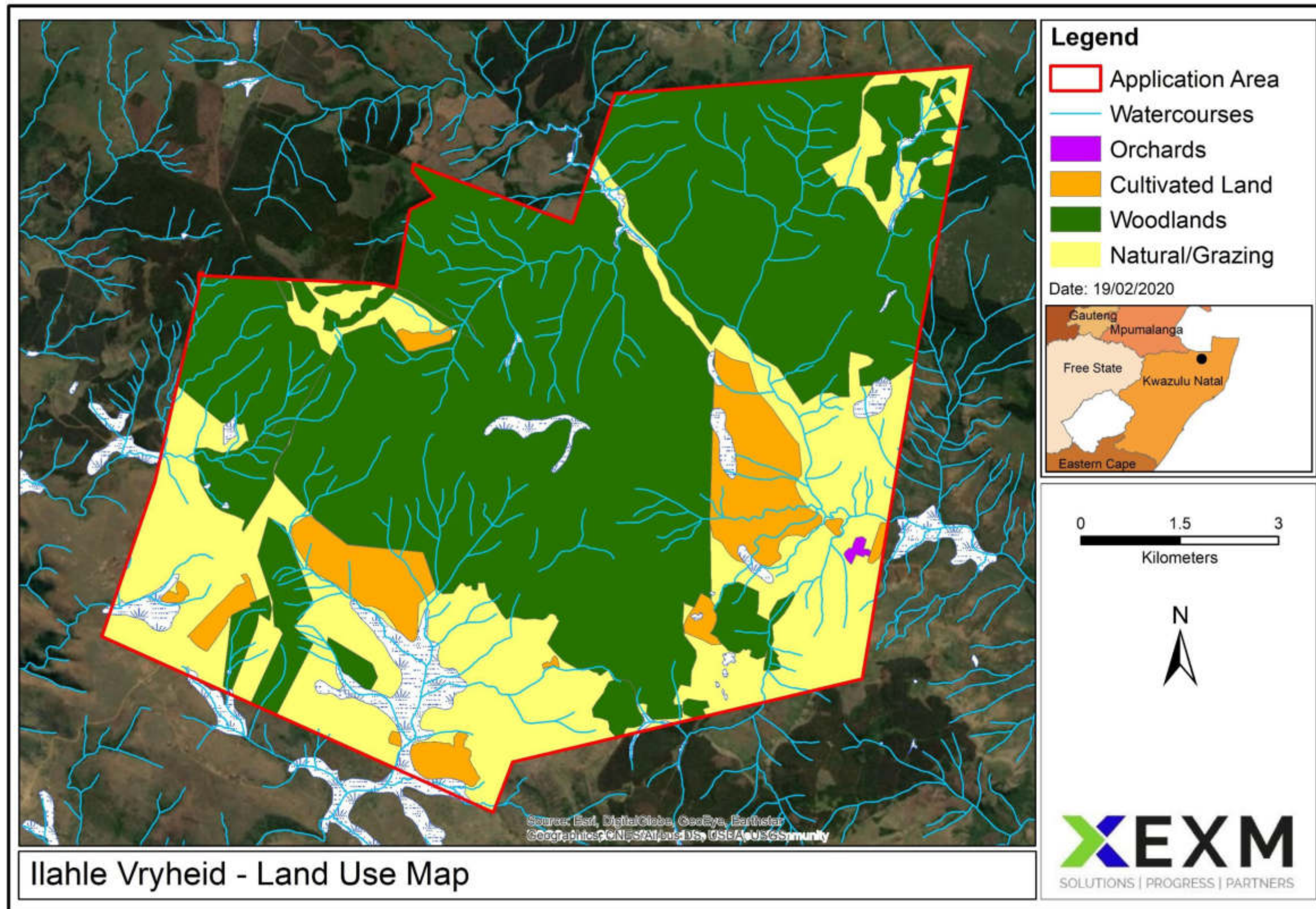


Figure 8-1: Ilahle Vryheid Final Land Use Map

9. CLOSURE MANAGEMENT AND ACTION PLAN

9.1 Rehabilitation Action Plan

The intended rehabilitation actions that would need to be undertaken by Ilahle after prospecting activities have been decommissioned are described below. These actions have been developed to align with the requirements of the objectives identified in section 7.3. This was also aligned with the strategies identified to mitigate potential risk during the risk assessment undertaken (Section 6).

Table 9-1: Decommissioning Phase Rehabilitation Actions

Nr	Aspect	Action	Description	Responsibility
1	Prospecting infrastructure			
1.1	Prospecting infrastructure and material	Removal of fences, drill rig, sumps, chemical toilets, shelter etc.	All infrastructure associated with prospecting activities will be removed from the respective sites and used at a subsequent site or taken away by contractor.	Drilling contractor.
1.2		Removal of contaminated structure and material.	Removal of all contaminated material from the site and disposed at a licenced disposal facility. Safe disposal certificates must be obtained.	Drilling contractor.
1.3		Removal of remaining waste.	All waste remaining after prospecting activities have been completed must be removed and disposed at a licenced facility	Drilling contractor.

Nr	Aspect	Action	Description	Responsibility
2	Affected prospecting surface areas			
2.1	Rehabilitation of affected prospecting areas	Remove of drill sludge and drill chips.	Remove drilling sludge residue (white residue) and drill chips from surface area and dispose off-site according to legal requirements.	Contractor
2.2		Remediation of contaminated soil	The site must be inspected for hydrocarbon or chemical spills. Insitu soil remediation will be conducted with an appropriate/tested product.	Contractor
		Flattening of mounds	Mounds must be flattened or ground level.	Contractor
		Erosion repair	Any erosion observed on site must be repaired by means of infilling.	
2.3		Ripping of compacted areas.	Compacted surface areas must be ripped/loosed, either by mechanical methods or by hand.	Contractor
2.4		Removal of Alien Invasive Plants.	All Alien Invasive Plants must be removed from site by mechanical means. No indigenous species must be removed.	Contractor
2.5		Shaping of surface area.	The final surface must be reshaped to simulate the topography of the surrounding landscape. This must be done to ensure the footprint area is free draining.	Contractor

Nr	Aspect	Action	Description	Responsibility
2.6		Placement of 150 - 300 mm of topsoil	The growth medium cover should be placed once backfilling has been completed.	Contractor
2.7		Seeding and revegetation	Vegetation needs to be re-established on the footprint areas. Fertilizer and organic matter would possibly be required to support vegetation growth. Seeding of the area must then be undertaken.	Contractor
2.8		Brushpacking	Dead branches can be used to place on the rehabilitated areas to protect new vegetation growth.	Contractor
2.9		Access roads	Access roads will be ripped, shaped and revegetated	Contractor
2.6		Monitoring and Maintenance	It is expected that two years monitoring of the vegetation reestablishment would be required. It will also be required to reseed approximately 60% of the vegetated area for three years.	Contractor
3	Borehole remediation			
3.1	Remediation of potentially contaminated groundwater	Conduct groundwater quality monitoring	Conduct groundwater sampling and analysis to assess whether contamination is present.	Environmental Officer
3.2		Remediation of hydrocarbon contamination.	The following actions can be implemented for the remediation of hydrocarbon contamination in the boreholes, depending on the level of contamination:	Contractor

Nr	Aspect	Action	Description	Responsibility
			<ul style="list-style-type: none"> Placement of drill sock to soak up hydrocarbon material. 	
		Sealing of borehole	A concrete seal will be established to prevent any water ingress and prevent community access to the boreholes.	
4	Monitoring and maintenance			
4.1		Monitoring and Maintenance	Inspect sites three months after rehabilitation has been conducted to verify success thereof. It is expected that two years monitoring of the vegetation reestablishment would be required.	Contractor
4.2		Seeding and revegetation	Vegetation needs to be re-established on the footprint areas. Fertilizer and organic matter would possibly be required to support vegetation growth. Seeding of the area must then be undertaken.	Contractor

9.2 Technical Solutions for Closure

9.2.1 Soil Stripping

Soil stripping should remove all materials that are suitable for supporting plant growth (2007 Guidelines for Rehabilitation of Mined Land). Possible impacts that may arise from undertaking vegetation clearance and soil stripping prior to any construction activity includes:

- Soil Compaction;
- Soil Erosion;
- Soil Contamination;
- Physical loss of Resource Volume;
- Disturbance of Soil Horizons; and
- Change in Land Use.

Stockpiles should be placed in strategic areas for ease of access during rehabilitation processes. The main goal during soil stockpiling should be to maintain soil quality and minimise deterioration of the soil structure. The following protocols should be adhered to during stockpiling of topsoil:

- Site clearance is limited to the area below the drill rig footprint and the area excavated for the placement of the silt trap. The soil in the rest of the drill site footprint and vegetation cover is to remain undisturbed.
- Soil is to be stockpiled at the highest point of the drill site.
- Soil is to be covered with plastic sheeting to prevent wind and water erosion. The plastic sheeting is to be secured at all times.
- Stockpiled soil is to be kept free of weeds and alien vegetation.
- Soil that becomes contaminated with hydrocarbons during operations is to be reported to the Environmental Officer. If possible, this is to be bioremediated in situ, or removed for bioremediation at another facility. Should bioremediation not be possible, the soil is to be removed and managed as hazardous waste.
- Soils that become contaminated with chemicals, other than hydrocarbons, are to be removed and managed as hazardous waste.
- Compacted areas must be ripped prior to placement of topsoil.

- Stockpiled soil must be placed over cleared areas as part of rehabilitation at the end of drilling activities
- Soils that have become compacted due to site activities are to be loosened (by hand) to promote seed germination.

9.2.2 Revegetation (Seeding and planting)

The majority of the affected area planned for prospecting is located on natural grassland or agricultural areas. The final land use objective is to ensure that the prospecting sites are transformed to its original land use, either natural grassland, grazing or crop cultivation. The area would therefore need to be seeded with dominant species grass species, indigenous to the area.

- Revegetation of the area must be done as soon as possible;
- Indigenous vegetations must be used;
- The site must be inspected to verify the success of re-vegetation; and
- Re-vegetate area if required as part of the site maintenance.

9.2.3 Alien and invasive

The alien and invasive plant (AIP) management process must be based on the objective to eradicate all alien and invasive plants with the focus on plant species that pose a high risk to biodiversity.

All invasive plant species within South Africa is regulated by NEMBA. Regulations published in Government Notice R.598 (replaced GN R.506) of 2014 and Government Notice R.864 of 2016 (replaced GN 507, 508, 509 and 599) under NEMBA states that species designated under section 70 of The Act are strictly regulated and no person may propagate, grow, buy or sell these for any reason, without a permit. All invasive plant species must be removed upon rehabilitation of the drill sites.

