mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

BASIC ASSESSMENT REPORT

And

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

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

NAME OF APPLICANT: LUKISA INVEST 100 (PTY) LTD (Registration no. 2001/020922/07)

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FILE REFERENCE NUMBER SAMRAD: WC 19/1/1/1/09/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 ASSSSMENT AND BASIC ASSESSMENT REPORT

3. Contact Person and correspondence address

a) Details of

i) Details of the EAP

Name of The Practitioner: Erika van der Linde

Tel No.: 083 441 0239

Fax No. :

e-mail address: erika@atox.co.za

ii) Expertise of the EAP.

(1) **The qualifications of the EAP**

(with evidence). B.Sc.; PHED; B.Ed.; M.EM (Conservation Management); Registered Environmental Assessment Practitioner (EAP) — 2020/2247 (Appendix 1).

Registered ISO Auditor with TÜV SÜD, Germany and DEKRA

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

(In carrying out the Environmental Impact Assessment Procedure) Ms. Erika van der Linde, a registered EAP (reg. nr. 2020/2247) who graduated with B. Sc, PHED, B. Ed, and M. EM (Conservation Management) from the University of the Free State is appointed to oversee the project. After 12 years of teaching natural and applied sciences at various secondary and tertiary institutions accredited with the Department of Education, she joined Ferret Mining and Environmental Services (Pty) Ltd from April 2003 to December 2017 as an environmental scientist. In January 2018 Ms van der Linde founded Aquatox Consulting. Ms van der Linde is also a registered ISO Systems auditor with TüV SüD, and Dekra, Germany, and has extensive experience in the following:

- Specialist contributions to environmental projects, including ecology and biology;
- Compilation of Environmental Management Programme Reports, Environmental Management Plans, Environmental Impact Assessments and Environmental impact reports, Environmental Management Programme performance assessments and audits;
- Compiling feasibility studies;
- Environmental due diligence assessments;
- Water use license applications and water use registration;
- Liaison with authorities on the acquisition of mining rights and permits and prospecting rights;
- Prospecting rights, mining permit, and mining right applications;
- Compliance evaluations and audits;
- Development and Implementation of ISO 14001-certified Environmental Management Systems;
- Auditing of ISO 14001-based Environmental Management Systems (audit log available on request).

b) Location of the overall Activity.

Farm Name:	Rietkuil 307 ptn RE Rietkuil 307 ptn 9 Farm 403 Ptn RE
Application area (Ha)	11195.2655
Magisterial district:	Beaufort West
Distance and direction from nearest town	Approximately 40km west of Beaufort West
21 digit Surveyor General Code for each farm portion	C00900000000030700000 C00900000000030700009 C00900000000040300000

c) Locality map

(show nearest town, scale not smaller than 1:250000). See attachment APPENDIX 2 MAP 1- Location Map 2 Topographic map and Property delineation; MAP 3 - Geology Map, MAP 4 - Proposed borehole location MAP 5 - Land use map, MAP 6 - Quaternary Catchments.

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

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

DESCRIPTION OF PLANNED NON-INVASIVE ACTIVITIES:

Phase 1 & Phase 2: Non-invasive work would mainly involve ground mapping, sampling and may involve remote sensing or geophysics as well as related desktop studies of data generated during the work.

Note: Should the geological data derived during Phase 1 & 2 (year 1 & 2) indicate the need for drilling (invasive prospecting) then progression into the drilling phase of 3, 4 and 5 may follow.

DESCRIPTION OF PLANNED INVASIVE ACTIVITIES:

Invasive activities would be restricted to reverse circulation or percussion drilling along the trend shown in the attached map during Phases 3, 4 and 5 only planned as follows:

Phase 3 – up to 140 boreholes

Phase 4 – up to 50 boreholes

Phase 5 – up to 70 borholes. The amount and location of drilling planned for each phase will be determined by the results of the previous phase and may result in slight changes to the final planning of the next phase.

No bulk sampling is planned at this stage.

No camp site would be established at any of the drill sites.

DESCRIPTION OF PRE-/FEASIBILITY STUDIES

The pre-/feasibility studies would include resource estimates and mining-related studies such as metallurgical test work, mine engineering, mine planning, social and labour planning, financial evaluation models for a basic economic assessment and any subsidiary study information required in support of a potential mining operation. The outcomes of the Pre-feasibility Study would lead to a “go-forward” decision or otherwise for higher level Feasibility Study work.

(i) Listed and specified activities

NAME OF ACTIVITY **(E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc** **E.g. for mining**,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**Aerial extent of the Activity** **Ha or m²**	**LISTED ACTIVITY** **Mark with an X where applicable or affected.**	**APPLICABLE LISTING NOTICE** (***GNR 544, GNR 545 or GNR 546)***
Phase 1	non-invasive over 11195.2655 ha	X	20 of R327
Phase 2	non-invasive over 11195.2655 ha	X	20 of R327
Phase 3: Drill sites 140 confirmation drilling	140 bore holes (200m2/borehole) 2,8ha	x	20 of R327
Phase 4: drilling sites 50 confirmation boreholes	50 bore holes (200m2/borehole) 1,0 ha	x	20 of R327
Phase 5: drilling of no more than 70 boreholes.	70 bore holes (200m2/borehole) 1,4 ha	x	20 of R327

(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)

Phase 1 & Phase 2 activities:
- Desktop studies: Compilation and assessment of existing data and information that would aid the planning of prospecting activities;
- Ground Mapping: Mapping of surface geological features on foot using a GPS and compass;
- Surface Sampling: Rock chip sampling would be applied during ground mapping and would involve the collection of rock chip or hand specimen samples from outcrop using a hammer;
- Remote Sensing: Interpretation of ortho or satellite imagery and terrain data that would aid in the planning of prospecting activities; or
- Geophysics: Methods that could be applied include airborne (helicopter or fixed wing) radiometric, magnetic and lidar surveys as well as down hole logging of existing historical bore holes. The application of geophysics is described as follows:

Geophysical prospecting methods are based on the study of physical fields (gravitational, magnetic, electrical, thermal elastic vibration, radiation, and nuclear radiation). Measurements of the parameters of these fields are made on the surface of the earth (land and water), in the air, and underground (in wells and shafts). The information obtained is used to determine the location of geological structures, ore bodies, and so forth and their fundamental characteristics. This allows the selection of the most proper guidelines for expensive drilling and mining operations, thereby increasing their efficiency. Geophysical prospecting methods utilize both natural and artificially created physical fields. The resolution, that is, the ability to distinguish specifically the sought-for features of the environment, is significantly higher, as a rule, for artificial field methods. The facilities for research by natural field methods are relatively inexpensive and transportable and yield uniform, readily comparable results for vast territories.

Research in existing historical boreholes can be conducted by means of all of the geophysical methods described above, but will mainly involve the use of downhole gamma logging equipment. All geophysical prospecting methods are based on the use of physicomathematical principles for the development of theory; high-precision instruments with electronic, radioengineering, precision-mechanical, and optical components for field measurements; and elements of computer technology, including modern electronic computers, for processing the results.

Phase 3 - (Month 24 - 36) - Confirmation drilling 140 holes
Phase 4 - (month 36 - 48) Confirmation drilling 50 boreholes and resource estimate
Phase 5 - (month 48-60) Confirmation drilling 70 boreholes, update resource estimate and geological model.

Non-invasive work (Phase 1 and Phase 2) would mainly involve ground mapping, sampling and may involve remote sensing or geophysics as well as related desktop studies of data generated from at various stages of drilling work.
Invasive activities would be restricted to reverse circulation and/or percussion drilling along the trend shown in Figure 1 during Phases 3, 4 and 5 only planned as follows:
Phase 3 – up to 140 reverse circulation or percussion boreholes to confirm historical drilling and mineralisation at the main target area.
Phase 4 – up to 50 reverse circulation or percussion boreholes to confirm historical drilling and mineralisation at subordinate target areas.
Phase 5 – up to 70 reverse circulation or percussion boreholes to confirm historical drilling and mineralisation at subordinate target areas.

The amount and location of drilling planned for each phase will be determined by the results of the previous phase and may result in slight changes to the final planning of the next phase.

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 COMPLIY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT.** (E.g. In terms of the National Water Act a Water Use License has/ has not been applied for)
Constitution of South Africa (No. 108 of 1996)	Section 24	Overarching legislation protecting the right of all persons within SA to a helathy environment. The applicant must recognise this right.
National Environmental Management Act (NEMA) (Act No 107, 1998)	Section 28	Even during non-invasive prospecting, the applicnt has a duty of care towards the environment
Mineral and Petroleum Resource Development Act (MPRDA) (Act 28 of 2002)	Section 16	A prospecting right is required for this application even though only non-invasive prospecting is proposed at this stage.
National Nuclear Regulator Act (Act 47 of 1999)	Various	A certificate of registration (COR) has been obtained. COR 199, authorization change request (ACR) submitted to the NNR.

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 prospecting process is the legislated, logical and practical precursor to possible future mining. The purpose of the prospecting process is to determine whether a economically viable mineral resource exists within the prospecting area. The prospecting application area, relative to its surrounding context, has been selected based on the occurrence of the known geological formations that sometimes carry uranium mineralisation. The need and desirability for this uranium prospecting application is therefore driven by the possibility for future mining. The need and desirability for possible future uranium mining is provided here.

Uranium is a naturally occurring element with an average concentration of 2.8 parts per million in the Earth's crust. It is more abundant than gold, silver or mercury, about the same as tin and slightly less abundant than cobalt, lead or molybdenum. Vast amounts of uranium also occur in the world's oceans, but in very low concentrations.

The World Nuclear Association estimates that the 435 nuclear reactors currently operative require some 78,000 tonnes of uranium oxide concentrate containing 66,000 tonnes of uranium (tU) from mines on an annual

basis (http://www.world-nuclear.org/information-library/nuclear-fuel-cycle/uraniumresources/uranium-markets.aspx#ECSArticleLink0). At present, about 42% of uranium comes from conventional mines (open pit and underground), about 51% from in situ recovery and 7% is recovered as a by-product from other mineral extraction. It is estimated that ~6% of the world uranium resources can be found in South Africa The vast majority of uranium production is consumed by the power sector with a small amount also being used for medical and research purposes, and some for naval propulsion.

In South Africa, uranium production has generally been a by-product of gold or copper mining. In 1951, a company (NUFCOR) was formed to exploit the uranium-rich slurries from gold mining and in 1998 this became a subsidiary of AngloGold Ltd. It produces about 550 tU/yr from material supplied by various gold mines. The existence of the mineral resources contained within the application area and the projected international supply/demand factors for uranium are the primary economic drivers that support the proposed mining project in the Karoo. For 2016, UxC expects world uranium production to increase by 4 million pounds to 162 million pounds U3O8 from 158 million pounds U3O8 in 2015 (UxC Market Outlook, Q2 2016). For 2017-2019, UxC's Base Case Demand slips slightly and an oversupply situation is expected to persist in the medium-term unless additional production cuts are made. However, UxC expects that the bottom of the market will be reached by the start of 2017 and spot prices are expected to start increasing towards the end of 2017.

The potential exists within the Beaufort West area for sound and sustainable economic growth with more equitable benefits and opportunities. Although some potential lies in the tourism sector, the transport and manufacturing sectors, in SMME development and in the agricultural sector, mining opportunities in the area may also enable positive economic development. Uranium mining is clearly identified in the 2012 – 2017 Integrated Development Plan (IDP) of the Beaufort West Local Municipality (BWLM) as one of the main opportunities available to address the critical problems of unemployment and lack of economic investment in the BWLM region.

Should the authorisation of this prospecting right application become a reality, 15 employment positions will be established for 5 years at least and may be expanded.

In terms of the DEA's Guideline on Need and Desirability (March 2013) all the questions as listed in Section 4 (page 14 – 22) have been considered as part of this non-invasive prospecting right application BAR. With regard to "securing ecological sustainable development and use of natural resources" it can be stated that the non-invasive prospecting activities have a low environmental impact and would not result in detrimental impacts in terms of ecological sustainability and natural resource preservation. In terms of "promoting justifiable economic and social development" the socio-economic impacts of the proposed project have been described and assessed in Section t(i)(1).

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

The proposed application site is dictated by the known geological formations within the application boundaries and the possibility of uranium bearing material. The interpreted channel trend is indicated in Appendix 2 Map 3.

For this reason, no alternative application area can be considered. Since no site infrastructure is planned, no alternative infrastructure design, layout or position is possible.

As non-invasive prospecting alternatives the following has been considered:

- Radon cup surveys placed into topsoil to monitor the radon levels being released over different areas. This process will not be applied since its benefit to prospecting data outcomes is questionable and has not proved successful in other prospecting programmes.
- A quad bike could be used to access sites where existing farm roads and tracks do not extend however there is not sufficient benefit to the geological team to warrant the expense of such equipment on site.
- Methods like Seismic acquisition surveys will not be applied as they are not applicable to this type of Karoo uranium deposit. In addition Induced Polarisation (IP) technology has historically been used in Karoo exploration but due to limited success it will not be applied to this application area.

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

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

i) Details of the development footprint alternatives considered.

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

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

Combined response to Sections h) and i):

Infrastructure Alternatives

No infrastructure of any kind is planned on site. Application is made for the non-invasive prospecting activities of Phase 1 and Phase 2. This phase may require a geologist to survey certain areas using a LDV (bakkie) on existing farm roads or track or on foot. In addition, surface sampling and geophysical surveys which could be undertaken using a fixed wing plane or helicopter.

Type of activity

No reasonable or feasible alternative activity to non-invasive prospecting as described can be considered to initiate a possible mineral development project.

Technology Alternatives

The proposed application site is dictated by the known geological formations within the application boundaries and the possibility of uranium bearing material. The interpreted channel trend is indicated in Appendix 2 Map 3.

For this reason, no alternative application area can be considered. Since no site infrastructure is planned, no alternative infrastructure design, layout or position is possible.

As non-invasive prospecting alternatives the following has been considered:

- Radon cup surveys placed into topsoil to monitor the radon levels being released over different areas. This process will not be applied since its benefit to prospecting data outcomes is questionable and has not proved successful in other prospecting programmes.
- A quad bike could be used to access sites where existing farm roads and tracks do not extend however there is not sufficient benefit to the geological team to warrant the expense of such equipment on site.
- Methods like Seismic acquisition surveys will not be applied as they are not applicable to this type of Karoo uranium deposit. In addition, Induced Polarisation (IP) technology has historically been used in Karoo exploration but due to limited success it will not be applied to this application area.

Should the results of Phase 1 and 2 indicate the need to continue into Phase 3, 4 and 5 of drilling, then a review and update of the BAR for such invasive prospecting will be submitted prior to the initiation of any such invasive activities.

Should this activity not be implemented (i.e. the no-go option), then the potential economic benefits of uranium mining within the Beaufort West area as well as to the South African GDP would not be realised. The anticipated job creation as an outcome of the whole Karoo Uranium Project (potential future mining, based on results of prospecting, at Ryst kuil and Rietkuil, if Mining rights are granted) would not become a reality.

ii) Details of the Public Participation Process Followed

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

All the relevant landowners in the application area have been notified and consulted. See Appendix 3 for consultation evidence - this will be completed before submission after registration and comment have been received and addressed.