The methods utilised should be appropriate for the species concerned. The following protocols should be implemented to control alien vegetation:

- No planting of invasive species must be allowed.
- Contractors must have knowledge of how to identify invasive plant species.
- All invasive alien plants will be removed either through mechanical or chemical methods.

- The areas must be inspected as part of the monitoring and maintenance and regrowth must be managed.

9.2.4 Groundwater

A water sample must be taken after prospecting has been finalised to check whether any hydrocarbon contamination is present.

The following actions can be implemented for the remediation of hydrocarbon contamination in the boreholes, depending on the level of contamination:

- Placement of drill sock to soak up hydrocarbon material.
- If required, insert Hydrocarbon Granular Shock Treatment Packs to remediate contamination.

9.3 Closure and Rehabilitation Spatial Progression Plan

The closure schedule needs to be linked to the financial provision estimate and forecast that is undertaken for each year of prospecting. The schedule should consider areas that become available for rehabilitation and costs should be provided to undertake such rehabilitation.

Table 9-2 below presents a high-level schedule of closure related aspects that is planned to be undertaken for the proposed prospecting activities. No more than six drill sites will be active/disturbed at any time and rehabilitation of the first two drill sites will commence once prospecting commences at the next two sites. The project is committed to continuous rehabilitation on completion of exploration activities at each site. It is not anticipated that more than six drill sites will require rehabilitation at any one time and therefore the calculations for the quantum reflects this commitment.

Refer to Figure 9-1 for the layout of the different sections within the PR area. Prospecting will commence in the eastern section and move westwards.

Table 9-2: Spatial Rehabilitation Progression Plan

No	Site	Action required	Due Date	Rehabilitation Status
Block 1: First section allocated for prospecting				
1.	Section 1: Southern section of PR area	Removal of all infrastructure and material.	2021	As per prospecting schedule
		Soil remediation.		
		Removal of Invasive Alien Plants.		
		Ripping of compacted areas.		

No	Site	Action required	Due Date	Rehabilitation Status
		Sloping of surface areas.		
		Seeding and re-vegetation.		
		Remediation of groundwater if required.		
		Sealing of borehole		
Block 2: Second section allocated for prospecting				
2.	Section 2: Centre section of PR area	Removal of all infrastructure and material.		
		Soil remediation.		
		Removal of Invasive Alien Plants.		
		Ripping of compacted areas.		
		Sloping of surface areas.	2022	As per prospecting schedule
		Seeding and re-vegetation.		
		Remediation of groundwater if required.		
		Sealing of borehole		

No	Site	Action required	Due Date	Rehabilitation Status
Block 3: Third section allocated for prospecting				
3.	Section 3: Northern section of PR area	Removal of all infrastructure and material.	2023	As per prospecting schedule
		Soil remediation.		
		Removal of Invasive Alien Plants.		
		Ripping of compacted areas.		
		Sloping of surface areas.		
		Seeding and re-vegetation.		
		Remediation of groundwater if required.		
		Sealing of borehole		

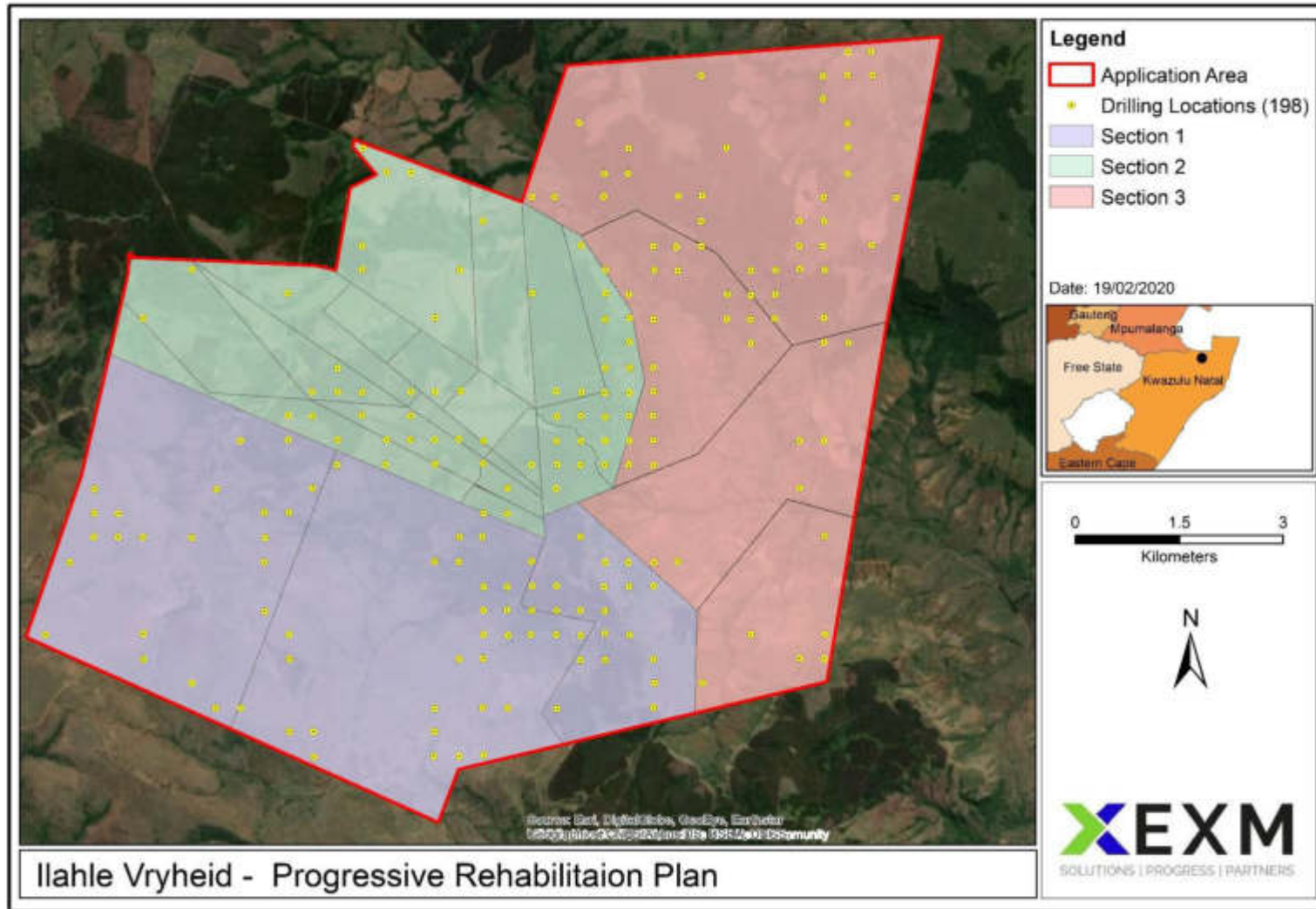


Figure 9-1: Progressive Rehabilitation Plan

10. ORGANISATION CAPACITY TO IMPLEMENT THE CLOSURE PLAN

10.1 Organisational Structure

Ilahle Management is accountable for Health, Safety, Environment and Community issues. The SHEQ Manager will be responsible for environmental issues pertaining to the proposed prospecting activities.

10.2 Training and Capacity Building

Ilahle must develop an awareness programme that will be utilised at the prospecting operations. This includes formal inductions, monthly themes, posters etc. Formal inductions should be undertaken by personnel and contractors. Themes should be identified through environmental risks. The contractor involved in rehabilitation actions should also receive training relevant to the actions that will be performed. SHE induction should also be conducted.

11. RELINQUISHMENT CRITERIA

The various closure actions have been identified in section 9. Once all these measures have been implemented some measurable criteria is required to assess the effectiveness of the closure plan implementation. These criteria will enable Ilahle to sufficiently relinquish responsibility for the prospecting area. The relevant relinquishment criteria have been developed and is included in Table 11-1 below. The table also includes the achievement indicators against relinquishment criteria and required reporting to satisfy legislative requirements.

Table 11-1: Relinquishment criteria for the prospecting area

Aspect	Closure Criteria	Indicators	Reporting requirement
Air Quality	National Environmental Management: Air Quality (Act 39 of 2004): Compliance to national dust control regulations.	Air quality measurement records (dust fallout).	Monitoring report
Biodiversity	Vegetation which has adequately been established and are self-sustaining. No alien and invasive vegetation proliferation present.	Species composition and cover.	Monitoring report

Aspect	Closure Criteria	Indicators	Reporting requirement
Groundwater	Groundwater quality must comply with qualities stipulated in applicable legislative standards.	Measuring groundwater quality.	Monitoring report
Safety	Ensure boreholes are sealed adequately.	Sign off from site supervisor	Rehabilitation checklist and final site inspection report.
Soil, Land, Capability and Land Use	Remediation of all contaminated soil.	Effectiveness of remedial measures implemented.	Rehabilitation checklist and final site inspection report.
Visual	The overall aesthetic appearance must be re-instated to acceptable levels to mirror prior landscape. Prospecting areas must be rehabilitated to successfully blend with surrounding landscape. Rehabilitated areas should re-establish natural vegetation to ensure area is aesthetically pleasing	Scenic quality determination against baseline prior prospecting environment.	Visual Assessment

12. CLOSURE COSTING

12.1 Effect of Concurrent Rehabilitation on Quantum

It is well documented that the lack of concurrent rehabilitation and clear incentives to rehabilitate does result in higher longer-term liabilities and more significant environmental risks. In general, mining operations (and prospecting) environmental liability increase progressively during operations until closure. The link between the application of concurrent rehabilitation and the need for closure rehabilitation is clear – thorough application of concurrent rehabilitation where possible is one of the best ways to ensure that closure rehabilitation needs, and costs are minimised. This relationship between closure liabilities and the required financial assurance/provisions during the different life cycle stages is displayed in Figure 12-1 below.

As indicated in the diagram, progressive closure results in a clear reduction in the financial assurance/provisions required for final rehabilitation, decommissioning and closure. Ilahle will therefore adopt the principle of *“the earlier the better”* to rehabilitation which will reduce future risks at the prospecting area. Concurrent rehabilitation is currently planned by Ilahle.

Concurrent rehabilitation at the site will be based on the principle that no more than six boreholes will be active at any time. Once Ilahle has finalised drilling at two boreholes, they will commence with rehabilitation and move on to the next two sites. Once drilling is finalised at these sites the operations will move to the next two sites and rehabilitation will commence on the previous two sites after the first two sites are finalised.

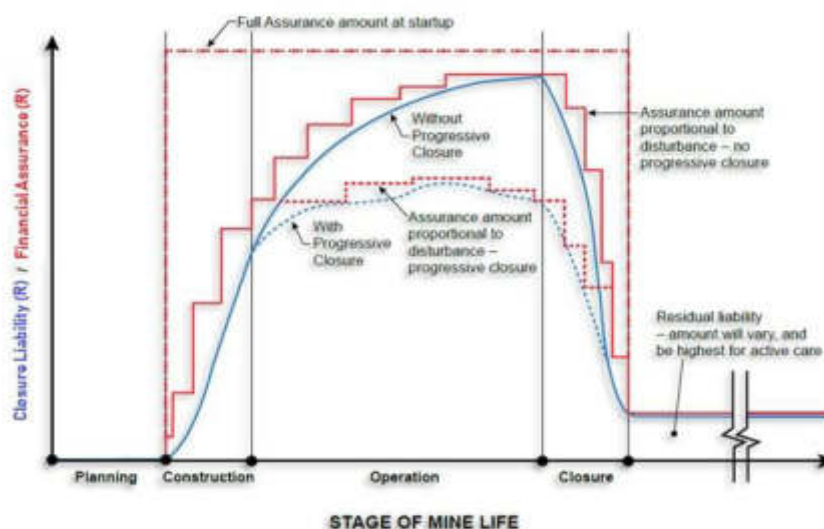


Figure 12-1: Closure Liability vs required financial provisions

12.2 Closure Costing Methodology

The rehabilitation liability has been calculated by EXM according to regulation 6 of the financial provision for prospecting, exploration, mining or production operations regulations (GNR 1147, November 2015). These regulations prescribe the required minimum content as follows: *“a detailed itemisation of all activities and costs, calculated based on the actual costs of implementation of the measures required.”* The regulation further outlines that closure cost estimation must include the following:

1. An explanation of the closure cost methodology;
2. Auditable calculations of costs per activity or infrastructure; and
3. Cost assumptions;

The model used to develop the rehabilitation cost for the Ilahle Vryheid Prospecting Area was developed in Microsoft Excel. An itemised list of all the required actions was included, which considered measurements of the areas to be rehabilitated. The rates for earthworks were calculated based on site conditions and typical plant hire rates.

An appropriately sourced contractor rate for 2020 was applied to each rehabilitation action to be implemented. These rates were obtained from recent projects undertaken by EXM and contractor sourced rates.

As stated in Section 12.1, no more than six drill sites will be active/disturbed at any time and rehabilitation of the first two drill sites will commence once prospecting commences at the next two sites. The project is committed to continuous rehabilitation on completion of prospecting activities at each site. It is not anticipated that more than six drill sites will require rehabilitation at any one time and therefore the calculation of the quantum reflects this commitment.

The liability calculation sheets have been developed to provide as much information as possible to indicate the actions, conditions and assumptions related to each cost item. The actual quantities, rates and liability calculations are provided in the calculation sheets. The rates used for the calculation of the rehabilitation liability can be updated to improve confidence and the level of accuracy required, by feeding this back into the rate calculations.

12.3 Closure Costing Assumptions

The following assumptions have been made during the calculation of the financial provision:

- Only six prospecting sites will be disturbed at any one time;
- All infrastructure will be removed from the site;
- At closure, all fences will be removed and access roads (if any) rehabilitated;
- It is anticipated that all drill sites will require the following general actions, however not all actions may be required for each of the boreholes and will depend on site conditions:
 - Removal of Invasive Alien Plants;
 - Ripping of compacted areas;
 - Removal of drilling sludge residue and drill chips;
 - Remediation of contaminated soil;
 - Remediation of potential hydrocarbon contamination in boreholes;
 - Seeding and fertilisation.

It is anticipated that only half of the sites will require follow up re-vegetation and removal of Invasive Alien Plants during monitoring and maintenance.

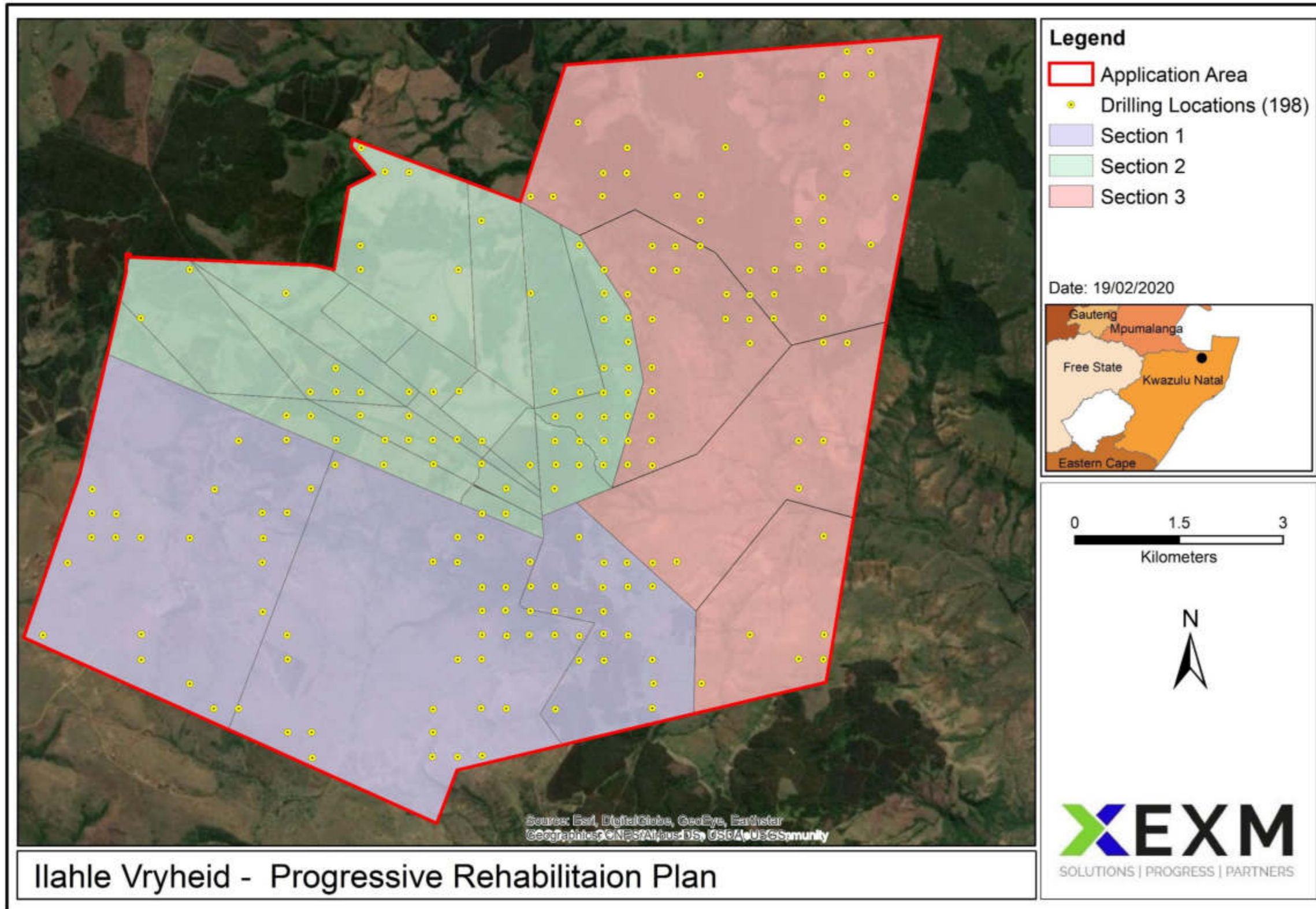


Figure 12-2: Borehole Locations that will be rehabilitated

12.4 Closure Costing

The estimated 2020 financial provision required for the final rehabilitation and closure of Ilahle Prospecting areas is **R 91 904,00 excl. VAT**. A summary of the financial provision estimate associated with the prospecting site is included in Table 12-1 below. The calculations have been made for six drill sites as described in Section 12.2. Detailed spreadsheets are provided in **Appendix A**.

Table 12-1: Summary of the Ilahle Vryheid Prospecting Financial Provision

Item	Description	Amount
1	Sealing of borehole with cement	R 16 200,00
2	General surface rehabilitation	
2,1	Travelling to site	R 2 527,00
2,2	Physical removal of weeds and invasive species	R 7 500,00
2,3	Disposal of removed plants	R 900,00
2,4	In situ remediation of hydrocarbon spills	R 2 370,00
2,5	Removal of drill sludge residue	R 9 000,00
2,6	Disposal of sludge residue (travelling)	R 1 500,00
2,7	Ripping of compacted areas	R 7 500,00
2,8	Fertilization and seeding	R 9 900,00
2,9	Brushpacking	R 7 500,00
Sub Total (2.1-2.9)		R 48 697,00
3	Placement of drill socks to soak any hydrocarbons	R 11 760,00
4	Monitoring and maintenance of rehabilitated sites including: (Latent)	
4,1	Site inspection	R 2 527,00
4,2	Ripping of compacted areas	R 3 750,00
4,3	Physical removal of weeds and invasive species	R 3 750,00
4,4	Disposal of removed plants	R 270,00
4,5	Fertilization and re-seeding	R 4 950,00
Sub Total (4.1-4.5)		R 15 247,00
SUB TOTAL (Items 1-5)		R 91 904,00
ADD 15% VAT		R13 785,60
GRAND TOTAL (INCL. VAT)		R105 689,60

13. MONITORING, AUDITING AND REPORTING REQUIREMENTS

13.1 Planned Internal Audits

Internal compliance monitoring must be undertaken to ensure compliance with the EMP, environmental authorisations and closure plan. During decommissioning and closure phases, a daily site diary must be kept by each contractor recording any environmental incidents for the day. Environmental incidents must be rectified and reported to the ECO. An ECO needs to be appointed during decommissioning and closure phase to ensure correct implementation of this report. The ECO will need to undertake weekly compliance audits.

13.2 Planned External Audits

External Environmental Compliance Audits will be compiled and submitted in accordance with legislative requirements (as applicable at the time) including:

- (1) Regulation 34 of the EIA Regulations (GN. 982 of 4 December 2014); and
- (2) Regulation 11 of the Financial Provisioning Regulation, 2015 (GN R. 1147 of 2016):
Annual updating of this report.

13.3 Monitoring Plan Related to Closure

Monitoring during the rehabilitation of the site will be required to assess whether the objectives of the closure plan is achieved and also to assess environmental compliance. The monitoring requirements contained in the below Table is recommended:

13.3.1 Groundwater Quality Monitoring

A water sample will be taken at each borehole during rehabilitation and the water will be analysed at a SANAS accredited laboratory. The sampling must include potential hydrocarbon contamination.

13.3.2 Monitor implementation of rehabilitation actions

The site supervisor will maintain evidence of actions implemented during rehabilitation of the borehole sites. A checklist should be completed and signed off to show that actions have been completed. Photographic evidence must also be maintained to monitor success of rehabilitation.