Public Consultation Process

iii) Summary of issues raised by I&Aps

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

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.		Date Comments Received	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated.
AFFECTED PARTIES					
Landowner/s	**X**				
Identified: information sent via whatsapp, followed by email where email addresses were available.					
Lawful occupier/s of the land					
Landowners or lawful occupiers on adjacent properties	**X**				
Municipal councillor	**X**				
Municipality	**X**				

Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA e					
Communities					
Dept. Land Affairs					
Traditional Leaders					
Dept. Environmental Affairs					
Other Competent Authorities affected					
OTHER AFFECTED PARTIES					
INTERESTED PARTIES					

iv) The Environmental attributes associated with the alternatives. (The environmental attributed described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects)

(1) Baseline Environment

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

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

Since no invasive activities are planned during Phase 1 and Phase 2 of the proposed Prospecting Work Programme (PWP), no impacts on the current geographical, physical, cultural character will take place. Should this activity be approved, a positive impact on the socioeconomic environment is anticipated through the creation of 9 employment opportunities.

Should the applicant intend to proceed to drilling operations in Phase 3 and onwards, then specific environmental authorisation will be required prior to the initiation of such activities.

The reason no invasive prospecting positions and associated specialist studies have been included in this BAR is as follows:

- the position/location, number and type of bore holes is proposed but not known at this stage
- to conduct appropriate specialist studies across the whole application area in order to address the possible eventuality of all bore hole positions is illogical and prohibitive.

In light of the application rationale above, the following background information is provided:

The Rietkuil project area is dominated by the Nama Karoo Biome with vegetation distribution typical of Karroid brokenveld.

KAROO NATIONAL PARK

The proposed Rietkuil Block prospecting footprint is located more than 14km from the Park Interface Zone (or Buffer Zone) of the Karoo National Park. The Karoo National Park Management Plan and Buffer Zone map is currently under review. The revised Buffer Zone map will be based on the Western Cape Biodiversity Framework (2014 and 2016 beta version) and related Critical Biodiversity Area (CBA) maps, potentially threatened habitats on national and provincial levels and the Northern Cape CBA maps. The Rietkuil prospecting footprint may fall entirely outside the revised Buffer Zone.

The application area fall within two (2) quaternary catchment areas . These include J22K and J22H. (Appendix 2 Map 6)

Land use is characteristic of the Karoo with small livestock being dominant, some large livestock and game farms. (appendix 2 Map 5) Small livestock farming is centred around meat and fibre production. The majority of the application area has a soil depth of <450mm. Soil potential is suitable mainly for grazing with a clay content of <15%.

The terrestrial morphology is characterised by "extremely irregular plains" across the whole application area.

(b) Description of the current land uses.

The dominant current land uses in the application areas include the following:

- small livestock farming (goats and sheep) for meat and fibre
- some large livestock farming (cattle)
- Game farming / hunting

A historical open pit within the Rietkuil farm is a historical land use within the appilation area. This rehabilitated, backfilled pit, overburden and ore stockpiles remain on site and were being fenced by the applicant during Oct/Nov 2016 in terms of the Certificate of Registration issued by the National Nuclear Regulator (NNR).

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

Episodic drainage lines are greener with larger trees and are dominated by Acacia. Homestead development is in most cases centred around such features that either provide proximity to water, vistas, arable land or shelter from prevailing winds.

The application area is characterised by typical Karoo farmland infrastructure. Most land within the area is fenced with either a sheep fence or in some cases with a higher (2,4m) game fence. Stock or Game camps are provided with water from dams (rare cases), bore holes with cribs and wind or solar pumps.

A historical open pit within the Rietkuil farm is a historical land use within the application area. This rehabilitated pit, overburden and ore stockpiles remain on site and were fenced during Oct/Nov 2016 in terms of the Certificate of Registration issued by the National Nuclear Regulator (NNR).

(d) Environmental and current land use map.

(Show all environmental, and current land use features)

The current land use map is provided in Appendix 2 map 5.

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

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

Anticipated potential impacts during the non-invasive phase of prospecting are limited to the ground mapping, surface sampling and geophysical activities. The nature/occurrence, Severity, Probability, Duration and Significance of each is provided below.

Activities during Phase 1 and Phase 2 are limited to
- Desktop studies
No impacts

- Ground Mapping

Impacts during the ground mapping activities are related to the potential impact of a LDV accessing areas within the prospecting right area which are not served by existing farm roads or tracks. This may result in the trampling of existing vegetation as well as a contribution to soil erosion.

OCCURRENCE: PROBABILITY (P) DURATION (D)
1 - Improbable 1 - Immediate
SEVERITY: SCALE (S) & MAGNITUDE (M)
1 - Site only 2 - Minor - Negligible: no measurable effect (<1%) from current conditions
SP = (M + D + S)*P
SP = (2 + 1 + 1)*1
SP = 4
SP <26 Indicates low environmental significance Impacts with little real effect and which should not have an influence on or require modification of the project design.

Mitigation for avoidance: Use of LDV's only on existing access roads and tracks. Access to any other areas where tracks/roads are not available will be on foot.

Surface sampling

Impacts during the surface sampling activities are related to the potential impact of a LDV accessing areas within the prospecting right area which are not served by existing farm roads or tracks. This may result in the trampling of existing vegetation as well as a contribution to soil erosion.

OCCURRENCE: PROBABILITY (P) DURATION (D)
1 - Improbable 1 - Immediate
SEVERITY: SCALE (S) MAGNITUDE (M)
1 - Site only 2 - Minor - Negligible: no measurable effect (<1%) from current conditions
SP = (M + D + S)*P
SP = (2 + 1 + 1)*1
SP = 4
SP <26 Indicates low environmental significance Impacts with little real effect and which should not have an influence on or require modification of the project design.
Mitigation for avoidance: Use of LDV's only on existing access roads and tracks. Access to any other areas where tracks/roads are not available will be on foot.
Impacts during the surface sampling are related to the potential impact of the removal of small portions of rock chips or hand-sized samples from rock outcrops. This may result in the disturbance of mammals, reptiles or insecta that may be using the surface rock as refugia. It may also impact on vegetation adhering to the rock surface or rooted shallowly underneath such a rock specimen.
OCCURRENCE: PROBABILITY (P) & DURATION (D)
1 - Improbable 1 - Immediate
SEVERITY: SCALE (S) MAGNITUDE (M)
1 - Site only 2 - Minor - Negligible: no measurable effect (<1%) from current conditions
SP = (M + D + S)*P
SP = (2 + 1 + 1)*1
SP = 4
SP <26 Indicates low environmental significance Impacts with little real effect and which should not have an influence on or require modification of the project design.
Mitigation for avoidance: Awareness of geological team to avoid rock chip sampling where a mammal, reptile, insect or plant is noted underneath/ontop of such a rock sample. In such a case the rock should be replaced in its original position taking care not to injure the wildlife in question and an alternative rock sample chosen.

- Remote sensing or
No impacts (Interpretation of ortho- or satellite imagery and terrain data that would aid in the planning of prospecting activities.)

- Geophysics.
Potential Impact: Low-flying aircraft could temporarily disturb livestock and wildlife.
OCCURRENCE: PROBABILITY (P) DURATION (D)
1 - Improbable 1 - Immediate
SEVERITY: SCALE (S) MAGNITUDE (M)
2 - Local 4 - Low: <10% change from current condition
SP = (M + D + S)*P
SP = (1 + 1 + 2)*4
SP = 16
SP Indicates low environmental significance Impacts with little real effect and which should not have an influence on or require modification of the project design.
Mitigation for avoidance: Liaison with land owner/leasee in order to ensure that animals are moved to camps not impacted by the planned flight pattern. This liaison should occur at least 7 days prior to the scheduled survey. Post survey liaison with the land owner to ensure effectiveness of mitigation measures.

During non-invasive prospecting, no change to the naturally occurring radiological environment is anticipated. However, radiological controls are still required in terms of the National Nuclear Regulator Act which is enforced and managed by the National Nuclear Regulator (NNR).

Therefore, prospecting activities will be carried out in accordance with documented procedures to comply with conditions specified in the existing Certificates of Registration (COR) issued by the National Nuclear Regulator (NNR) which cover most of the areas under application. Where the current prospecting right

applications are not fully covered by the existing COR, an authorisation change request has been submitted to the NNR. A COR is required before uranium exploration can commence. The conditions of the COR is then implemented within the prospecting right in question. During historical prospecting, radiation surveys have been carried out and are being expanded in addition to the ongoing personal exposure monitoring through the use of Thermo-luminescent dosimeters (TLD's). The data serves as the basis for the Radiation Protection Programme submitted to the National Nuclear Regulator (NNR) and approved by them.

Phase 3 - 5 reverse circulation / percussion drilling: . The area is used for grazing.

Potential Impact: Approximately 260 boreholes is proposed which will impact a combined 5.2ha at most. typical RC/percussion borehole can be completed within hours, which means minimal time spent on each drilling location. The drill rig is truck-mounted and requires a trailer-mounted compressor, which needs to be towed behind it across open veld between borehole locations. No clearing of vegetation is required in this environment.

OCCURRENCE: PROBABILITY (P) DURATION (D)
4 -high probability 1 - Immediate
SEVERITY: SCALE (S) MAGNITUDE (M)
2 - Local 4 - Low: <10% change from current condition
SP = (M + D + S)*P
SP = (4 + 1 + 2)*4
SP = 28
SP 26 – 60 Indicates moderate environmental significance. An impact which is sufficiently important to require management and which could have an influence on the decision unless it is mitigated.

Mitigation for avoidance: Liaison with land owner/leasee in order to ensure that animals are moved to camps. This liaison should occur at least 7 days prior to the scheduled drilling. Post drilling liaison with the land owner to ensure effectiveness of mitigation measures.

Drilling are planned on grid lines along which the drill rig and compressor would only move once (in one direction), thereby avoiding repeated crushing of vegetation and significantly reducing the overall destruction of vegetation.

Unused drill chips could be returned to the hole after drilling and data collection for a continuous rehabilitation process (unless the hole is required to be kept open for additional test work in which case the drill chip material will be temporarily stored for later rehabilitation).

Also see Appendix 4: presenting a continuation of this section as well as table J.

No impact on the current and future integrity of the CBA's, ESA's and NPAES is anticipated due to the non-invasive nature of the proposed prospecting. The contribution from the South African National Parks has been considered in this regard.

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

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

Phase 3, 4 and 5 which is based on a proposed drilling programme is included. Should the borehole positions change, then a detailed verification impact assessment for the bore hole positions will be required. This impact assessment would then be conducted according to the following methodology:

The significance of the identified impacts would be determined using the approach summarized below. This incorporates two aspects for assessing the potential significance of impacts (terminology from the then

Department of Environmental Affairs and Tourism Guideline document on EIA Regulations, April 1998), namely occurrence and severity, which are further sub-divided as shown in below. Industry best practice as well as mitigation measures suggested by specialists would be described and considered for the determination of post mitigation significance.

However, the drilling program will impact up to 5.2 ha or the application area. This area is used for grazing. As indicated in section V above is rated as a mitigatable significance.
Performance assessment during operations will be implemented to ensure limited impacts.

Impact assessment methodology:
OCCURRENCE
Probability of occurrence; Duration of occurrence
SEVERITY
Magnitude (severity) of impact; Scale / extent of impact
To assess each impact, the following four ranking scales are used:
PROBABILITY (P) DURATION (D)
5 - Definite/don't know 5 - Permanent: after rehabilitation and closure
4 - Highly probable 4 - Long-term: decommissioning phase and until rehabilitated.
3 - Medium probability 3 - Medium-term: operational phase
2 - Low probability 2 - Short-term: Construction phase
1 - Improbable 1 - Immediate
0 - None
SCALE (S) MAGNITUDE (M)
5 - International 10 - Very high/don't know
4 - National 8 - High: >20% change from current conditions
3 - Regional 6 - Moderate: 10 to 20% change from current conditions
2 - Local 4 - Low: <10% change from current conditions
1 - Site only 2 - Minor - Negligible: no measurable effect (<1%) from current conditions
0 - None
The significance of the two aspects, occurrence and severity, is assessed using the following formula:
SP (significance points) = (magnitude + duration + scale) x probability
The maximum value is 100 significance points (SP). The impact significance points are assigned a rating of high, medium or low with respect to their environmental impact as follows:
SP >60 Indicates high environmental significance An impact which could influence the decision about whether or not to proceed with the project regardless of any possible mitigation.
SP 26 – 60 Indicates moderate environmental significance An impact or benefit which is sufficiently important to require management and which could have an influence on the decision unless it is mitigated.
SP <26 Indicates low environmental significance Impacts with little real effect and which should not have an influence on or require modification of the project design.
+ Positive impact An impact that is likely to result in positive consequences/effects.
Potential impacts would be assessed using the above calculation and rating system, and mitigation measures were proposed for all relevant project phases (construction to decommissioning).

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

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

Not applicable no surface infrastructure is planned, therefore no site layout is required.
No invasive prospecting or infrastructure is planned during Phase 1 and Phase 2 of this application. For this reason no site layout impact assessment for Phase 1 and Phase 2 is applicable.

Activities during Phase 1 and Phase 2 are limited to
- Desktop studies
- Ground Mapping
- Surface sampling
- Remote sensing or
- Geophysics.

Should the applicant intend to proceed with Phase 3, 4 and 5 which is based on a drilling programme.

Phase 3 - 5 will confirm and delineate the ore body to ensure targeted mining, should the result of the prospecting indicate feasible mining opportunity. Approximately 14 jobs will be created during these phases of the program.

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

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

Activities during Phase 1 and Phase 2 are limited to

- Desktop studies

No impacts

- Ground Mapping

Impacts during the ground mapping activities are related to the potential impact of a LDV accessing areas within the prospecting right area which are not served by existing farm roads or tracks. This may result in the trampling of existing vegetation as well as a contribution to soil erosion.

Significant Point(SP) = 4

SP <26 Indicates low environmental significance Impacts with little real effect and which should not have an influence on or require modification of the project design.

Mitigation for avoidance: Use of LDV's only on existing access roads and tracks. Access to any other areas where tracks/roads are not available will be on foot.

- Surface sampling

Impacts during the surface sampling activities are related to the potential impact of a LDV accessing areas within the prospecting right area which are not served by existing farm roads or tracks. This may result in the trampling of existing vegetation as well as a contribution to soil erosion.

SP = 4

SP <26 Indicates low environmental significance Impacts with little real effect and which should not have an influence on or require modification of the project design.

Mitigation for avoidance: Use of LDV's only on existing access roads and tracks. Access to any other areas where tracks/roads are not available will be on foot.