13.3.3 Monitoring of site conditions and vegetation growth

The site must be monitored on a quarterly basis after rehabilitation to verify whether the rehabilitation actions were successfully implemented. Some aspects that must be

monitored post rehabilitation include the following:

- Is there any ponding or erosion visible on-site?
- Is the site free of AIP species?
- Has the vegetation established successfully?

13.3.4 Final Site Inspection and Audit

A site inspection and environmental audit will be conducted by an independent environmental practitioner, after rehabilitation has been conducted and maintained, to verify that the actions stipulated in the rehabilitation plan has been successfully implemented.

14. MOTIVATION FOR AMENDMENT OF THE PLAN BASED ON MONITORING

No amendments have been recommended or required.

15. CONCLUSION AND RECOMMENDATIONS

The identified final land use is a function of the status of the land, feasibility of rehabilitation options that can be applied to the proposed prospecting activities and feasible surrounding land uses. As part of the closure strategy various objectives have been established to ensure the environment after rehabilitation of the areas can achieve long term sustainability. Through the implementation of the various actions identified in this report Ilahle will be able to adequately manage the decommissioning and closure liabilities of the prospecting activities.

The primary objective of closure is to reinstate the environmental status whereupon Ilahle's legal liability is terminated and a closure certificate can be issued for the prospecting area. This can only be realised once it can be proven that rehabilitation has been undertaken sufficiently and that residual environmental impact can be adequately managed. The primary component of managing these impacts is to implement the various management action required to remove, remediate and reinstate the natural surfaces.

Ilahle would need to provide adequate financial assurance through a required financial instrument to provide for their decommissioning and closure liability cost. Ilahle will obtain a closure certificate only once it can prove that rehabilitation is satisfactory, and that if any residual pollution effects exist, they can be adequately managed.

16. REFERENCES

Department of Minerals and Energy. (2005). Guideline Document For The Evaluation Of The Quantum Of Closure-Related Financial Provision Provided By A Mine. Pretoria.

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17. APPENDICES

Appendix A: Ilahle Vryheid Prospecting Closure Cost Calculations

Ilahle Vryheid - Unplanned Closure Cost @ February 2020							
Company:	Ilahle 4 KZN (Pty) Ltd						
Mining Right:	KZN 30/5/1/1/2/10921 PR						
Application area:	Vryheid						
Prepared by:	EXM Advisory Services (Pty) Ltd						
Item	Description	Calculation per drilling site			Calculation for all applicable sites		Comments
		Unit	Quantity	Rate	Boreholes	Amount	
1	Sealing of borehole with cement	Cement seal	1	R 2 700,00	6	R 16 200,00	Based on contractor costs per borehole. Only three sites have boreholes present.
2	General surface rehabilitation						
2,1	Travelling to site	Travelling cost	700	3,61		R 2 527,00	Based on AA rates
2,2	Physical removal of weeds and invasive species	Man hours	5	R 250,00	6	R 7 500,00	Assume 5 man hours per site including removal.
2,3	Disposal of removed plants	Kg	300	R 0,50	6	R 900,00	Rate based on municipal rate for waste disposal.
2,4	In situ remediation of hydrocarbon spills	20kg bag absorbent material	1	R 395,00	6	R 2 370,00	According to actual cost of product
2,5	Removal of drill sludge residue	Man hours	6	R 250,00	6	R 9 000,00	Assume 6 man hours per site, including removal.
2,6	Disposal of sludge residue (travelling)	Kg	500	R 0,50	6	R 1 500,00	Rate based on municipal rate for waste disposal.
2,7	Ripping of compacted areas	Man hours	5	R 250,00	6	R 7 500,00	Assume 5 man hours per site
2,8	Fertilization and seeding	Seed mix and fertiliser	1	R 1 650,00	6	R 9 900,00	Purchase and placement of organic compost or artificial fertiliser (1 m3 per site)+ 3 man hours per borehole+ transport
2,9	Brushpacking	Man hours	5	R 250,00	6	R 7 500,00	Assume 5 man hours on site
Sub Total (2,1 - 2,9)						R 48 697,00	
3	Placement of drill socks to soak any hydrocarbons	Per absorbent sock	2	R 980,00	6	R 11 760,00	Assume 2 drill sock per hole is required.
4	Monitoring and maintenance of rehabilitated sites including:						
4,1	Site inspection	3,61	700			R 2 527,00	Based on AA rates
4,2	Ripping of compacted areas	Man hours	5	R 250,00	3	R 3 750,00	Assume 5 man hours per site
4,3	Physical removal of weeds and invasive species	Man hours	5	R 250,00	3	R 3 750,00	Assume 5 man hours per site including removal.
4,4	Disposal of removed plants	Kg	300	R 0,30	3	R 270,00	
4,5	Fertilization and seeding	Seed mix and fertiliser	1	R 1 650,00	3	R 4 950,00	Purchase and placement of organic compost or artificial fertiliser (1 m3 per site)+ 3 man hours per borehole+ transport
Sub Total (4,1-4,5)						R 15 247,00	
					SUB TOTAL	R 91 904,00	
					Add 15% VAT	R13 785,60	
					GRAND TOTAL (INCL. VAT)	R105 689,60	

**Appendix 7:
Latent Environmental Risk Report.**

Ilahle 4 KZN (PTY) Ltd Vryheid

Prospecting Right and Environmental Authorisation Application

ENVIRONMENTAL RISK ASSESSMENT REPORT

FINAL

REF NUMBER: KZN 30/5/1/1/2/10921 PR

SEPTEMBER 2020

VERSION 01

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Report Sign-Off			
Name	Designation	Signature	Date
Trevor Hallatt	Senior Environmental Advisor		2020/09/14
Divan van der Merwe	Director		2020/09/14

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1. INTRODUCTION

1.1 Project Background

Ilhahle 4 KZN (Pty) Ltd (Ilahle) has submitted an application (KZN 30/5/1/1/2/10921 PR) to conduct prospecting activities for coal and pseudocoal in an area approximately 41 km of Vryheid in the Magisterial District of Zululand, Kwa-Zulu Natal. The prospecting area covers approximately 7 900 hectares. The proposed prospecting activities trigger activities 20 and 27 listed in GNR 893 (Listing Notice 1 as amended in 2017). Therefore, a Basic Impact Assessment (BA) process must be undertaken as part of an application for Environmental Authorisation (EA).

Regulation 10 of the Financial Provision Regulation of 2015 (GN R.1147 of 2015), published in terms of the National Environmental Management Act (No. 107 of 1998) (NEMA Financial Provision Regulation), requires that an environmental risk assessment report must be developed and accompany an EA application. The purpose of this report is to set out actions and measures that need to be conducted in order to identify, quantify and manage the potential latent environmental risks related to the post closure phase. The plan must also contain details regarding financial provision for rehabilitation and/or management of the latent risks. This report has been developed in terms of the Annexure 5 of the NEMA Financial Provision Regulation in support of the EA application which contains minimum requirements for an environmental risk assessment report.

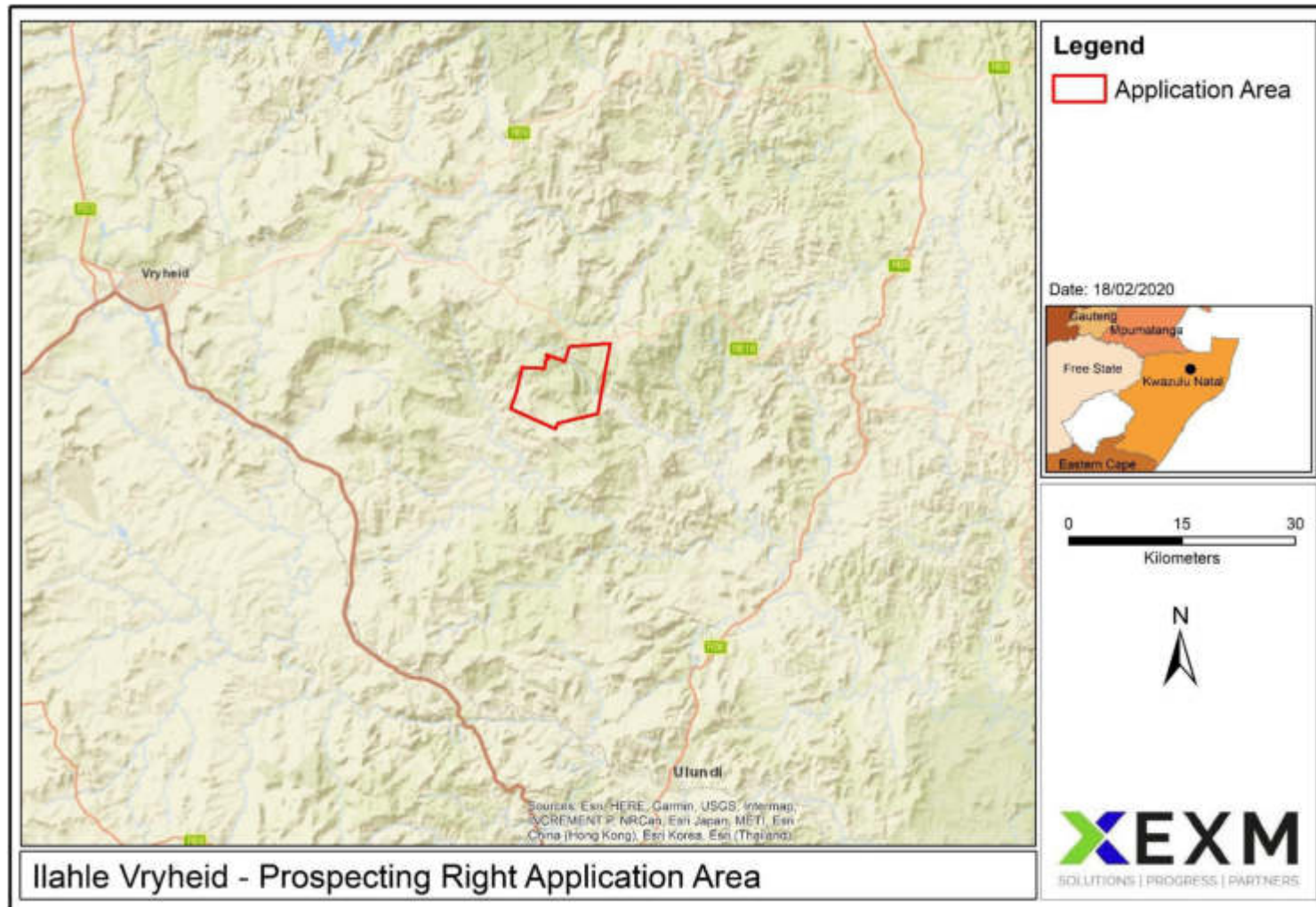


FIGURE 1-1: LOCALITY MAP

1.2 Details of report compilation and review

1.2.1 Compilation:

Writer:

- **Name:** Trevor Hallatt
- **Affiliation:** Senior Environmental Advisor, EXM Advisory Services (Pty) Ltd
- **Tel No.:** +27(10) 007 3617
- **Email address:** trevor@exm.co.za

Reviewer:

- **Name:** Renier Ellis
- **Affiliation:** Senior Environmental Advisor, EXM Advisory Services (Pty) Ltd
- **Tel No.:** 010 007 3617
- **Email address:** renier@exm.co.za

1.2.2 Expertise of Independent Assessor

Qualifications

BSc Geography & Environmental Management (NWU)

BA Hons Environmental Management (NWU)

MA Environmental Management (NWU)

Expertise and Experience

Trevor Hallatt has more than 10 years of environmental management experience in mining, power generating, industrial and local government sectors. His duties entail the planning and execution of projects related to environmental management, including ISO 14001: 2004 and legal compliance audits, Environmental Impact Assessments (EIA), Financial Provisioning, Compilation of Environmental Management Programmes, Environmental Risk Assessments and Environmental Management Systems. Furthermore, he performed different functions in the planning and delivery of environmental short courses, including the development of modules and presenting on different topics. Trevor is also a registered Natural Science Professional with the South African Council for Natural Scientific Professions (Reg nr: 300123/15).


1.2.3 Expertise of Independent Assessor

Name of Practitioner	Divan van der Merwe	Trevor Hallatt
Affiliation	Director	Senior Environmental Scientist
Telephone	073 378 7845	071 689 2229

E-mail address	divan@exm.co.za	trevor@exm.co.za
Experience	12 years	10 years
Qualifications	MSc Environmental Management	MA Environmental Management
Professional Registration	LaRRSA	SACNASP

1.2.4 Declaration of Independence

The undersigned declare that this report represents an **independent and objective** assessment of the financial provision for Ilahle 4 KZN (Pty) Ltd.

Name	Designation	Signature	Date
Trevor Hallatt	Senior Environmental Advisor		2020/09/14

2. APPROACH AND METHODOLOGY

In terms of section 38A of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA) an approved environmental authorisation is a condition prior to granting of a prospecting right. According to section 24C(2A) of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA), the Department of Mineral Resources (DMR) is the responsible authority for listed activities which relate directly to mining related activities, including prospecting.

Activities listed in regulations published in terms of NEMA must obtain an EA prior to commencement. Activities listed in GNR 983 (Listing Notice 1) and GNR 985 (Listing Notice 3) require a Basic Impact Assessment (BA) to be conducted in order to obtain EA and a full EIA must be conducted for activities listed in GNR 984 (Listing Notice 2). The proposed prospecting activities trigger activities 20 and 27 listed in GNR 893 (Listing Notice 1 as amended in 2017), published. Therefore, a Basic Impact Assessment (BA) process must be undertaken as part of an application for Environmental Authorisation (EA).

Regulation 10 of the Financial Provision Regulation of 2015 (GN R.1147 of 2015), published in terms of the National Environmental Management Act (No. 107 of 1998) (NEMA Financial Provision Regulation), requires that an environmental risk assessment report as per Regulation 6 (stipulated below) must be developed and accompany an EA application.

Regulation 6 of GN R. 1147 requires the financial provision to be determined through a detailed itemisation of all activities and cost which are based on the actual cost of implementation of the measures required for:

1. Annual rehabilitation and remediation, needs to be reflected in an Annual Rehabilitation Plan (ARP)
2. Final Rehabilitation, Decommissioning and Closure activities at the end of mining, need to be reflected in a final rehabilitation, Decommissioning and Closure Plan (RDCP); and
3. Remediation and management of latent or residual environmental impacts which may become known in the future, including the pumping and treatment of polluted or extraneous water, which needs to be reflected in an **environmental risk assessment report (ERR)**.

2.1 Content of the Report

This report has been compiled in terms of the Regulations pertaining to the financial provision for prospecting, exploration, mining or production operations (GNR 1147, November 2015) and include the minimum content of an Environmental Risk Report as required in Appendix 5 (Refer to Table 2-1)

TABLE 2-1: REQUIRED CONTENT OF THE ENVIRONMENTAL RISK REPORT ACCORDING TO GNR 1147, 2015

MINIMUM CONTENT OF AN ENVIRONMENTAL RISK ASSESSMENT REPORT (APPENDIX 5 OF GN R. 1147)	
Requirement	Section in Report
The environmental risk assessment report must contain information that is necessary to determine the potential financial liability associated with the management of latent environmental liabilities post closure, keeping in mind the proposed post-mining end use, once the initial relinquishment criteria has been achieved and must include:	
(a) details of— (i) the person or persons that prepared the plan; (ii) the professional registrations and experience of the preparers;	Refer to Section 1.2 of the report
(b) details of the assessment process used to identify and quantify the latent risks, including— (i) a description of the risk assessment methodology inclusive of risk identification and quantification; (ii) substantiation why each risk is latent, including why the risk was not or could not be mitigated during concurrent rehabilitation and remediation or during the implementation of the final rehabilitation, decommission and closure plan; (iii) a detailed description of the drivers that could result in the manifestation of the risks, to be presented within the context of closure actions already having been implemented during the execution of concurrent rehabilitation or during the implementation of the final rehabilitation, decommission and closure plan; (iv) a description of the expected timeframe in which the risk is likely to manifest, typically as expected years after closure, and the duration of the impact, including motivation to support these timeframes;	Refer to Section 4 and 5 of the report

MINIMUM CONTENT OF AN ENVIRONMENTAL RISK ASSESSMENT REPORT (APPENDIX 5 OF GN R. 1147)

Requirement	Section in Report
<p>(v) a detailed description of the triggers which can be used to identify that the risk is imminent or has manifested, how this will be measured and any cost implications thereof;</p> <p>(vi) results and findings of the risk assessment;</p> <p>(vii) an explanation of changes to the risk assessment results as applicable in annual updates to the plan;</p> <p>(v) a detailed description of the triggers which can be used to identify that the risk is imminent or has manifested, how this will be measured and any cost implications thereof;</p> <p>(vi) results and findings of the risk assessment;</p> <p>(vii) an explanation of changes to the risk assessment results as applicable in annual updates to the plan;</p>	
<p>(c) management activities, including—</p> <p>(i) monitoring of results and findings, which informs adaptive or corrective management and/or risk reduction activities;</p> <p>(ii) an assessment of alternatives to mitigate or manage the impacts once the risk has become manifested, which must be focussed on practicality as well as cost of the implementation;</p> <p>(iii) motivation why the selected alternative is the appropriate approach to mitigate the impact;</p> <p>(iv) a detailed description of how the alternative will be implemented;</p>	Refer to Section 6 of the report
<p>(d) costing, calculated using the current value of money and no discounting or net present value calculations included in the determination of the quantum of the liability, including—</p> <p>(i) a cost estimation, which must include—</p> <p>(aa) an explanation of the closure cost methodology;</p> <p>(bb) an auditable calculations of costs per activity or infrastructure; (cc) cost assumptions;</p> <p>(dd) monitoring costs post closure to determine whether the risk is imminent or has manifest are to be included in the assessment as are monitoring costs likely to be incurred during the implementation of the strategy to manage or mitigate the impacts once the risk has become manifest;</p> <p>(ii) where appropriate, a differentiation between capital, operating, replacement and maintenance costs;</p> <p>(iii) cost estimates for operations, or components of operations that are more than 30 years from closure prepared as conceptual estimates within an accuracy of ± 50 per cent. Cost estimates will have an accuracy of ± 70 per cent for operations, or components of operations, 30 or less years (but more than ten years) from closure and ± 80 per cent for operations, or components of operations ten or less years (but more than five years) from closure. Operations with 5 or</p>	Refer to Section 7 of the report

MINIMUM CONTENT OF AN ENVIRONMENTAL RISK ASSESSMENT REPORT (APPENDIX 5 OF GN R. 1147)	
Requirement	Section in Report
less years will have an accuracy of ± 90 per cent. Motivation must be provided to indicate the accuracy in the reported number and as accuracy improves, what actions resulted in an improvement in accuracy; and	
(e) monitoring, auditing and reporting requirements, which must include requirements prior to the manifestation of the risk and impacts as well as those once the impacts resulting from the manifestation of the risk are realised, inclusive of the approach that will be taken to analyse monitoring results and how these results will be used to inform adaptive or corrective management and/or risk reduction activities.	Refer to Section 8 of the report

2.2 Objective of the Environmental Risk Report

The objectives of an environmental risk assessment report are outlined in Appendix 5 of GN R. 1147 and include the following:

- Ensure timeous risk reduction through appropriate interventions;
- Identify and quantify the potential latent environmental risks related to post closure;
- Detail the approach to managing the risks;
- Quantify the potential liabilities associated with the management of the risks; and
- Outline monitoring, auditing and reporting requirements.

3. PROJECT DESCRIPTION AND SCHEDULE

3.1 Project Overview

The Prospecting Right application has been submitted to prospect for coal and pseudocoal in respect to the following properties:

- Portion 2 and the Remainder (Whole Area) of the Farm Tygerskloof No. 173- HU
- A Portion of the Farm Demoina No. 830-HU
- Portion 3, 4, 5 and 7 (Whole Area) of the Farm Wonderfontein No. 560-HU
- Whole Area of the Farm Mariantha No. 845-HU
- Whole Area of the Farm Welteverede 540-HU
- A Portion Of the Farm Tierkloof 829-HU
- Portions 4-7, 13, 16, Portions 2-17 of the Farm Spitzkop No. 70-HU

The prospecting right area covers approximately 7 900 ha in extent. The proposed Prospecting Right is located within the AbaQulusi Local Municipality and is located ~41 km east of Vryheid in Kwazulu-Natal.

3.2 Proposed Prospecting Activities

The prospecting activities will be aimed at identifying potential coal and psuedocoal deposits. In order to identify the mineral targets a desktop review phase and invasive drilling phase will be undertaken.

3.2.1 Desktop Review Phase

The desktop studies will involve assessing all available public information on the geology, mineral occurrence and topography of the prospecting right application area, and all information on past work carried out in the area from geophysics, geochemistry, image interpretation, drilling and mining. Any literature assessed will be reviewed, collated and archived for reference. Key information during this phase will be data provided by the Council of Geoscience on historic drilling that has been undertaken within the prospecting area.

3.2.2 Spatial Database Compilation

Spatial information will be compiled into a GIS database for access, correlation and evaluation. The GIS system will be used and maintained for the period of the prospecting right exploration program and regularly updated as new information is generated by the exploration program. All spatial information assessed and collected in the field will be

standardized using the WGS84 datum.