Impacts during the surface sampling are related to the potential impact of the removal of small portions of rock chips or hand-sized samples from rock outcrops. This may result in the disturbance of mammals, reptiles or insecta that may be using the surface rock as refugia. It may also impact on vegetation adhering to the rock surface or rooted shallowly underneath such a rock specimen.

SP = 4

SP <26 Indicates low environmental significance Impacts with little real effect and which should not have an influence on or require modification of the project design.

Mitigation for avoidance: Awareness of geological team to avoid rock chip sampling where a mammal, reptile, insect or plant is noted underneath/on top of such a rock sample. In such a case the rock should be replaced in its original position taking care not to injure the wildlife in question and an alternative rock sample chosen.

- Remote sensing or

No impacts (Interpretation of ortho or satellite imagery and terrain data that would aid in the planning of prospecting activities.)

- Geophysics.

Potential Impact: Low-flying aircraft could temporarily disturb livestock and wildlife.

SP = 28

SP 26 – 60 Indicates moderate environmental significance An impact or benefit which is sufficiently important to require management and which could have an influence on the decision unless it is mitigated.

Mitigation for avoidance: Liaison with land owner/leasee in order to ensure that animals are moved to camps not impacted by the planned flight pattern. This liaison should occur at least 7 days prior to the scheduled survey. Post survey liaison with the land owner to ensure effectiveness of mitigation measures.

Drilling impact and mitigation are discussed above

The management objective of a CBA is to keep it natural with no further loss of habitat and to rehabilitate degraded areas. Only low-impact biodiversity sensitive land-uses are appropriate. The management objective of an Ecological Support Area (ESA) is to maintain it in a functional near-natural state. Some habitat loss is acceptable provided the underlying biodiversity objectives and ecological functioning are not compromised. Should the applicant wish to conduct a airborne geophysical assessment proximal to the Karoo National Park, liaison with SANParks should be initiated at least 30 days prior to the activity. Appropriate mitigation measures and monitoring of possible impacts on game movement must be discussed and agreed to with identified representatives of SANParks. Records of such liaison must be maintained by the applicant.

ix) Motivation where no alternative sites were considered.

The proposed application site is dictated by the known geological formations within the application boundaries and the possibility of uranium bearing material. The interpreted channel trend is indicated in Appendix 2 Map 3.

For this reason, no alternative application area can be considered. Since no site infrastructure is planned, no alternative infrastructure design, layout or position is possible.

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

No infrastructure is planned within the application area. For this reason no alternative site or site layout is applicable.

i) Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site (In respect of the final site layout plan) through the life of the activity. **(Including (i) a description of all environmental issues and risks that erer identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.)**

No site infrastructure of any kind is planned or foreseen. For this reason, no site alternative or preferred site assessment in terms of impact identification, impact rank and activity risks is applicable.

This project is planned as a continuation of prospecting that occurred since 2015. The legacy of previous drilling programmes indicate that responsible rehabilitation can ensure that the areas can be released for agricultural activities (pre-prospecting land use).

During the invasive activities, i.e. activities that will disturb the surface, a combination of light vehicles, trucks (including drill rigs with compressors) would be used for activities within the prospecting requiring existing farm tracks and travel across open veld. In this regard care would be taken to minimize the impacts of the equipment on the environment through appropriate planning and control. Motorised equipment of this nature also creates the possibility of hydrocarbon fuel spills. This will prevented by using plastic liner at fuel transfer points, but in the event that fuel spillages do occur, the affected soil will be removed and disposed of in the appropriate manner at a certified disposal facility. The methods that could be applied for invasive prospecting work are summarised in the following table:

Activity
Reverse Circulation Drilling (similar to standard percussion drilling).

Description
Reverse circulation (RC) drilling uses the same hammer drilling principal as standard percussion drilling except that the drill chips are blown up the centre of the drill string into a cyclone (rather than along the outside), which allows for capture of almost all the drill chips produced. This virtually eliminates the accumulation of drill chip waste on surface that would need to be cleaned up during rehabilitation.

Possible Impacts
A typical RC borehole can be completed within hours, which means minimal time spent on each drilling location. The drill rig is truck-mounted and requires a trailer-mounted compressor, which needs to be towed behind it across open veld between borehole locations. No clearing of vegetation is required in this environment.

Applied Mitigations
Drilling will be planned on grid lines along which the drill rig and compressor would only move once (in one direction), thereby avoiding repeated crushing of vegetation and significantly reducing the overall destruction of vegetation.
Unused drill chips could be returned to the hole after drilling and data collection for a continuous rehabilitation process (unless the hole is required to be kept open for additional test work in which case the drill chip material will be temporarily stored for later rehabilitation).

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).

NAME OF ACTIVITY **(E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc** **E.g. For mining**,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**POTENTIAL IMPACT** (Including the potential impacts for cumulative impacts) (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	**SIGNIFICANCE** if not mitigated	**MITIGATION TYPE** (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc) E.g. Modify through alternative method. Control through noise control Control through management and monitoring through rehabilitation..	**SIGNIFICANCE** if mitigated
Desktop studies & remote sensing	No impact	NA	NA	NA	NA	
Ground Mapping & Surface sampling	a LDV accessing areas within the prospecting right area which are not served by existing farm roads or tracks. This may result in the trampling of existing	Vegetation and soils	phase 1 & 2	low	Mitigation for avoidance: Use of LDV's only on existing access roads and tracks. Access to any other areas where tracks/roads are not available will be on foot	No impact

	vegetation as well as contribution to soil erosion					
Surface sampling	The removal of small portions of rock chips or hand-sized samples from rock outcrops. This may result in the disturbance of mammals, reptiles or insecta that may be using the surface rock as refugia. It may also impact on vegetation adhering to the rock surface or rooted shallowly underneath such a rock specimen	Fauna and Flora	Phase 1 & 2	low	Awareness of geological team to avoid rock chip sampling where a mammal, reptile, insect or plant is noted underneath/ontop of such a rock sample. In such a case the rock should be replaced in its original position taking care not to injure the wildlife in question and an alternative rock sample chosen	low
Geophysics	Low-flying aircraft/drone could temporarily disturb	Fauna	phase 2	Moderate	Liaison with land owner/leasee in order to ensure that animals are moved to camps not impacted by the planned	Low

	livestock and wildlife				flight pattern. This liaison should occur at least 7 days prior to the scheduled survey. Post survey liaison with the land owner to ensure effectiveness of mitigation measures.	
Non-invasive prospecting	ongoing employment of existing employees	Socio-economic	Life of PR	Positive	None required.	Positive

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

k) Summary of specialist reports.

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

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
Not applicable	No specialist studies are required for the planned Phase 1 and Phase 2 prospecting as it is non-invasive in nature. Phase 3 - 5 which includes drilling, no specialist studies is currently foreseen. the area has been exposed to grazing. However, should the appointed EAP identify any unforseen impacts, related studies will be conducted while drilling is stopped.		

Attach copies of Specialist Reports as appendices

l) Environmental impact statement

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

The proposed prospecting activities have been found to have low environmental impacts on fauna, flora and soil which are effectively mitigated

(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**

Appendix 2 Map 4.

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

Alternative prospecting technology as described above was found to be ineffective in rendering useful data and therefore not selected for implementation for this project. the negative impacts of the selected technology was found to be low and effectively implemented. The positive impacts were found to the employment of suitable qualified persons from the local Beaufort west community.

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.

Retain the existing environmental status quo. Should the prospecting phase not result in mining, the pre-prospecting land use i.e. agriculture would not be affected and should be able to continue as before.

n) Aspects for inclusion as conditions of Authorisation.

Any aspects which must be made conditions of the Environmental Authorisation

The Environmental Authorisation should include the following condition:

Non-invasive prospecting as described in Phase 1 and Phase 2 of the Prospecting Work Programme (PWP) for this application is authorised. The proposed future invasive prospecting operations as described in the PWP Phase 3, 4 and 5 is subject to review by an EAP to ensure the site situation did not change or whether further environmental authorisation is required prior to the initiation of any such prospecting. Implementation of the controls and mitigation measures as described in this EMP is required.

Should the results of Phase 1 & 2 of the non-invasive prospecting indicate the need to continue into drill of Phase 3 – 5 then the applicable legislative requirements must be met.

Furthermore, the relevant directorates should be notified of the availability of the relevant documents to provide comment.

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

(Which relate to the assessment and mitigation measures proposed)

No assumptions, uncertainties or knowledge gaps were identified.

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.

All development progress should not only be guided by economic factors but also by the degree of risk of the potential associated environmental impact/s. This application is proposed to follow an initial phase of non-invasive prospecting which will have low impact on the receiving environment, which could effectively be mitigated. Should results from Phase 1 and 2 indicate the need for invasive prospecting work to be initiated, only then must specialist studies be conducted by the applicant for the specific areas required for drilling. Environmental authorisation is then required prior to the initiation of any such future invasive prospecting activities.

This EAP considers this a logical and prudent approach to prospecting progression where a future phase is only initiated if the current phase indicates the need for further prospecting. For these reasons the EAP recommends environmental authorisation for the prospecting proposed. Confirmation of the site situation and propose drilling is required prior to commencement of phase 3 - 5.

ii) Conditions that must be included in the authorisation

No invasive prospecting of any nature may be initiated by the prospecting right holder without environmental authorisation for such invasive prospecting activities. In addition, no site establishment of any infrastructure may be initiated without environmental authorisation.

q) Period for which the Environmental Authorisation is required.

The period for Environmental Authorisation for non-invasive prospecting activities is 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.

Confirmed - the Undertaking by the applicant for this section as well as for the EMPr is provided at the end of the EMP Report.

s) Financial Provision

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

i) Explain how the aforesaid amount was derived.

No financial provision is required for non-invasive prospecting. Should the applicant decide to proceed to invasive prospecting as described in Phase 3 - 5, then financial provisioning will be required as part of the environmental authorisation process (or upgrade process)

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).

Not applicable - see paragraph i) above.

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** .

Non-invasive prospecting will have no direct or indirect impact on the socio-economic conditions of any affected persons (land owners). A land owner and/or legal occupier must provide consent for a geologist to access any specific property for the purposes of ground mapping or surface sampling. Liaison to this end is the responsibility of the applicant and records of liaison and any subsequent agreements with land owners and/or lawful occupiers for access to land for non-invasive prospecting must be recorded.

Nine (9) job opportunities will be created to local residents of Beaufort West should this prospecting right be awarded.

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

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

Non-invasive prospecting will have no impact on the National Estate in terms of Section 3(2) of the National Resources Act.

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

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

No reasonable or feasible alternative/s is/are applicable as no site infrastructure is planned and no invasive prospecting is planned for phase 1 & 2. The proposed boreholes are planned for areas that has been used for grazing. It is proposed that a reassessment be conducted after phase 2 to confirm the site status for the then confirmed boreholes.

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).

Details and expertise of the EAP are already included in Part A, Section 1(a) as required

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 description of the aspect of the proposed prospecting activities are included in Part A Section (1)(h) above as required.

c) Composite Map

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

No infrastructure are planned for this prospecting right application. For this reason the Infrastructure Map provided in the application area boundaries and currently proposed drill areas (Appendix 2, map 4).

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

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

The management objective of a CBA is to keep it natural with no further loss of habitat and to rehabilitate degraded areas. Only low-impact biodiversity sensitive land-uses are appropriate. The management objective of an Ecological Support Area (ESA) is to maintain it in a functional near-natural state. Some habitat loss is acceptable provided the underlying biodiversity objectives and ecological functioning are not compromised.

Closure objectives for this prospecting right application remain the current land use, unaffected by the proposed prospecting. Should invasive prospecting be initiate by the applicant (Phase 3 - Phase 5), rehabilitation of the drill sites (5.2 ha) is required.

plugging of boreholes, use of only the signal track formed by the drill rig traveling in one direction. Where possible existing track will be used.

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

No water use license is required for non-invasive prospecting. No editing field is provided for Question iii) below, thefore it is addressed here. No Water Use License is applicable to this application.

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

iv) Impacts to be mitigated in their respective phases

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

ACTIVITIES **(E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc** **E.g. For mining**,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**PHASE** (of operation in which activity will take place. State; Planning and design, Pre-Construction' Construction, Operational, Rehabilitation, Closure, Post closure).	**SIZE AND SCALE of disturbance** (volumes, tonnages and hectares or m²)	**MITIGATION MEASURES** (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	**COMPLIANCE WITH 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. With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:-.. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.
Ground mapping	Phase 1 & 2	<0.1% of application area	Use of LDV;s only on existing access roads and tracks, Access to any other areas where tracks/roads are not available will be on foot.	National Enviornmental Management Act (NEMA) (Act 107 of 1998) Section 28 - Even during noninvasive prospecting, the applicant has a duty of care towards the environment	This mitigation measure should be applied throughout the entire prospecting period
Surface sampling	Phase 1 & 2.	<0.1% of application area	Use of LDV;s only on existing access roads and tracks, Access to any other areas where tracks/roads are not available will be on foot.	National Enviornmental Management Act (NEMA) (Act 107 of 1998) Section 28 - Even during noninvasive prospecting, the applicant has a duty of care towards the environment	This mitigation measure should be applied throughout the entire prospecting period

Surface sampling	Phase 1 & 2	<0.1% of application area	Awereness of geological team to avoid rock chip sampling wherea mammal, reptile, insect or plant is noted underneath/ontop of such a rock sample. In such a case the rock should be replaced in its original position taking care not to injure the wildlife in question and an alternative rock sample chosen.	National Enviornmental Management Act (NEMA) (Act 107 of 1998) Section 28 - Even during noninvasive prospecting, the applicant has a duty of care towards the environment	The mitigation measure should be applied throught the entire prospecting period.
Geophysics	Phase 1 & 2	>80% of the application area	Liaison with land owner/leasee in order to ensure that animals are moved to camps not impacted by the planned flight pattern. This liaison should occur at least 7 days prior to the scheduled survey. Post survey liaison with the land owner to ensure effectiveness of mitigation measure	National Enviornmental Management Act (NEMA) (Act 107 of 1998) Section 28 - Even during non-invasive prospecting, the applicant has a duty of care towards the environment	The mitigation measure should be applied throught the entire prospecting period.
RC drilling	Phase 3 - 5	260 boreholes is currently foreseen. Each with a maximum impact of 200m2.	Liaison with land owner/leasee in order to ensure that animals are moved to camps not impacted. EAP assess area to confirm site situation prior to drilling During the invasive activities, i.e. activities that will disturb the surface, a combination of light vehicles, trucks (including drill rigs with compressors) would be used for activities within the prospecting requiring existing farm tracks and travel across open veld. In this regard care	National Enviornmental Management Act (NEMA) (Act 107 of 1998) Section 28 - prospecting, the applicant has a duty of care towards the environment	From phase 3 to closure of prospecting.

			would be taken to minimize the impacts of the equipment on the environment through appropriate planning and control. Motorised equipment of this nature also creates the possibility of hydrocarbon fuel spills. This will prevented by using plastic liner at fuel transfer points, but in the event that fuel spillages do occur, the affected soil will be removed and disposed of in the appropriate manner at a certified disposal facility. Drilling will be planned on grid lines along which the drill rig and compressor would only move once (in one direction), thereby avoiding repeated crushing of vegetation and significantly reducing the overall destruction of vegetation. Unused drill chips could be returned to the hole after drilling and data collection for a continuous rehabilitation process (unless the hole is required to be kept open for additional test work in which case the drill chip material will be temporarily stored for later rehabilitation).		