3.2.3 Remote sensing

As part of the initial review, public domain aerial photos will be acquired and a detailed geological and structural interpretation will be done on these to aid in identifying target areas that are not readily evident on the ground and to provide an independent interpretation of the geology of the area.

Satellite imagery will also be acquired to provide a more regional viewpoint of the area of interest. As before a detailed geological and structural interpretation will be done on these images to provide a more regional viewpoint on the target areas. Satellite imagery is used to complement the aerial photo interpretations as the combination of multi-spectral bands can be used to highlight certain lithology, vegetation types, soil types, alteration minerals, etc.

3.2.4 Geophysical survey to be undertaken

Both airborne and ground geophysical surveys may be undertaken for the prospecting right area. This is dependent on the results of the desktop study. These surveys will be used in conjunction with the data available to the public from the Council for Geoscience.

A small airborne magnetic/radiometric survey may be carried out over the prospect and surrounding areas to map the structural geology of the area. Follow up ground geophysical surveys will then be carried out on coincident targets from the compilation of geological and geophysical data. These surveys may include ground gravity, ground electromagnetics, IP and controlled source audio magnetotellurics (CSAMT).

On completion of the desktop review a plan detailing the location of invasive drill sites will be completed allowing the holder to commence with borehole drilling to acquire core samples and delineate the minerals. Establishment and operation of the drilling rigs will be undertaken and is the main activities forming part of the invasive drilling phase.

3.3 Proposed Infrastructure

The following infrastructure or areas will be established at each drilling site: (also see Figure 3):

3.3.1 Access Road (if required)

Existing farm tracks and roads will be followed for entry and exit to all drill sites. Site locations will be determined to ensure short and easy access. All access on farms will be conducted in terms of a written agreement with the landowner. In instances where no access road is

available to the site location a single track will be chosen on the basis of least environmental impact on natural habitat considered the last option. Only these tracks will be followed and will not be deviated from.

3.3.2 Parking for light vehicles

The parking area for light vehicles will be established adjacent to the drill site. The extent of this area will be kept to a minimum. Vehicles will only park in the designated area and will make use of one turning track to minimise disturbance to the environment.

3.3.3 Chemical storage area

Storage and use of hydrocarbons and other chemicals may only take place on impermeable surfaces with bunds to contain any accidental spills. Hazardous material will be stored in appropriate containers and clearly marked. Drip trays and/or impermeable surfaces with bunds must be placed under machinery that has the potential to leak. Material Safety Data Sheets will be available for all drilling and other chemicals kept on site.

3.3.4 Water delivery and settling sumps

When core drilling will be undertaken a number of settling sumps will be excavated and lined with impervious plastic sheets. The purpose of these sumps is to recycle water and drilling fluids by means of gravity causing heavier materials (e.g. drill cuttings) to settle and "clean" water being produced for re-use. These sumps will be fenced, where required, to prevent livestock and public access. The plastic sheets will be removed, and sumps will be backfilled on completion of drilling.

3.3.5 Drill rig

In most cases the drill rig will be a self-contained, truck-mounted unit accompanied by a compressor and a generator. The drill rig will be driven to site and mobilised in the desired location, positioned over the drill site and stabilised. The footprint of disturbance for a drill rig and associated equipment is generally smaller than 625 m². Plastic sheets and drip trays will be placed underneath the rig for the duration of the drilling process at each site in order to avoid hydrocarbon spills and contamination. The perimeter of the drill sites will be staked out and the drill crew will not operate beyond these boundaries. Depending on the locality, this perimeter may be fenced, marked with bunting or barricading. Please refer to Figure 3 for a layout plan of the drilling site.

3.3.6 Drill core storage area

During core drilling a laydown area for the extracted core samples will be established within

the footprint of the drill site. This area is usually 10m × 2m and is used to place the extracted core in sequence (according to depth) for later analysis by an appointed geologist. Core trays will be used to contain the core samples.

3.3.7 Drill rod storage area

During the drilling process the drill rods are usually kept on trestles (specially built stands) or on the back of a truck for easy access or within the drill site area.

3.3.8 Vegetation and topsoil stockpile areas (if required)

Vegetation and topsoil will only be stockpiled in instances where settling sumps are required i.e. core drilling. During the excavation process the topsoil and available vegetation will be placed adjacent to the sumps. This will also serve as stormwater diversion berms. The excavated material will be backfilled into the rehabilitated sumps on completion of the drilling process.

3.3.9 General and hazardous waste receptacles

Separate, marked receptacles (containers) will be provided for the storage and disposal of hazardous and general wastes at the waste generation points. The purpose of this is to ensure that general and hazardous waste be disposed of separately.

3.3.10 Chemical toilet

Chemical toilets will be provided for the drilling crew. The toilets will be supplied and managed by a specialist contractor and the sewage disposed of at the nearest sewage farm, or as required by the local authority. The toilets will be cleaned on a weekly basis for the duration of the drilling programme.

3.3.11 Safety fencing / barricading

The perimeter of the drill sites will be staked out and the drill crew will not operate beyond these boundaries. Depending on the locality, this perimeter may be fenced, marked with bunting or barricading signage to prevent public or livestock access. The drilling sites will be clearly demarcated as a dangerous working area. The fences will remain until all hazardous machinery and material have been removed and the sumps (if any) backfilled.

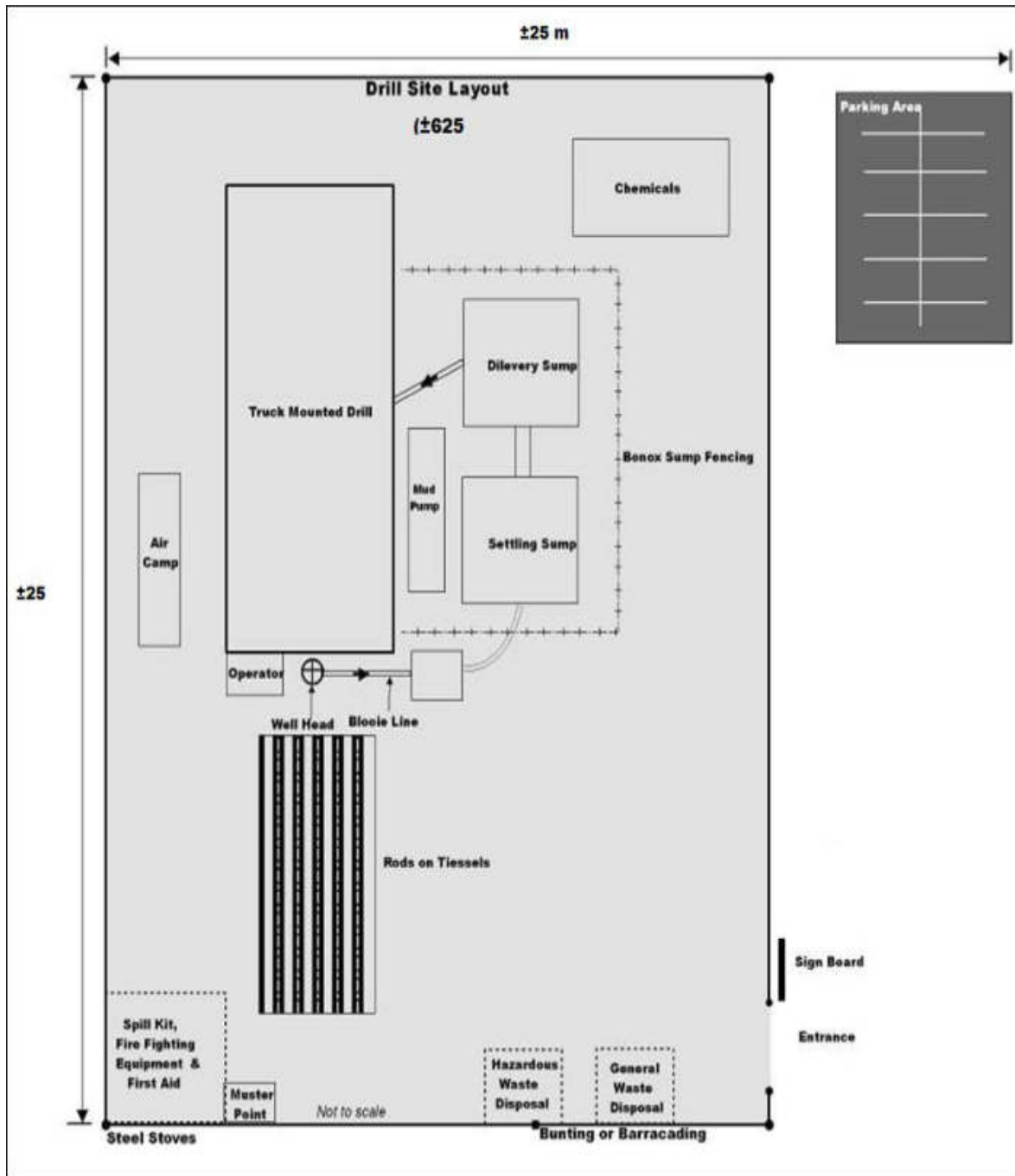


FIGURE 3-1: PROPOSED DRILL RIG LAYOUT

4. ENVIRONMENTAL RISK ASSESSMENT

4.1 Risk Assessment Methodology

A risk is the potential for adverse negative affects which may be realized in the future with respect to achieving explicitly established and stated performance requirements that may be avoided through implementation of preemptive actions or mitigation measures. Risk analysis examines risks in detail to determine the extent of the risks and the relationships among them. Risk analysis also classifies risks into sets of related risks and ranks them according to significance. Furthermore, risk analysis evaluates all identified risks to estimate the likelihood of occurrence, consequence of occurrence, and timeframes for implementation of mitigation actions.

4.1.1 Risk Ranking Criteria

A Risk Matrix is a graphical representation of the likelihood and consequence rating of a risk. For the purpose of this report a "5x5 Matrix" was used which contains criteria divided into five rows and five columns. The rows of a Risk Matrix represent likelihood scores, while the columns represent the consequence scores (Refer to Table 4-2). Each cell in the Risk Matrix is represented by a Priority Score (Risk Level), with associated guidelines as indicated in Table 4-1. Once the risk score is determined for each risk identified, adequate management measures (or controls) are identified and the risk assessment process is repeated to determine the risk level after appropriate controls are implemented.

Where the consequence of an event is not known or cannot be determined, the "precautionary principle" will be adhered to and the worst-case scenario assumed. Where possible, mitigation measures to reduce the significance of negative risk and enhance positive impacts will be recommended

The various risks associated with rehabilitation, decommissioning and closure of the Ilahle Vryheid prospecting project were assessed according to the following categories:

- Environment;
- Legal, Regulatory and Financial;
- Social; and
- Health and Safety.