e) Impact Management Outcomes

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

ACTIVITY (whether listed or not listed). **(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.).**	**POTENTIAL IMPACT** **(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)**	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated **(e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)**	**MITIGATION TYPE** **(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)** **E.g.** • **Modify through alternative method.** • **Control through noise control** • **Control through management and monitoring** • **Remedy through rehabilitation..**	**STANDARD TO BE ACHIEVED** **(Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.**
Ground mapping & surface sampling	Disturbance of vegetation and soil if LDV's travel off road.	Flora & soil	Phase 1 & 2	Avoidance: Use of LDV;s only on existing access roads and tracks, Access to any other areas where tracks/roads are not available will be on foot	Impact avoided
Surface sampling	Disturbance of fauna and flora through rock chip collection	Flora and Fauna	Phase 1 & 2	Control through awareness of geological team	Impact avoided
Geophysics	Disturbance of fauna by low flying aircraft or helicopter.	Fauna	Phase 2	Avoidance: liaison with land owners to move animals to camps outside of flight path	Impact avoided
Drilling	The drill rig is truck-mounted and requires a trailer-mounted compressor,	Flora & Soil	Phase 3 - 5	Control through management and monitoring.	plug boreholes

	which needs to be towed behind it across open veld between borehole locations. No clearing of vegetation is required in this environment.				

f) Impact Management Actions

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

ACTIVITY whether listed or not listed. **(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.).**	**POTENTIAL IMPACT** **(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)**	**MITIGATION TYPE** **(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)** **E.g.** • **Modify through alternative method.** • **Control through noise control** • **Control through management and monitoring** **Remedy through rehabilitation..**	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:-.. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
Ground mapping & surface sampling	Disturbance of vegetation and soil if LDV's travel off road.	Avoidance: Use of LDV;s only on existing access roads and tracks, Access to any other areas where tracks/roads are not available will be on foot.	Phase 1 & 2 (during activity)	Section 28 of NEMA
Surface sampling	Disturbance of fauna and flora through rock chip collection.	Control through awareness of geological team	Phase 1 & 2 (during activity)	Section 28 of NEMA
Geophysics	Disturbance of fauna by low flying aircraft or helicopter or drone.	Avoidance: liaison with land owners to move animals to camps outside of	Phase 2 (during activity)	Section 28 of NEMA

		flight path		
Drilling	A typical RC/percussion borehole can be completed within hours, which means minimal time spent on each drilling location.	The drill rig is truck-mounted and requires a trailer-mounted compressor, which needs to be towed behind it across open veld between borehole locations. No clearing of vegetation is required in this environment.	phase 3 to closure. Plugging of holes must occur after logging of the borehole. Traversing the area must be limited to that which is necessary, keeping to existing tracks as far as possible.	Section 28 of NEMA

i) Financial Provision

(1) Determination of the amount of Financial Provision.

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

Closure objectives for this prospecting right application remain the current land use, unaffected by the proposed non-invasive prospecting. Should invasive prospecting be initiated by the applicant (Phase 3 - Phase 5), then financial provisioning is required with the applicable closure objectives.
Objective: plug all boreholes.

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

Environmental objectives in relation to closure as described in this BAR are reviewed by land owners and IAPs during consultation.

(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.

No rehabilitation plan applicable to non-invasive prospecting. The invasive activities may impact up to 200m2 per borehole. All boreholes must be made safe before a closure certificate can be issued.

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

Planned boreholes must be made safe continuously thorough the drilling phase.

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

Not applicable - No financial provision is required for non-invasive prospecting. Should the applicant decide to proceed to invasive prospecting as described in Phase 3 - 5, then financial

provisioning will be required as prior to commencement of these phases.

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

Yes, the financial provisioning will be determined and submitted to the competent authority 3 months before commencing with phase 3.

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

g) **Monitoring of Impact Management Actions**
h) **Monitoring and reporting frequency**
i) **Responsible persons**
j) **Time period for implementing impact management actions**
k) **Mechanism for monitoring compliance**

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Prospecting personel movement on site	LDV use	Visual	Environmental control officers (ECO)	Prior to and during on-site activity
Aerial survey	Impacts on animal movement	Visual and land owner liaison	ECO	Before, during and after serial survey.
Drilling	Impact on biodiversity and soil	visual	ECO & geologist	Before, during and after drilling.

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

Performance assessment reports will be submitted on an annual basis.

m) Environmental Awareness Plan

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

The geologist and his/her team, when accessing a site for field work recognisance or ground mapping must be aware of general environmental protection principles. These principles must be communicated via General Environmental Awareness training. Records of training content, date and time of training as well as trained persons must be maintained by the applicant. The content of this document must be communicated to all involved with the prospecting activities.

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

An environmental assessment practitioner and/or the enviornmental control officer will be responsible to confirm the status of the site with reference to the content of this document. should amendments be required, such will be communicated with the land owner and other relevant IAPS prior to implementation.

n) Specific information required by the Competent Authority

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

No financial provisioning is applicable to non-invasive prospecting operations. Should the applicant plan to proceed with invasive prospecting following the non-invasive phases, then confirmation of impacts is required along with the appropriate financial provisioning. In such a case financial provisioning must be reviewed annually.

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. ☒

Erika van der Linde

Signature of the environmental assessment practitioner:

Aquatox Consulting Pty Ltd

Name of company:

05/10/2026

Date:

-END-

List of appendices

Appendix 1: EAP registration

APPENDIX 2 MAP 1- Location

Map 2 - Topographic map and Property delineation;

MAP 3 - Geology Map,

MAP 4 – Proposed Boreholes

Map 5 - Land use map,

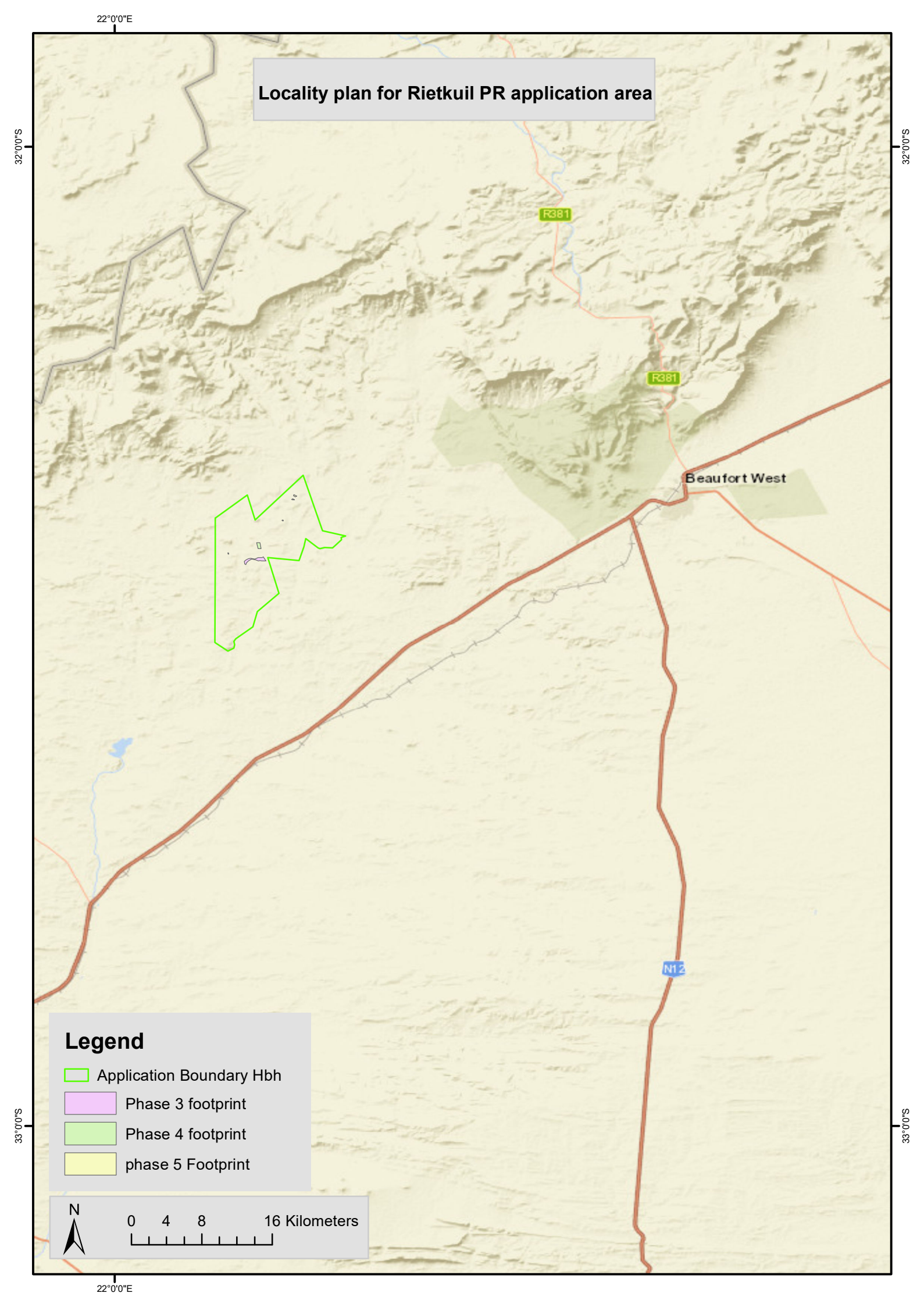
Map 6 - Quaternary Catchments.

Appendix 3: Public Participation

- Newspaper advert (digital) and site notice

Appendix 4: Table J : Impact and risk assessment (Continued)

Appendix 5: Screening Report


Locality plan for Rietkuil PR application area
22°0'0"E
32°0'0"S
33°0'0"S
R381
Beaufort West
N12
Legend
Application Boundary Hbh
Phase 3 footprint
Phase 4 footprint
phase 5 Footprint
N
0 4 8 16 Kilometers

APPENDIX 2

MAP 2: TOPOGRAPHIC MAP AND PROPERTY DESCRIPTIONS

Regulation 11(1)(b) Application Maps
(as contemplated in Regulation 2(2))

MAP 3: GEOLOGY MAP

MAP 2 – Lukisa Invest 100 (Pty) Ltd Application Rietkuil Application Topographic Map as Contemplated in Regulation 2(2)

The figure P1, P2, P3, …, P27 and P1 represents the Rietkuil Application comprising the properties listed for which application is being made by Lukisa Invest 100 (Pty) Ltd for a Prospecting Right for Uranium Ore (U) and Molybdenum Ore (Mo) in terms of Section 16 of the Mineral and Petroleum Resources Development Act (MPRDA, Act 28 of 2002)) in the District of Beaufort West, Western Cape Province. Extent: approximately 11195.2655 hectares.

For Lukisa Invest 100 (Pty) Ltd:

_____ Date: 13 April 2026

Signed

For DMR Western Cape:

_____ _____

Signed Date

Corner Points

PR Application Outline

Point	Longitude	Latitude	Point	Longitude	Latitude
P1	22.102927	-32.379203	P15	22.193435	-32.408542
P2	22.135526	-32.355717	P16	22.188483	-32.422719
P3	22.143608	-32.380900	P17	22.156194	-32.419505
P4	22.192528	-32.335459	P18	22.168075	-32.455883
P5	22.212503	-32.391930	P19	22.145842	-32.474849
P6	22.235910	-32.397553	P20	22.141138	-32.490483
P7	22.234684	-32.399011	P21	22.123901	-32.502476
P8	22.231923	-32.401287	P22	22.122033	-32.505012
P9	22.226720	-32.405723	P23	22.122707	-32.508700
P10	22.222540	-32.409796	P24	22.121875	-32.511936
P11	22.214604	-32.409073	P25	22.115890	-32.515034
P12	22.209774	-32.410457	P26	22.102287	-32.506485
P13	22.207867	-32.409716	P27	22.102737	-32.421314
P14	22.195137	-32.399983			

MAP LABEL	FARM NAME	FARMNO	SUBDIVNO	21-DIGIT SG CODE	MAGISDISTR	PROVINCE	EXTENT (ha)
RE/307	RIETKUIL	307	RE	C00900000000030700000	BEAUFORT WEST	WESTERN CAPE	4969.2980
9/307	RIETKUIL	307	9	C00900000000030700009	BEAUFORT WEST	WESTERN CAPE	2154.9582
RE/403	FARM 403	403	RE	C00900000000040300000	BEAUFORT WEST	WESTERN CAPE	4071.0093
						TOTAL EXTENT	11195.2655

MAP 3 – Lukisa Invest 100 (Pty) Ltd Rietkuil Application Geology

The figure P1, P2, P3, …, P27 and P1 represents the Rietkuil Application comprising the properties listed for which application is being made by Lukisa Invest 100 (Pty) Ltd for a Prospecting Right for Uranium Ore (U) and Molybdenum Ore (Mo) in terms of Section 16 of the Mineral and Petroleum Resources Development Act (MPRDA, Act 28 of 2002)) in the District of Beaufort West, Western Cape Province. Extent: approximately 11195.2655 hectares.