TABLE 4-1 RISK LEVELS

Risk Rating	Risk Level	Guidelines for Risk Matrix
21 to 25	High	A high risk exists that management/ rehabilitation objectives during final RDC may not be achieved. Implementation of mitigation measures must be prioritised to avoid severe consequences. A mitigation strategy should include timeframes for implementation and assign responsible departments and/or persons
13 to 20	Significant	A significant risk exists that management/ rehabilitation objectives may not be achieved. Appropriate mitigation strategy to be devised as soon as possible to manage risk. A risk-based approach should be taken when developing strategies for implementation of mitigations measures.
6 to 12	Medium	A moderate risk exists that management's objectives may not be achieved. Appropriate mitigation strategy to be devised as part of the normal management process.
1 to 5	Low	A low risk exists that management's objectives may not be achieved. Monitor risk, no further mitigation required.

4.2 Environmental Risk Assessment for the Latent Risks associated with Mine Closure

Table 4-1 provides the risk analysis that was developed for the various risks associated with latent environmental liabilities of the proposed Ilahle Vryheid prospecting project.

TABLE 4-2: RISK ASSESSMENT MATRIX

Environment	Lasting less than a year and/or limited to small area and/or receptor of low significance/ sensitivity (industrial area).	Lasting more than a year, but less than 5 years and/or impact on an extended area and/or no environmentally sensitive species/ habitat).	Lasting more than 5 years and/ or impact on an extended area; area with some environmental sensitivity (scarce/ valuable environment).	Lasting more than 5 years and/or impact on sub-basin and/or environmentally sensitive environment/ receptor (endangered species/ habitats).	Permanent impact and/or affects a whole basin or region and/or highly sensitive environment (endangered species, wetlands, protected habitats).	
Legal, Regulatory & Financial	Technical non-compliance. No warning received; no regulatory reporting required.	Breach of regulatory requirements; report/involvement of authority. Attracts administrative fine.	Minor breach of law; report/investigation by authority. Attracts compensation/ penalties/ enforcement action.	Breach of the law; may attract criminal prosecution, penalties/ enforcement action. Individual licence temporarily revoked.	Significant breach of the law. Individual or company lawsuits; permit to operate substantially modified or withdrawn.	
Social	Minor impacts or no reaction from local communities or press. Complaints may be restricted to neighbouring properties.	Some impacts on local population, mostly repairable. Isolated and manageable stakeholder complaints. Potential for minor reaction from local community.	Ongoing social issues. Complaints from community members/ stakeholders. Potential for reaction from the local community and/or press.	Significant social impacts. Organized community protests threatening continuity of operations. Potential for harsh reaction from the local community and/or press.	Major widespread social impacts. Community reaction affecting business continuity with significant potential for cessation of activities due to public intervention and/or outcry that could lead to national and international coverage	
Health and Safety	Insignificant health and safety impacts. Consequences may lead to temporary discomfort with no lasting effects.	Impacts that may result in some sort of minor medical treatment with no lasting effects.	Impacts on health and safety of people and animals are significant, although no lives will be lost because of such impacts.	Severe health and safety risk to people and animals. Impacts can permanently affect health and may lead to a fatality.	Severe health and safety risk to people and animals, as well as the wellbeing of the community and stakeholders. Impacts will lead to permeant health issues and will result in multiple fatalities.	
LIKELIHOOD		RISK RATING				
5 - Almost Certain 1 year	The unwanted event has occurred frequently; occurs in order of one or more times per year & is likely to reoccur within 1 year *	11 (Medium)	16 (Significant)	20 (Significant)	23 (High)	25 (High)
4 - Likely 3 years	The unwanted event has occurred infrequently; occurs in order of less than once per year & is likely to reoccur within 3 years *	7 (Medium)	12 (Medium)	17 (Significant)	21 (High)	24 (High)
3 - Possible 10 years	The unwanted event has happened at some time; or could happen within 10 years*	4 (Low)	8 (Medium)	13 (Significant)	18 (Significant)	22 (High)
2 - Unlikely 30 years	The unwanted event has happened at some time; or could happen within 30 years *	2 (Low)	5 (Low)	9 (Medium)	14 (Significant)	19 (Significant)
1 - Rare >30 years	The unwanted event has never been known to occur; or it is highly unlikely that it will occur within 30 years *	1 (Low)	3 (Low)	6 (Medium)	10 (Medium)	15 (Significant)
* The unwanted event can refer to events that have occurred in Ilahle's business, the mining industry or other sectors						
CONSEQUENCE (Where an event has more than one 'Consequence Type', choose the 'Consequence Type' with the highest rating)						
LIKELIHOOD (Consider near-misses as well as actual events)						

TABLE 4-3: LATENT RISK ASSESSMENT

NO.	CONSEQUENCE CATEGORY	ENVIRONMENTAL ASPECT	AREA/ACTIVITY	POTENTIAL RISK	RISK CONSEQUENCE	LIKELIHOOD	CONSEQUENCE	RISK VALUE	RISK LEVEL	MITIGATION	LIKELIHOOD	CONSEQUENCE	RISK VALUE	RISK LEVEL WITH MITIGATION
1	ENVIRONMENTAL, LEGAL/REGULATORY, SOCIAL, HEALTH AND SAFETY	Financial Provisions	Ilahle PR area	Failure to implement the final rehabilitation, decommissioning and closure plan (due to budget restraints and/or shortcomings)	<ul style="list-style-type: none"> Potential loss of future profits from agriculture or other land use by local community or future landowners. 	3	2	8	M	<ul style="list-style-type: none"> Inspect site on a quarterly basis to ensure that vegetation growth is sustained. 	2	2	5	L
2	ENVIRONMENTAL AND SOCIAL	Disturbed areas	Ilahle PR area	Not achieving appropriate end land use.	<ul style="list-style-type: none"> Loss of agricultural potential. Degradation of natural areas that provide habitat for biodiversity. 	3	2	8	M	<ul style="list-style-type: none"> Rip compacted areas, apply fertiliser/compost and re-vegetate if required. Ensure sustained vegetation growth. 	2	2	5	L
3	ENVIRONMENTAL	Disturbed areas	Ilahle PR area	Proliferation of alien and invasive plant species in rehabilitated areas.	<ul style="list-style-type: none"> The encroachment of alien invasive species poses a risk to indigenous vegetation and habitats. No suitable for livestock grazing. 	3	2	8	M	<ul style="list-style-type: none"> Inspect site on a quarterly basis to assess areas for encroachment of invasive alien vegetation. Conduct removal of invasive plants as required. 	2	2	5	L
4	ENVIRONMENTAL	Water runoff on disturbed areas	Ilahle PR area	Erosion risk	<ul style="list-style-type: none"> Potential loss of topsoil due to erosion. Sedimentation of downstream water courses. 	3	2	8	M	<ul style="list-style-type: none"> Inspect site on a quarterly basis to assess potential erosion problems. Implement measures to remedy erosion, including: <ul style="list-style-type: none"> Filling and sloping of erosion trenches. Ensure that area is correctly sloped (not too steep) according to surrounding topography Upstream berms to divert water away from disturbed areas where significant erosion has been detected. Revegetation of areas should be undertaken. 	2	2	5	L

5. LATENT RISK IDENTIFICATION AND DISCUSSION

During the risk assessment undertaken for the latent environmental risk, four latent risks were identified. These included aspects associated with loss of agricultural potential and proliferation of alien and invasive plant species, erosion, surface water. These are discussed in detail below:

5.1 Proliferation of AIPs

5.1.1 Identified Risks

Rehabilitated land generally tends to be affected by the proliferation of alien and invasive plant species. Development and implementation of an Invasive Plant Management and Control Plan is recommended to reduce the risk of AIP proliferation

5.1.2 Proposed Management Activities

The establishment of vegetation on the disturbed areas must be monitored on a quarterly basis to ensure sustained growth and inspect the area for AIP encroachment. Areas that do not show self-sustaining vegetation growth must be ripped again, fertilised and re-seeded. AIPs must be removed if detected during quarterly inspections.

5.2 Surface Water

5.2.1 Identified Risks

Siltation of surface water resources due to erosion can lead to loss of biodiversity and/or sensitive aquatic habitats, degradation of wetlands and related ecosystems and degradation of downstream surface water resources. Siltation will also impact on the flow characteristics of the watercourses and may be permanently affected unless rehabilitation is successful.

5.2.2 Proposed Management Activities

The following mitigation measures are proposed to avoid siltation of water resources:

- Monitor rehabilitated areas to ensure that the area become self-sustainable
- Ensure vegetation cover is self-sustainable to avoid future erosion and implement additional erosion protection measures where needed
- Ensure that all bare areas are rehabilitated during operations through implementation of concurrent rehabilitation and the remaining disturbed areas are rehabilitated during the closure phase of the mine.

5.3 Erosion

5.3.1 Identified Risks

Soil erosion will lead to the physical degradation of the soil. Sediments and contaminants could be transported to surface water resources, resulting in sedimentation and alteration of aquatic habitats. Soil erosion will lead to changes in the ecological characteristics of any disturbed area i.e. establishment of alien invasive species resulting in the loss of natural habitat for indigenous fauna and flora. Additionally, soil erosion will lead to a shortage of soil/material required for the successful rehabilitation of disturbed areas.

5.3.2 Proposed Management Activities

Proper management measures must be implemented to ensure that wind and water erosion are limited at rehabilitation areas. Areas where infrastructure demolition took place is also highly susceptible to soil erosion. Care and maintenance of rehabilitated areas include:

- Regular monitoring of rehabilitated areas for soil erosions should be undertaken
- Revegetation of areas should be undertaken.
- Rehabilitated areas experiencing erosion hazards can be protected by an upslope berm and toe channel to divert water run-off to prevent erosion and transportation of sediments.
- Alien and Invasive Management plan must be implemented.

5.4 General Rehabilitated Areas

It is essential that the areas where rehabilitation activities have been undertaken be monitored and remedial action implemented when necessary. This must be done as follows:

- Regular monitoring of rehabilitated areas for soil erosion should be undertaken.
- Rehabilitated areas showing evidence of erosion can be protected by berms and toe channels to divert water run-off or installation of geotextile such as hessian sheeting to promote vegetation establishment and to prevent erosion and transportation of sediments.
- Alien Invasive Plant Management plan must be implemented.

6. CLOSURE COSTING FOR LATENT LIABILITIES

6.1 Closure Costing Methodology

The financial provision has been calculated by EXM according to regulation 6 of the financial provision for prospecting, exploration, mining or production operations regulations (GNR 1147, November 2015). These regulations prescribe the required minimum content as follows: *“a detailed itemisation of all activities and costs, calculated based on the actual costs of implementation of the measures required.”* The regulation further outlines that closure cost estimation must include the following:

1. An explanation of the closure cost methodology;
2. Auditable calculations of costs per activity or infrastructure;
3. Cost assumptions.

6.2 Development of a Quantum

The quantum has been developed using Microsoft Excel as a database and equation tool. An itemised list of all the required actions was included, which are required to manage the latent environmental risk after the implementation of the closure plan. An appropriate rate was applied to each action to be implemented. An itemised list of all the required actions was included in a model, which considered measurements of the areas to be rehabilitated. The rates for earthworks were calculated based on site conditions and typical plant hire rates.

An appropriately sourced contractor rate for 2020 was applied to each rehabilitation action to be implemented. These rates were obtained from recent projects undertaken by EXM and contractor sourced rates.

No more than six drill sites will be active/disturbed at any time and rehabilitation of the first two drill sites will commence once prospecting commences at the next two sites. The project is committed to continuous rehabilitation on completion of each drill sites. It is not anticipated that more than six drill sites will require rehabilitation at any one time and therefore the calculation of the quantum reflects this commitment.

6.3 Closure Costing Assumptions

The following assumptions have been made during the calculation of the financial provision:

- Only six prospecting sites will be disturbed at any one time;

- All infrastructure will be removed from the site;
- It is assumed that sloping and revegetation will be sufficient to adequately mitigate the risk of erosion after rehabilitation has been completed as per maintenance and monitoring costing.
- At closure, all fences will be removed and access roads (if any) rehabilitated;
- It is anticipated that all borehole sites will require the following general actions, however not all actions may be required for each of the boreholes and will depend on site conditions:
 - Removal of Invasive Alien Plants;
 - Ripping of compacted areas;
 - Removal of drilling sludge residue and drill chips;
 - Remediation of contaminated soil;
 - Remediation of potential hydrocarbon contamination in boreholes;
 - Seeding and fertilisation.

It is anticipated that only half of the sites will require follow up re-vegetation and removal of Invasive Alien Plants during monitoring and maintenance.

6.4 Closure Costing

The estimated financial provision required for the Latent Liability includes maintenance and re-vegetation of rehabilitated areas, has been estimated at **R 15 247,00 excl. VAT**. It is anticipated that 50% of the drill sites will require re-vegetation and removal of AIPs after rehabilitation has been conducted, therefore the provision has been made for 3 drill sites that will require maintenance at any one time. A summary of the financial provision estimates associated with the Ilahle Vryheid Prospecting area is included in the table below. Detailed sheets are provided in Appendix A.

TABLE 6-1: SUMMARY OF THE PROJECT FINANCIAL PROVISION

Item	Description	Amount
1	Sealing of borehole with cement	R 16 200,00
2	General surface rehabilitation	
2,1	Travelling to site	R 2 527,00
2,2	Physical removal of weeds and invasive species	R 7 500,00
2,3	Disposal of removed plants	R 900,00
2,4	In situ remediation of hydrocarbon spills	R 2 370,00
2,5	Removal of drill sludge residue	R 9 000,00
2,6	Disposal of sludge residue (travelling)	R 1 500,00
2,7	Ripping of compacted areas	R 7 500,00
2,8	Fertilization and seeding	R 9 900,00
2,9	Brushpacking	R 7 500,00
Sub Total (2.1-2.9)		R 48 697,00
3	Placement of drill socks to soak any hydrocarbons	R 11 760,00
4	Monitoring and maintenance of rehabilitated sites including: (Latent)	
4,1	Site inspection	R 2 527,00
4,2	Ripping and sloping of compacted areas	R 3 750,00
4,3	Physical removal of weeds and invasive species	R 3 750,00
4,4	Disposal of removed plants	R 270,00
4,5	Fertilization and re-seeding	R 4 950,00
Sub Total (4.1-4.5)		R 15 247,00
SUB TOTAL (Items 1-5)		R 91 904,00
ADD 15% VAT		R13 785,60
GRAND TOTAL (INCL. VAT)		R105 689,60

7. MONITORING, AUDITING AND REPORTING REQUIREMENTS

7.1 Planned Internal Audits

Internal compliance monitoring must be undertaken to ensure compliance with the EMPr, and environmental authorisations until a closure certificate is issued by the DMR. Managing the latent liabilities and effectiveness of the rehabilitation undertaken is critical to achieve long term sustainability. An ECO should be appointed for a two (2) year period after completion of the closure and rehabilitation phase. It is recommended that quarterly site inspections be undertaken. Any Environmental incidents or lack of rehabilitation which required management interventions must be rectified and reported by the ECO.

7.2 Planned External Audits

External Environmental Compliance Audits will be compiled and submitted in accordance with legislative requirements (as applicable at the time) including:

- (1) Regulation 34 of the EIA Regulations (GN. 982 of 4 December 2014) (as amended); and
- (2) Regulation 11 of the Financial Provisioning Regulation, 2015 (GN R. 1147 of 2016): Annual updating of this report.

7.3 Monitoring Plan Related to Closure

Monitoring during the rehabilitation of the site will be required to assess whether the objectives of the closure plan is achieved and also to assess environmental compliance. The monitoring requirements contained in the below Table is recommended:

7.3.1 Groundwater Quality Monitoring

A water sample will be taken at each borehole during rehabilitation and the water will be analysed at a SANAS accredited laboratory. The sampling must include potential hydrocarbon contamination.

7.3.2 Monitor implementation of rehabilitation actions

The site supervisor will maintain evidence of actions implemented during rehabilitation of the borehole sites. A checklist should be completed and signed off to show that actions have been completed. Photographic evidence must also be maintained to monitor success of rehabilitation.

7.3.3 Monitoring of site conditions and vegetation growth

The site must be monitored on a quarterly basis after rehabilitation to verify whether the rehabilitation actions were successfully implemented. Some aspects that must be monitored post rehabilitation include the following?

- Is there any ponding or erosion visible on-site?
- Is the site free of AIP species?
- Has the vegetation established successfully?

7.3.4 Final Site Inspection and Audit

A site inspection and environmental audit will be conducted by an independent environmental practitioner, after rehabilitation has been conducted and maintained, to verify that the actions stipulated in the rehabilitation plan has been successfully implemented.

8. CONCLUSION AND RECOMMENDATIONS

The identified final land use is a function of the status of the land, feasibility of rehabilitation options that can be applied to the proposed prospecting activities and feasible surrounding land uses. As part of the closure strategy various objectives have been established to ensure the environment after rehabilitation of the areas can achieve long term sustainability. Through the implementation of the various actions identified in this report Ilahle will be able to adequately manage the decommissioning and closure liabilities of the prospecting activities.

The primary objective of closure is to reinstate the environmental status whereupon Ilahle's legal liability is terminated and a closure certificate can be issued for the prospecting area. This can only be realised once it can be proven that rehabilitation has been undertaken sufficiently and that residual environmental impact can be adequately managed. The primary component of managing these impacts is to implement the various management action required to remove, remediate and reinstate the natural surfaces.

Ilahle would need to provide adequate financial assurance through a required financial instrument to provide for their decommissioning and closure liability cost. Ilahle will obtain a closure certificate only once it can prove that rehabilitation is satisfactory, and that if any residual pollution effects exist, they can be adequately managed.

9. REFERENCES

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APPENDIX A – ILAHLE VRYHEID PROSPECTING AREA FINANCIAL PROVISION

ILAHLE VRYHEID PROSPECTING RIGHT PROJECT CLOSURE COST CALCULATIONS

Ilahle Vryheid - Unplanned Closure Cost @ February 2020							
Company:	Ilahle 4 KZN (Pty) Ltd						
Mining Right:	KZN 30/5/1/1/2/10921 PR						
Application area:	Vryheid						
Prepared by:	EXM Advisory Services (Pty) Ltd						
Item	Description	Calculation per drilling site			Calculation for all applicable sites		Comments
		Unit	Quantity	Rate	Boreholes	Amount	
1	Sealing of borehole with cement	Cement seal	1	R 2 700,00	6	R 16 200,00	Based on contractor costs per borehole. Only three sites have boreholes present.
2	General surface rehabilitation						
2,1	Travelling to site	Travelling cost	700	3,61		R 2 527,00	Based on AA rates
2,2	Physical removal of weeds and invasive species	Man hours	5	R 250,00	6	R 7 500,00	Assume 5 man hours per site including removal.
2,3	Disposal of removed plants	Kg	300	R 0,50	6	R 900,00	Rate based on municipal rate for waste disposal.
2,4	In situ remediation of hydrocarbon spills	20kg bag absorbent material	1	R 395,00	6	R 2 370,00	According to actual cost of product
2,5	Removal of drill sludge residue	Man hours	6	R 250,00	6	R 9 000,00	Assume 6 man hours per site, including removal.
2,6	Disposal of sludge residue (travelling)	Kg	500	R 0,50	6	R 1 500,00	Rate based on municipal rate for waste disposal.
2,7	Ripping of compacted areas	Man hours	5	R 250,00	6	R 7 500,00	Assume 5 man hours per site
2,8	Fertilization and seeding	Seed mix and fertiliser	1	R 1 650,00	6	R 9 900,00	Purchase and placement of organic compost or artificial fertiliser (1 m3 per site)+ 3 man

Ilahle Vryheid - Unplanned Closure Cost @ February 2020							
Company:	Ilahle 4 KZN (Pty) Ltd						
Mining Right:	KZN 30/5/1/1/2/10921 PR						
Application area:	Vryheid						
Prepared by:	EXM Advisory Services (Pty) Ltd						
							hours per borehole+ transport
2,9	Brushpacking	Man hours	5	R 250,00	6	R 7 500,00	Assume 5 man hours on site
Sub Total (2,1 - 2,9)						R 48 697,00	
3	Placement of drill socks to soak any hydrocarbons	Per absorbent sock	2	R 980,00	6	R 11 760,00	Assume 2 drill sock per hole is required.
4	Monitoring and maintenance of rehabilitated sites including:						
4,1	Site inspection	3,61	700			R 2 527,00	Based on AA rates
4,2	Ripping of compacted areas	Man hours	5	R 250,00	3	R 3 750,00	Assume 5 man hours per site
4,3	Physical removal of weeds and invasive species	Man hours	5	R 250,00	3	R 3 750,00	Assume 5 man hours per site including removal.
4,4	Disposal of removed plants	Kg	300	R 0,30	3	R 270,00	
4,5	Fertilization and seeding	Seed mix and fertiliser	1	R 1 650,00	3	R 4 950,00	Purchase and placement of organic compost or artificial fertiliser (1 m3 per site)+ 3 man hours per borehole+ transport
Sub Total (4,1-4,5)						R 15 247,00	
					SUB TOTAL	R 91 904,00	
					Add 15% VAT	R13 785,60	
					GRAND TOTAL (INCL. VAT)	R105 689,60	