For Lukisa Invest 100 (Pty) Ltd:

_____ 13 April 2026

Signed Date

For DMR Western Cape:

_____ _____

Signed Date

Corner Points
PR Application Outline
Alluvial Cover
Dolerite
Abrahamskraal Formation

22.10°E 22.20°E 32.40°S 32.50°S

Point	Longitude	Latitude	Point	Longitude	Latitude
P1	22.102927	-32.379203	P15	22.193435	-32.408542
P2	22.135526	-32.355717	P16	22.188483	-32.422719
P3	22.143608	-32.380900	P17	22.156194	-32.419505
P4	22.192528	-32.335459	P18	22.168075	-32.455883
P5	22.212503	-32.391930	P19	22.145842	-32.474849
P6	22.235910	-32.397553	P20	22.141138	-32.490483
P7	22.234684	-32.399011	P21	22.123901	-32.502476
P8	22.231923	-32.401287	P22	22.122033	-32.505012
P9	22.226720	-32.405723	P23	22.122707	-32.508700
P10	22.222540	-32.409796	P24	22.121875	-32.511936
P11	22.214604	-32.409073	P25	22.115890	-32.515034
P12	22.209774	-32.410457	P26	22.102287	-32.506485
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MAP LABEL	FARM NAME	FARMNO	SUBDIVNO	21-DIGIT SG CODE	MAGISDISTR	PROVINCE	EXTENT (ha)
RE/307	RIETKUIL	307	RE	C00900000000030700000	BEAUFORT WEST	WESTERN CAPE	4969.2980
9/307	RIETKUIL	307	9	C00900000000030700009	BEAUFORT WEST	WESTERN CAPE	2154.9582
RE/403	FARM 403	403	RE	C00900000000040300000	BEAUFORT WEST	WESTERN CAPE	4071.0093
						TOTAL EXTENT	11195.2655

0 2.5 5 km

N1

Rietkuil PR application area proposed boreholes phase 3 - 5

22°6'0"E
22°7'0"E
22°8'0"E
22°9'0"E
22°10'0"E
22°11'0"E
22°12'0"E
22°13'0"E

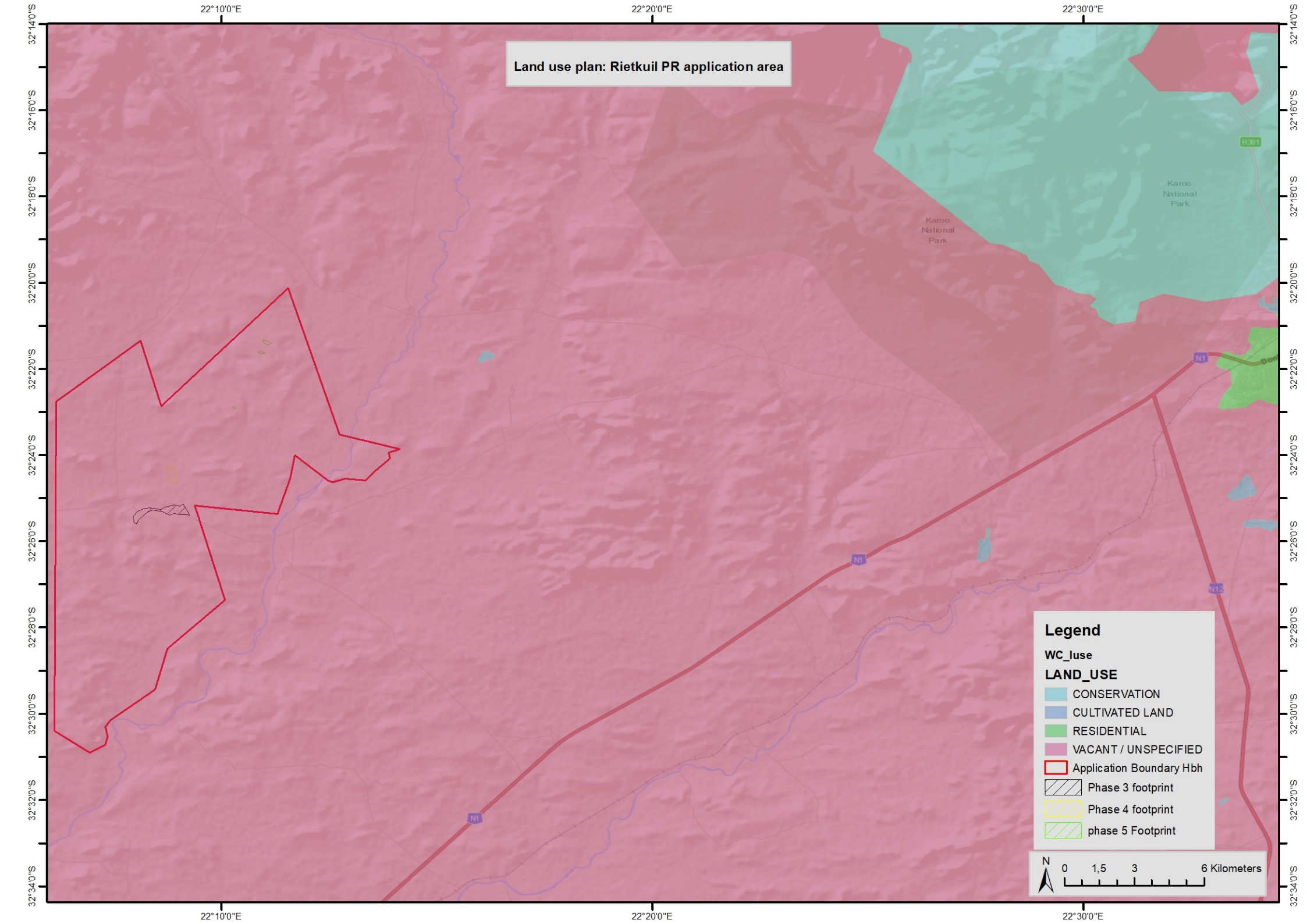
32°22'0"S
32°23'0"S
32°24'0"S
32°25'0"S
32°26'0"S

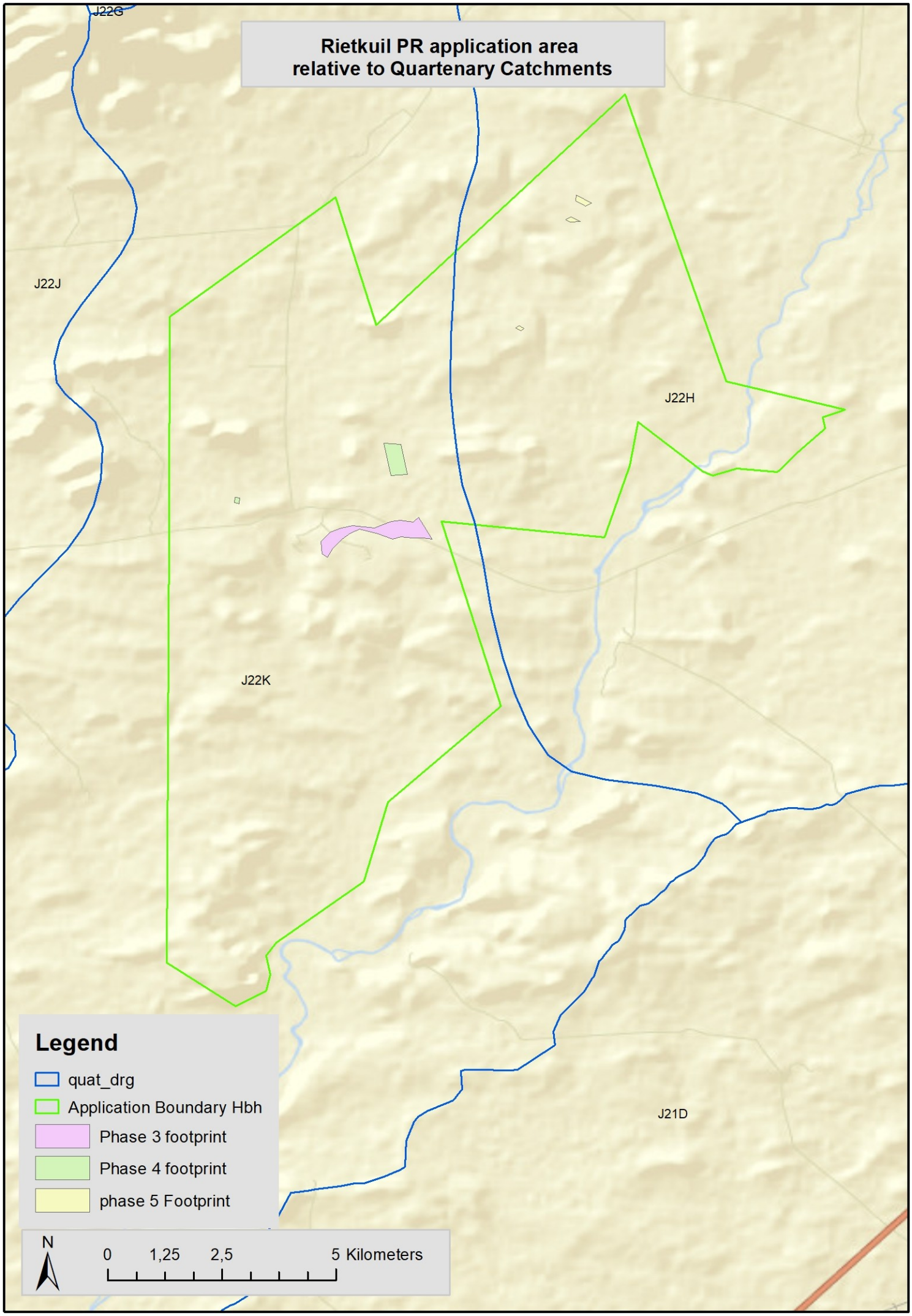
Legend

- Application Boundary Hbh
- BH_Phase_3_HBH
- BH_Phase_4_HBH
- BH_Phase_5_HBH

N

0 0,5 1 2 Kilometers


Land use plan: Rietkuil PR application area
22°10'0"E
22°20'0"E
22°30'0"E
32°14'0"S
32°16'0"S
32°18'0"S
32°20'0"S
32°22'0"S
32°24'0"S
32°26'0"S
32°28'0"S
32°30'0"S
32°32'0"S
32°34'0"S
Karoo National Park
Karoo National Park
R381
N1
N1
N12
Legend
WC_luse
LAND_USE
CONSERVATION
CULTIVATED LAND
RESIDENTIAL
VACANT / UNSPECIFIED
Application Boundary Hbh
Phase 3 footprint
Phase 4 footprint
phase 5 Footprint
N
0
1,5
3
6 Kilometers


Rietkuil PR application area
relative to Quartenary Catchments
J22G
J22J
J22H
J22K
J21D
Legend
quat_drg
Application Boundary Hbh
Phase 3 footprint
Phase 4 footprint
phase 5 Footprint
N
0
1,25
2,5
5 Kilometers

NOTIFICATION OF PUBLIC PARTICIPATION:

APPLICATION FOR A PROSPECTING RIGHT IN TERMS OF SECTION 16 OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 AND ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AS AMENDED OVER REMAINDER, PORTION 9 OF RIETKUIL 307, REMAINING EXTENT OF FARM 403, SITUATED IN THE MAGISTERIAL DISTRICT OF BEAUFORT WEST, WESTERN CAPE PROVINCE.

Notice is given in terms of the Mineral and Petroleum Resource Development Act (MPRDA) (Act 28 of 2002) that Lukisa Invest 100 (Pty) Ltd wish to apply for a Prospecting Right for Uranium and Molybdenum ore on various farm portions indicated in the figure below.

Lukisa Invest 100 (Pty) Ltd appointed Aquatox Consulting (Pty) Ltd, independent environmental practitioners, to conduct the Baseline Risk assessment, the Environmental Management Plan (EMP), and a public participation process for the proposed prospecting operations in accordance with requirements of Section 24(5) of the National Environmental Management Act (NEMA) (Act 107 of 1998), as amended and Section 39 of the Mineral and Petroleum Resource Development act (Act 28 of 2002).

The Public Participation Process will run from **05 October 2026 – 05 November 2026.**

The relevant reports are available on Aquatox Consulting website at https://atox.co.za/public-participation/. For more information, please contact Ms. Erika van der Linde at erika@atox.co.za

All comments can be sent to erika@atox.co.za and kindly copy in info@publictalk.co.za

KENNISGEWING VAN OPENBARE DEELNAME

AANSOEK OM 'N PROSPEKTEERREG INGEVOLGE ARTIKEL 16 VAN DIE WET OP DIE ONTWIKKELING VAN MINERAAL- EN PETROLEUMHULPBRONNE, 2002, EN OMGEWINGSMAGTIGING INGEVOLGE DIE NASIONALE WET OP OMGEWINGSBESTUUR, 1998, SOOS GEWYSIG, OOR DIE RESTANT, GEDEELTE 9 VAN RIETKUIL 307 EN DIE RESTERENDE GEDEELTE VAN PLAAS 403, GELEË IN DIE LANDDROSDISTRIK BEAUFORT-WES, WES-KAAP PROVINSIE.

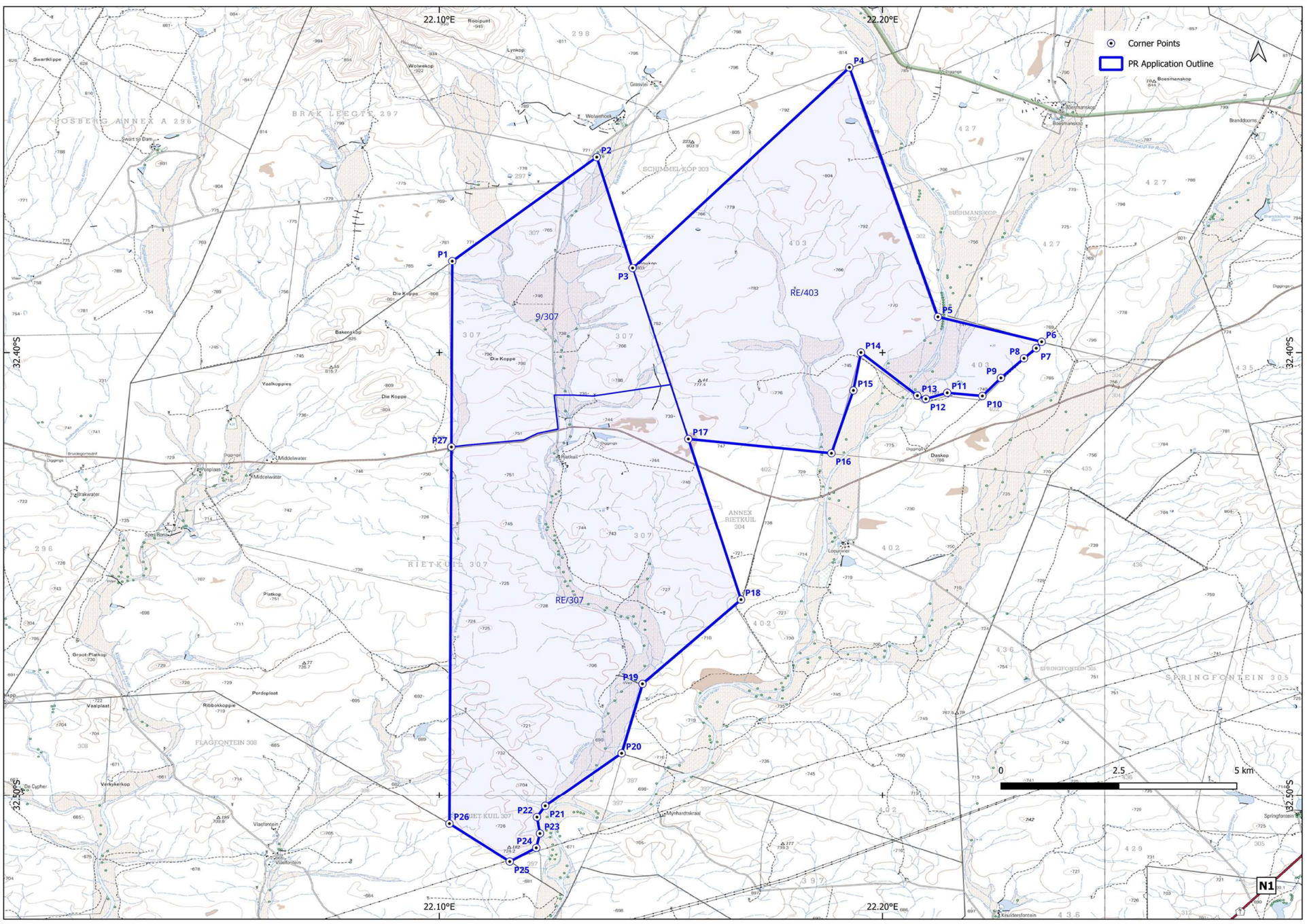
Kennis geskied hiermee ingevolge die Wet op die Ontwikkeling van Mineraal- en Petroleumhulpbronne (MPRDA) (Wet 28 van 2002) dat Lukisa Invest 100 (Edms.) Bpk. van voorneme is om aansoek te doen om 'n Prospekteerreg vir uraan- en molibdeenerts op verskeie plaasgedeeltes soos aangedui in die onderstaande figuur.

Lukisa Invest 100 (Edms.) Bpk. het Aquatox Consulting (Edms.) Bpk., onafhanklike omgewingspraktisyns, aangestel om die Basislynrisiko-assessering, die Omgewingsbestuursplan (OBP) en 'n openbaredeelnameproses vir die voorgestelde prospekteerbedrywighede uit te voer, in ooreenstemming met die vereistes van Artikel 24(5) van die Nasionale Wet op Omgewingsbestuur (NEMA) (Wet 107 van 1998), soos gewysig, en Artikel 39 van die Wet op die Ontwikkeling van Mineraal- en Petroleumhulpbronne (Wet 28 van 2002).

Die Openbaredeelnameproses sal plaasvind vanaf **05 Oktober 2026 tot 05 November 2026**.

Die relevante verslae is beskikbaar op Aquatox Consulting se webwerf by https://atox.co.za/public-participation/.Vir meer inligting, kontak asseblief me. Erika van der Linde by erika@atox.co.za.

Alle kommentaar kan gestuur word aan erika@atox.co.za. Kopieer asseblief ook info@publictalk.co.za in op alle korrespondensie.



Appendix 4: Impact and risk assessment

Table J. Assessment of each identified potentially significant impact and risk (Continued)

Activity	Aspect	Potential Impact	M	D	S	P	SP (Before Mitigation)	Mitigation Measures	M	D	S	P	SP (after mitigation)
Drilling (RC/Percussion)	Vegetation clearing for drill sites and access roads	Habitat loss, biodiversity disturbance	2	4	1	4	28	Minimise disturbance footprint; Restrict vehicle movement to designated routes; implement erosion controls; Drilling is planned on grid lines along which the drill rig and compressor would only move once (in one direction), thereby avoiding repeated crushing of vegetation and significantly reducing the overall destruction of vegetation; avoid sensitive habitats; rehabilitate disturbed areas	1	2	1	2	8
Drilling (RC/Percussion)	Soil disturbance and compaction from vehicles and drilling equipment	Soil degradation, erosion, reduced infiltration	3	4	1	4	32	Restrict vehicle movement to designated routes; implement erosion controls; Drilling is planned on grid lines along which the drill rig and compressor would only move once (in one direction), thereby avoiding repeated crushing of vegetation and significantly reducing the overall destruction of vegetation; rehabilitate disturbed areas	2	2	1	2	10
Drilling (RC/Percussion)	Generation of drill cuttings and spoil	Visual impacts, altered drainage patterns	2	2	1	3	15	Contain cuttings; remove excess waste from site	2	2	1	2	10
Drilling (RC/Percussion)	Fuel, oil and lubricant storage and handling	Soil and groundwater contamination	6	3	2	2	22	Bunded storage on bakkie; No storage on drill site; drip trays; spill kits; staff training; routine inspections	2	1	1	2	8
Drilling (RC/Percussion)	Refuelling and equipment maintenance	Hydrocarbon spills contaminating soil and water	6	3	1	3	30	Spill response procedures; supervision during refuelling	2	1	1	2	8
Drilling (RC)	Drilling fluid use (reticulation drilling)	Groundwater and soil contamination	6	3	1	3	30	Use environmentally acceptable drilling additives; contain fluids in plastic lined sumps; proper disposal	4	1	1	2	12
Drilling RC	Drilling wastewater disposal	Surface water and groundwater pollution	4	2	1	3	21	Use lined sumps; prevent discharge into watercourses; monitor disposal practices	2	2	1	2	10
Drilling (RC/Percussion)	Dust generation from drilling operations	Reduced air quality; nuisance to receptors; vegetation impacts	4	2	1	4	28	Water suppression; speed limits; maintain equipment; dust collection systems where feasible	4	2	1	2	14
Drilling (RC/Percussion)	Dust from vehicle movement	Nuisance impacts and reduced visibility	4	2	1	4	28	Enforce speed limits; water roads if required; use existing roads	2	2	1	1	5
Drilling (RC/Percussion)	Noise generated by drilling rigs and compressors	Disturbance to fauna, livestock and neighbouring land users	2	2	1	4	20	Restrict working hours; maintain silencers; stakeholder communication	1	2	1	3	12
Drilling (Percussion)	Ground vibration from percussion drilling	Disturbance to fauna and nearby structures	2	1	1	4	16	Maintain equipment; monitor where sensitive receptors are present	2	1	1	2	8

Activity	Aspect	Potential Impact	M	D	S	P	SP (Before Mitigation)	Mitigation Measures	M	D	S	P	SP (after mitigation)
Drilling (RC/Percussion)	Exhaust emissions from machinery and vehicles	Air pollution and greenhouse gas emissions	2	1	1	3	12	Regular servicing; minimise idling; use efficient equipment	2	1	1	2	8
Drilling (RC/Percussion)	Increased traffic and transportation activities	Wildlife disturbance, road degradation, safety risks	2	1	2	2	10	Designated routes; drill grid travel, minimize travel, speed controls	2	1	2	1	5
Drilling (RC/Percussion)	General waste generation	Littering and pollution	2	1	1	2	8	Daily removal and disposal at municipal facilities	2	1	1	1	4
Drilling (RC/Percussion)	Hazardous waste generation	Soil and water contamination	4	2	1	3	21	Proper storage and disposal by licensed contractors; maintain waste records	2	2	1	2	10
Drilling (RC/Percussion)	Presence of workers and equipment	Disturbance to fauna; introduction of invasive species	4	3	1	2	16	Environmental awareness training; prohibit hunting and collection of species; clean equipment	2	3	1	2	12
Drilling (RC/Percussion)	Inadequate rehabilitation of drill sites	Visual impacts, alien plant invasion	2	3	1	5	30	Backfill boreholes where required; recontour disturbed areas; monitor rehabilitation	2	2	1	3	15

SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED DEVELOPMENT FOOTPRINT ENVIRONMENTAL SENSITIVITY

EIA Reference number:

Project name: Rietkuil PR EA

Project title: Rietkuil PR

Date screening report generated: 20/07/2026 13:11:04

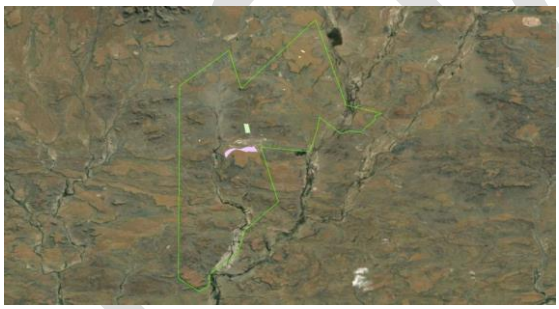
Applicant: Lukisa Invest 100 Pty Ltd

Compiler: E. van der Linde

Compiler signature:

.....

Application Category: Mining|Prospecting rights



OFFICIAL

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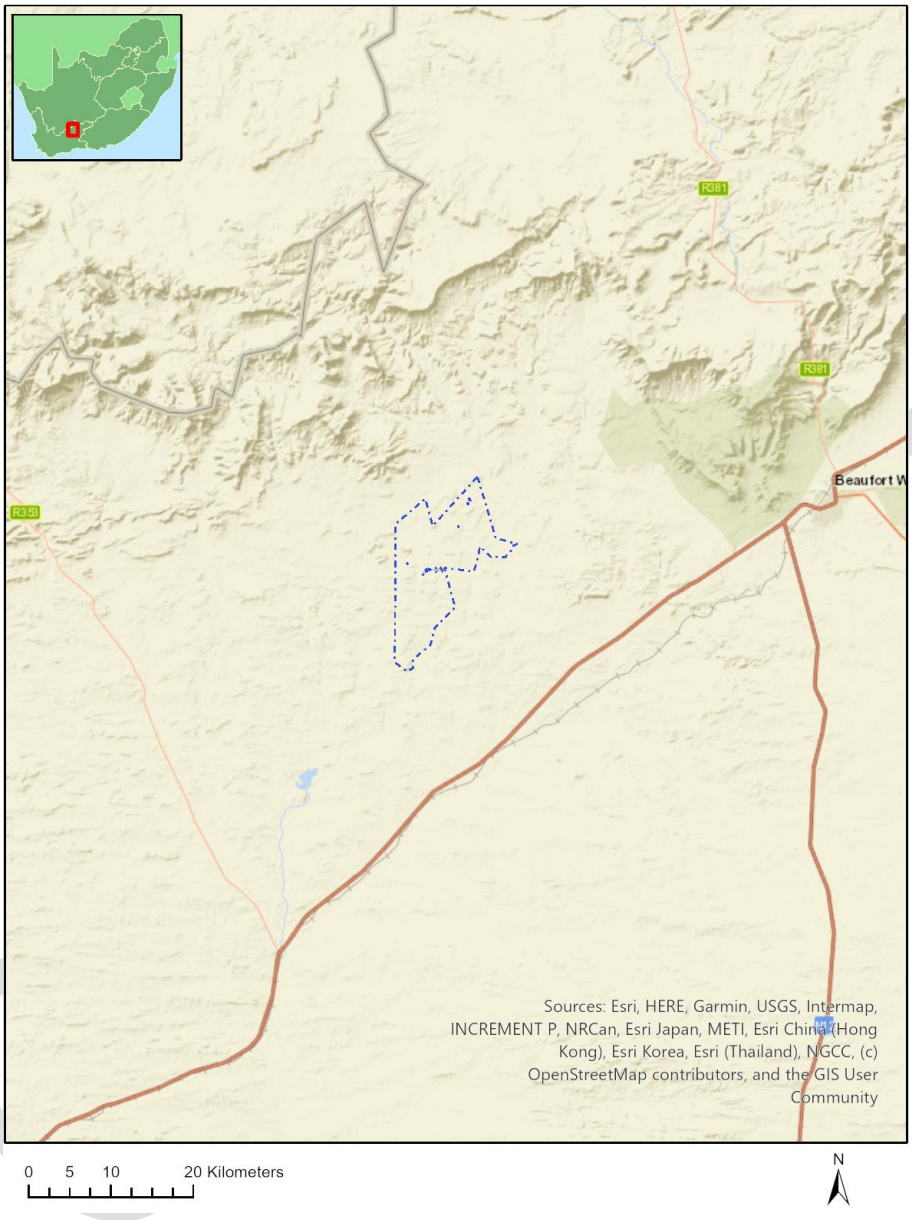
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Proposed Project Location

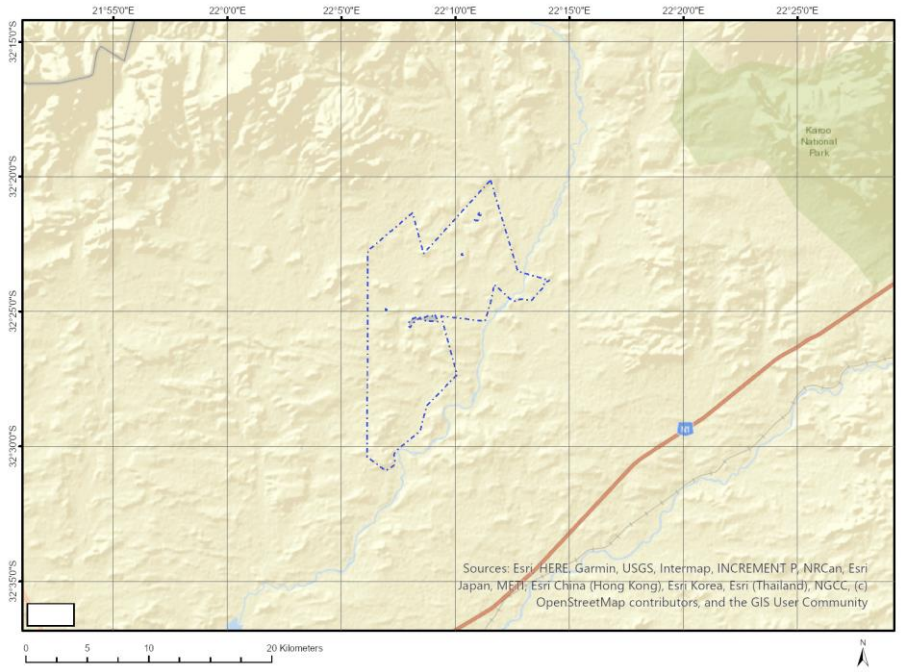
Orientation map 1: General location

General Orientation: Rietkuil PR EA



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Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	HENDRIKS KRAAL	298	0	32°18'14.83S	22°9'31.12E	Farm
2		397	0	32°31'2.66S	22°10'17.86E	Farm
3	BRAK LEEGTE	297	0	32°21'53.61S	22°4'42.52E	Farm
4		402	0	32°27'16.47S	22°11'54.13E	Farm
5	BUSHMANS KOP	302	0	32°22'14.21S	22°12'59.91E	Farm
6	FLAGFONTEIN	308	0	32°32'33.68S	22°3'22.79E	Farm
7		403	0	32°23'10.58S	22°10'57.39E	Farm
8	SCHIMMEL KOP	303	0	32°21'25.88S	22°9'25.97E	Farm
9	RIETKUIL	307	0	32°26'23.01S	22°5'46.89E	Farm
10		427	0	32°20'42.72S	22°15'8.4E	Farm
11	RIETKUIL	307	10	32°24'10.7S	22°5'40.1E	Farm Portion
12		402	0	32°27'16.47S	22°11'54.13E	Farm Portion
13	RIETKUIL	307	0	32°27'20.22S	22°7'46.4E	Farm Portion
14	RIETKUIL	307	2	32°27'50.64S	22°3'34.05E	Farm Portion
15	BRAK LEEGTE	297	0	32°21'53.61S	22°4'42.52E	Farm Portion
16	HENDRIKS KRAAL	298	1	32°19'58.81S	22°10'19.12E	Farm Portion
17	SCHIMMEL KOP	303	1	32°21'32.28S	22°9'16.03E	Farm Portion
18	FLAGFONTEIN	308	5	32°28'30.19S	22°2'51.62E	Farm Portion
19	BUSHMANS KOP	302	7	32°22'14.21S	22°12'59.91E	Farm Portion
20	RIETKUIL	307	7	32°26'11.79S	22°4'47.48E	Farm Portion
21		397	0	32°31'2.66S	22°10'17.86E	Farm Portion
22		427	0	32°20'59.8S	22°14'38.27E	Farm Portion
23	RIETKUIL	307	9	32°23'30.11S	22°7'27.89E	Farm Portion
24	FLAGFONTEIN	308	0	32°30'20.86S	22°3'42.08E	Farm Portion
25	SCHIMMEL KOP	303	0	32°20'31.64S	22°10'50.38E	Farm Portion

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26		403	0	32°23'10.58S	22°10'57.39E	Farm Portion
27		427	0	32°21'59.95S	22°14'32.91E	Farm Portion

Development footprint[1] vertices:

Footprint	Latitude	Longitude
1	32°25'33.46S	22°7'57.71E
1	32°25'24.49S	22°7'56.61E
1	32°25'17.88S	22°8'3.4E
1	32°25'14.85S	22°8'11.16E
1	32°25'13.13S	22°8'19.44E
1	32°25'15.14S	22°8'34.67E
1	32°25'12.38S	22°8'41.15E
1	32°25'10.5S	22°8'46.89E
1	32°25'9.58S	22°8'53.15E
1	32°25'10.63S	22°9'2.03E
1	32°25'7.63S	22°9'5.92E
1	32°25'22.88S	22°9'15.61E
1	32°25'22.14S	22°9'9.31E
1	32°25'22.13S	22°9'1.23E
1	32°25'21.17S	22°8'53.61E
1	32°25'23.03S	22°8'47.81E
1	32°25'18.98S	22°8'37.09E
1	32°25'16S	22°8'24.11E
1	32°25'18.7S	22°8'17.69E
1	32°25'22.88S	22°8'11.81E
1	32°25'29.56S	22°8'5.05E
1	32°25'35.67S	22°8'1.5E
1	32°25'33.46S	22°7'57.71E
2	32°24'53.1S	22°6'55.95E
2	32°24'53.78S	22°6'59.19E
2	32°24'57.7S	22°6'58.84E
2	32°24'56.96S	22°6'55.44E
2	32°24'53.1S	22°6'55.95E
3	32°22'53.25S	22°10'14.88E
3	32°22'51.63S	22°10'17.41E
3	32°22'53.48S	22°10'20.6E
3	32°22'55.42S	22°10'18.5E
3	32°22'53.25S	22°10'14.88E
4	32°21'36.61S	22°10'50.38E
4	32°21'34.41S	22°10'54E
4	32°21'37.81S	22°11'0.65E
4	32°21'38.28S	22°10'53.67E
4	32°21'36.61S	22°10'50.38E
5	32°21'22.94S	22°10'57.44E
5	32°21'19.06S	22°10'57.85E
5	32°21'24.7S	22°11'8.74E
5	32°21'26.65S	22°11'4.46E
5	32°21'22.94S	22°10'57.44E

[1] "development footprint", means the area within the site on which the development will take place and incudes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

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Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	14/12/16/3/3/2/2317	Wind	Approved	23.9

Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development footprint as well as the most environmental sensitive features on the footprint based on the footprint sensitivity screening results for the application classification that was selected. The application classification selected for this report is:
Mining|Prospecting rights.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this footprint are indicated below.

Incentive, restriction or prohibition	Implication
Strategic Transmission Corridor-Central corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf
Strategic Gas Pipeline Corridors-Phase 9: Inland Corridor from Saldanha to Coega	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf
Karoo National Park Buffer	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/karoo_plan.pdf

Proposed Development Area Environmental Sensitivity

The following summary of the development footprint environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme		X		
Animal Species Theme		X		

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Aquatic Biodiversity Theme				X
Civil Aviation Theme		X		
Defence Theme				X
Paleontology Theme	X			
Plant Species Theme			X	
Terrestrial Biodiversity Theme				X

Specialist assessments identified

Based on the selected classification, and the known impacts associated with the proposed development, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the footprint situation.

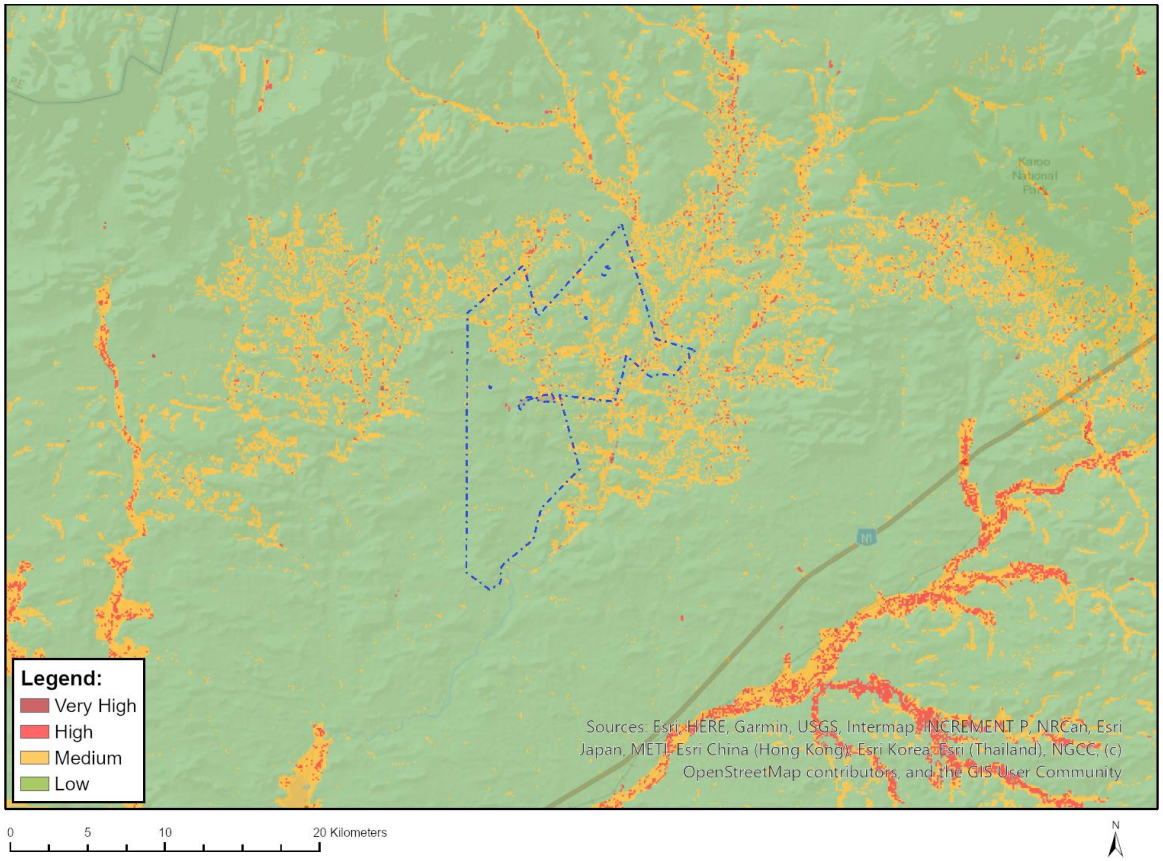
No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/GuidanceforHIA.pdf
3	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/GuidanceforPIA.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
6	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
7	Radioactivity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
8	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
9	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

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Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed footprint for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY

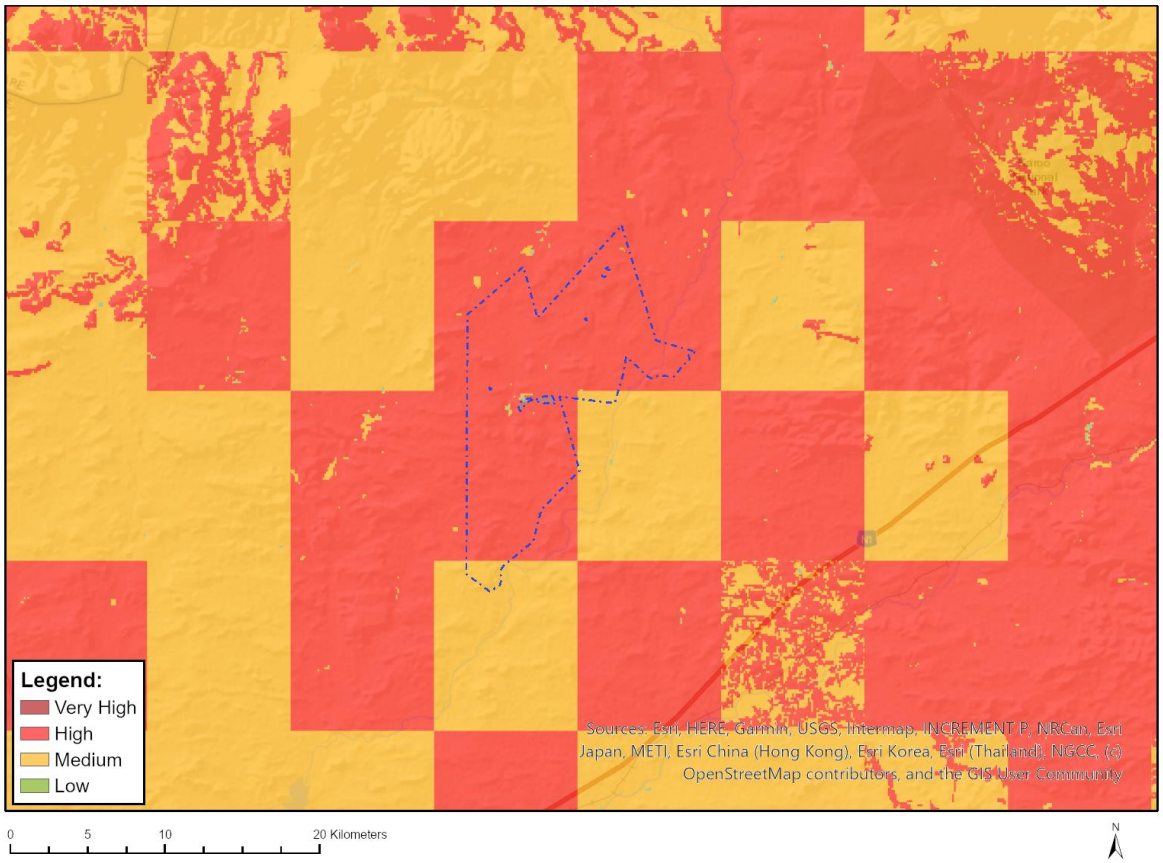


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	08. Moderate
Low	05. Low
Low	04. Low-Very low
Medium	06. Low-Moderate
Medium	07. Low-Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

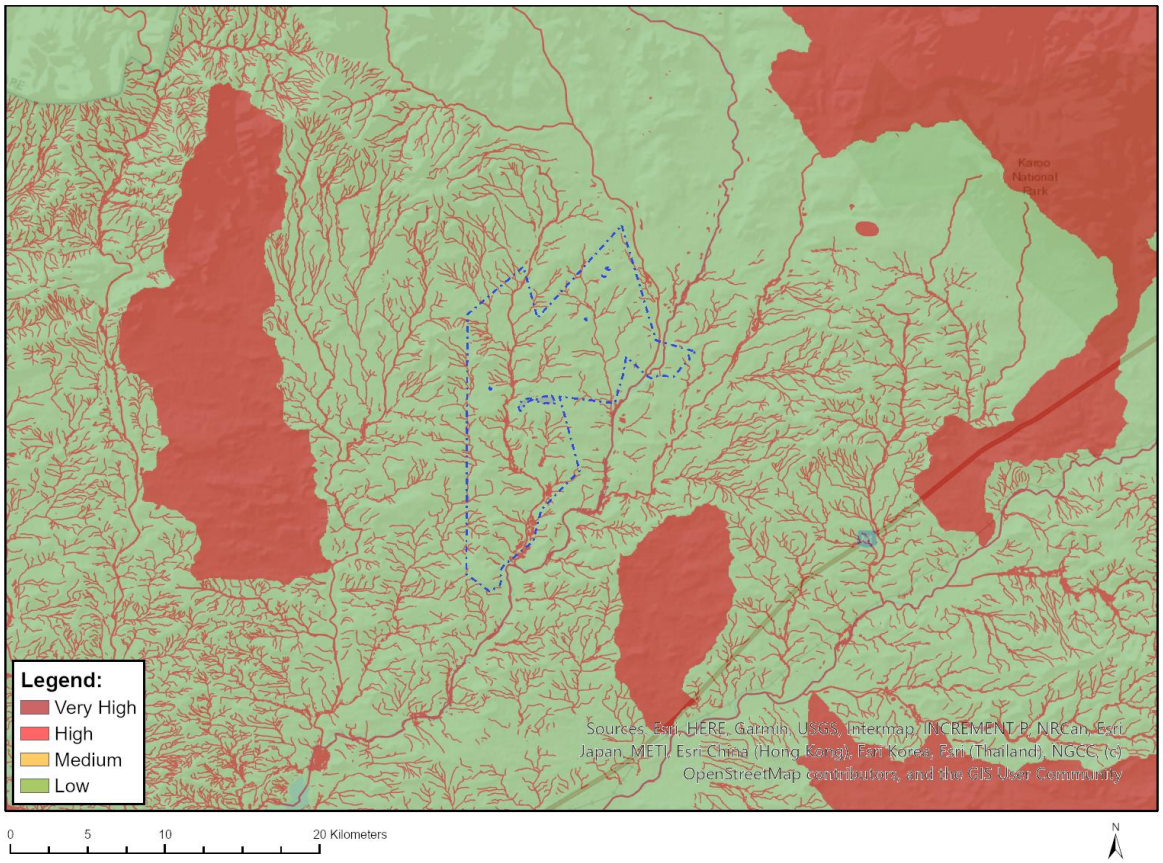
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Neotis ludwigii
High	Aves-Falco biarmicus
Low	Subject to confirmation
Medium	Reptilia-Chersobius boulengeri

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MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY



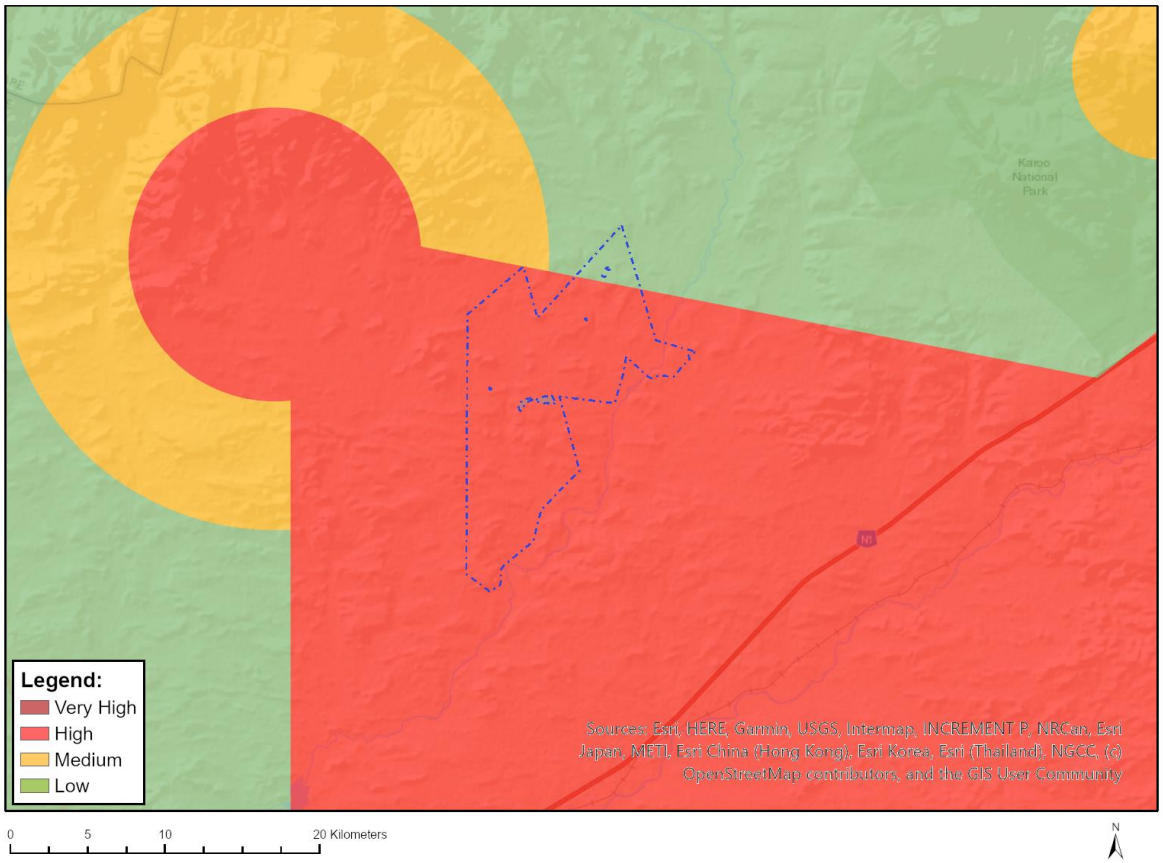
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

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MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY



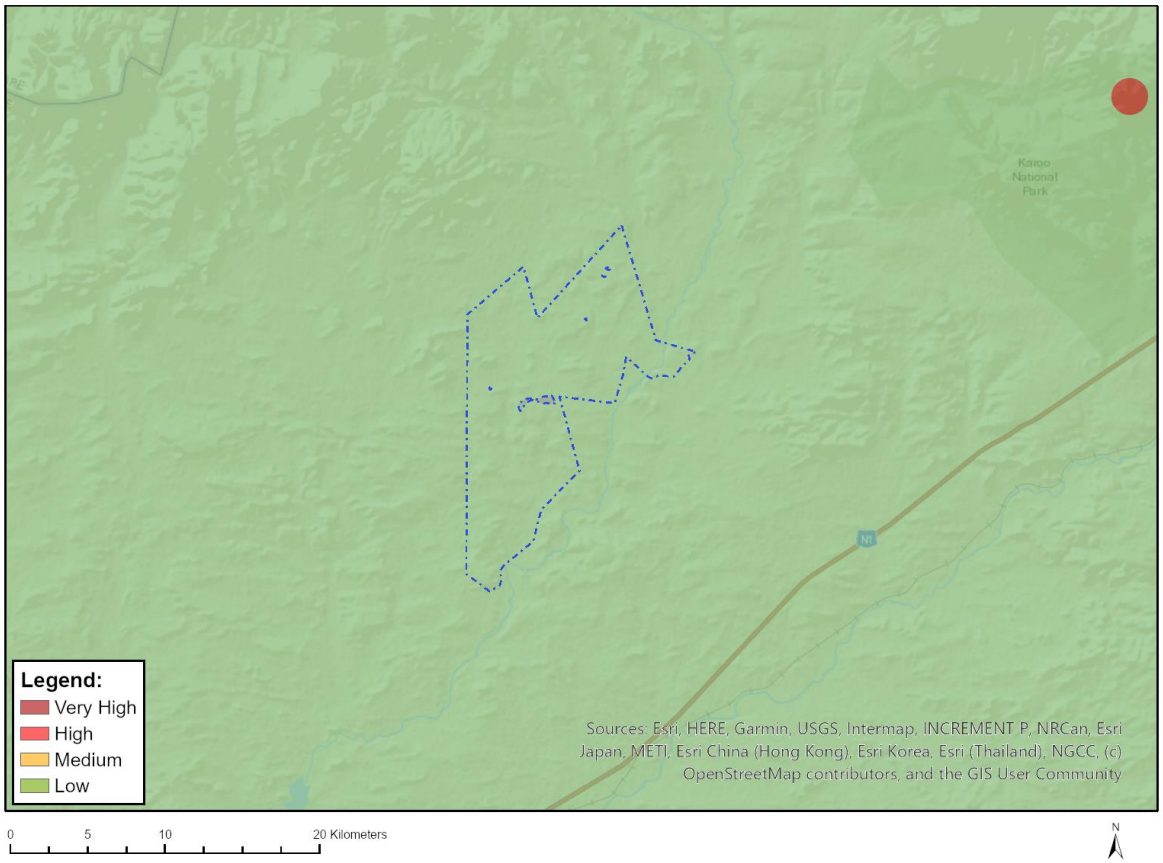
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Dangerous and restricted airspace as demarcated
Low	Low sensitivity
Medium	Between 8 and 15 km of other civil aviation aerodrome

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MAP OF RELATIVE DEFENCE THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

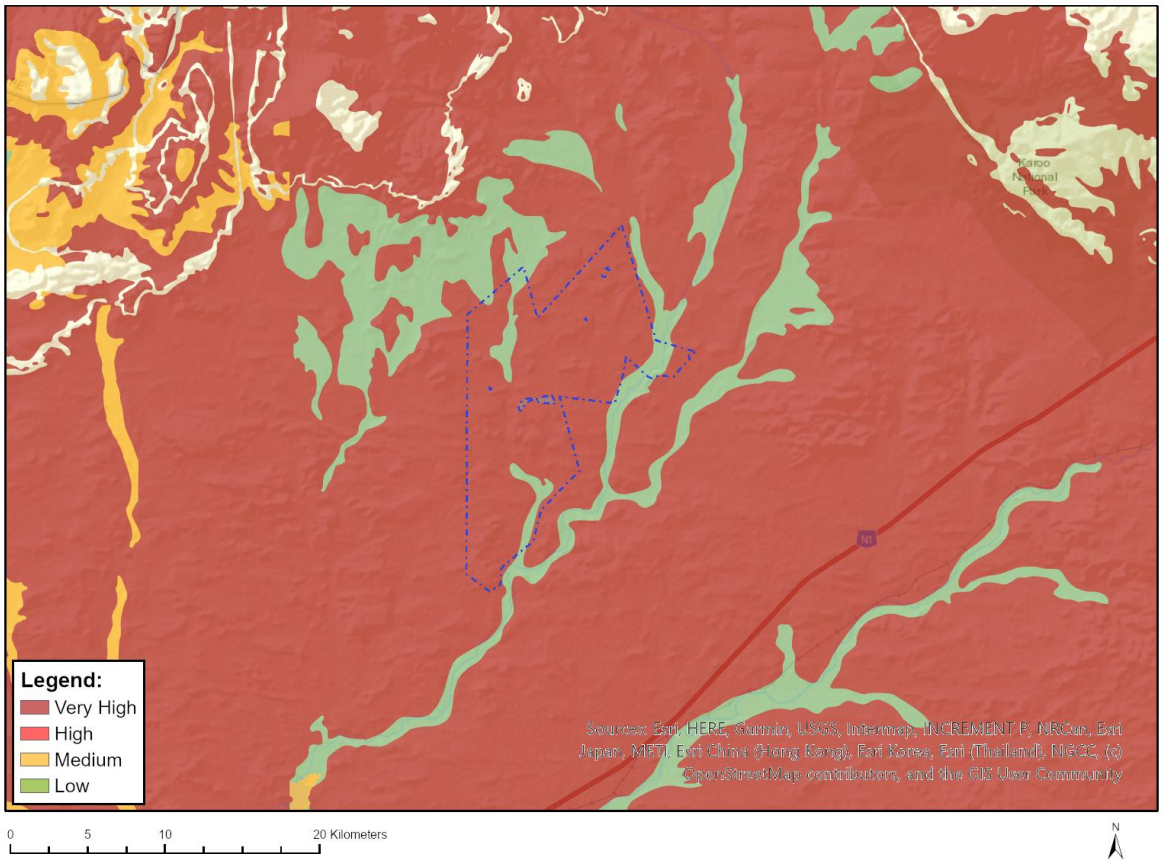
Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

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MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY



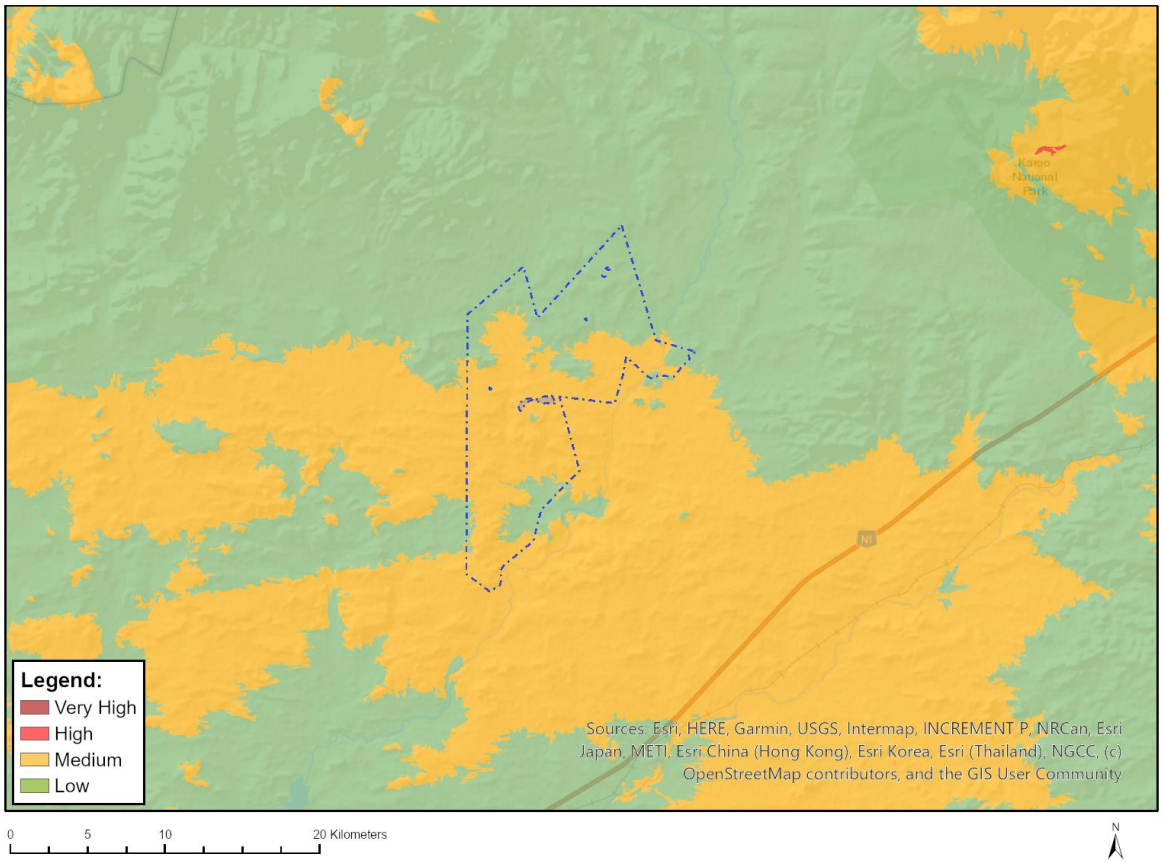
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Features with a Very High paleontological sensitivity

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MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

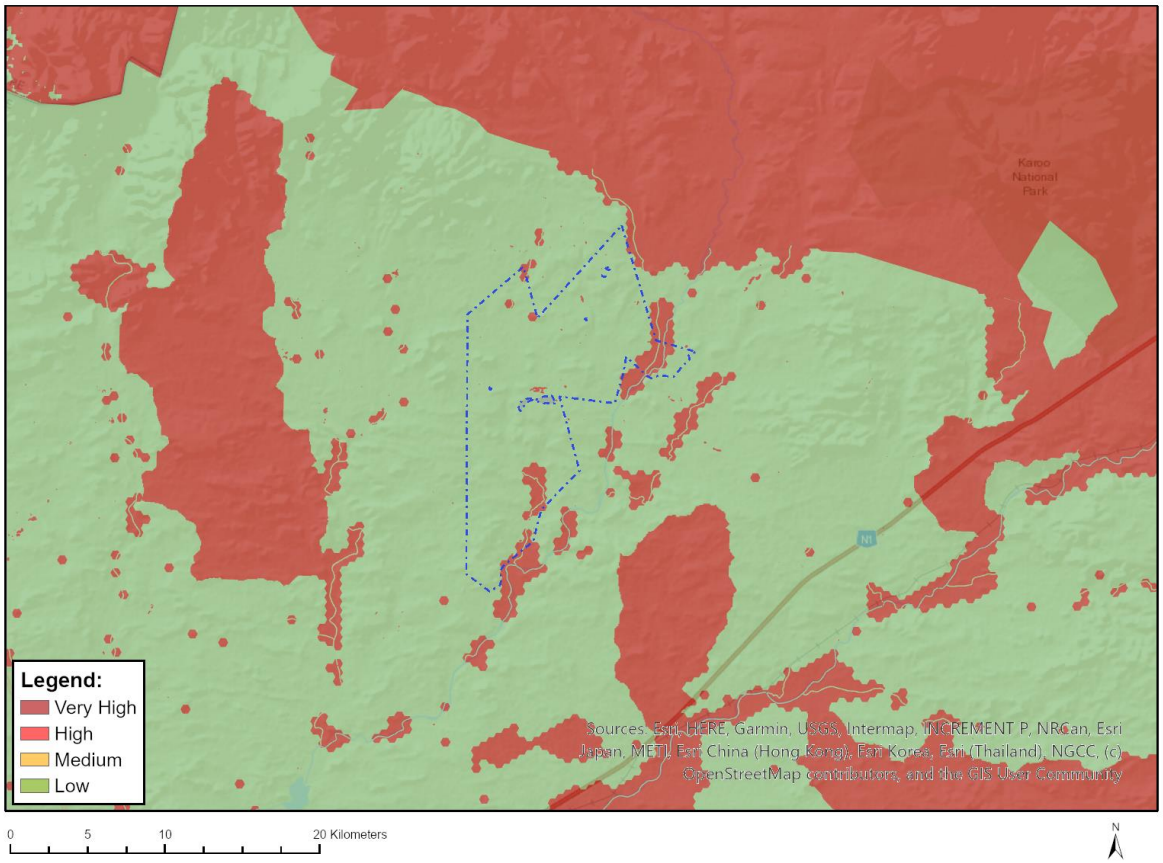
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Peersia frithii

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MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

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