BASIC ASSESSMENT REPORT & ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

Prospecting Right Application for Manganese Ore on portion 1 of the farm Lizeth 325, situated in the Magisterial District of John Taolo Gaetswe (Kuruman), Northern Cape Province.

DMRE REF.: NC 30/5/1/1/2/12658 PR

PREPARED ON BEHALF OF:

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mineral resources & energy
Department:
Mineral Resources and Energy
REPUBLIC OF SOUTH AFRICA

2022

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Submitted for environmental authorizations in terms of the National Environmental Management Act, 1998 (NEMA) and the National Environmental Management Waste Act, 2008 (NEM: WA) 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).

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File reference number SAMRAD: DMRE REF: NC 30/5/1/1/2/12658 PR

i. IMPORTANT NOTICE

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

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

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

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

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

ii. Objective of the basic assessment process

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

a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
b) identify the alternatives considered, including the activity, location, and technology alternatives;
c) describe the need and desirability of the proposed alternatives,
d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage , and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on the these aspects to determine:
    i. the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and
    ii. the degree to which these impacts— (aa) can be reversed; (bb) may cause irreplaceable loss of resources; and (cc) can be managed, avoided or mitigated;
e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—
    i. identify and motivate a preferred site, activity and technology alternative;
    ii. identify suitable measures to manage, avoid or mitigate identified impacts; and
    iii. identify residual risks that need to be managed and monitored.

iii. Abbreviations

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

iv. Document control

Document title	Basic Assessment Report and Environmental Management Programme Report for Prospecting Right and Environmental Authorization Application for Manganese Ore on portion 1 of the farm Lizbeth 325 which is situated in the magisterial district of John Taolo Gaetswe (Kuruman), Northern Cape Province with the DMRE REF: NC 30/5/1/1/2/12658 PR.		
Version	Version 1	Draft Basic Assessment Report and Environmental Management Programme report	
Quality control			
	Compiled by	**Reviewed by**	**Distribution**
Name	Ayanda Vilakazi	Dr NK Singo & Miss Rudzani Shonisani	Stakeholders Review
Designation	Environmental Technician Intern	Registered EAP's	
Disclaimer			

The opinion expressed in this, and associated reports are based on the information provided by [Legacy Box Holdings] to Singo Consulting (Pty) Ltd ("Singo Consulting") and is specific to the scope of work agreed with Legacy Box Holdings.

Singo Consulting acts as an advisor to the Legacy Box Holdings and exercises all reasonable skill and care in the provision of its professional services in a manner consistent with the level of care and expertise exercised by members of the environmental profession.

Where site inspections, testing or fieldwork have taken place, the report is based on the information made available by Singo Consulting during the visit, visual observations and any subsequent discussions with regulatory authorities. The data and information used in this report were provided to Singo Consulting by Legacy Box Holdings (client) and also referred to other outside sources (includes historical site investigation information and third-party expert research).

Singo Consulting (Pty) Ltd ("Singo Consulting") takes reasonable care and diligence when providing services and preparing documents, but it has been assumed that the information provided to Singo Consulting (Pty) Ltd ("Singo Consulting") is accurate.

These views do not generally refer to circumstances and features that may occur after the date of this study, which were not previously known to Singo Consulting (Pty) Ltd or had the opportunity to assess.

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PART A

SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

1 INTRODUCTION AND EXECUTIVE SUMMARY

Singo Consulting (Pty) Ltd (Singo Consulting), on behalf of Legacy Box Holdings (Pty) Ltd (Legacy Box Holdings), submitted an application for a Prospecting Right (PR) subject to Section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA), and an application for an Environmental Authorisation (EA) in terms to Chapter 6 of GNR 982 enacted under the National Environmental Management Act (Act 107 of 1998) (NEMA) as amended for prospecting of Manganese Ore.

The proposed project will ascertain if economically viable mineral deposits exist in the application area. To undertake the proposed prospecting activities, Legacy Box Holdings (Pty) Ltd requires a PR in terms of the MPRDA. The applicant must also obtain an EA in terms of the NEMA, which involves the submission of a Basic Assessment Report (BAR) and Environmental Management Programme report (EMPr).

Legacy Box Holdings appointed Singo Consulting (Pty) Ltd to manage the EA by conducting an Environmental Impact Assessment (EIA) and public participation process (PPP), and compiling a BAR and EMPr to support the PR application. These reports will be submitted to the Department of Mineral Resources and Energy (DMRE) for adjudication and will meet the NEMA's 2014 EIA Regulations (as amended in April 2017).

The proposed PR application covers Portion 1 of the farm Lizeth 325, situated in the Magisterial District of John Taolo Gaetswe (Kuruman), Northern Cape Province. (See Figure 1). The application area is situated in the Kuruman district of the Northern Cape Province about 35.23 Km Northwest of Ga-Segonyana. According to PWP the area falls under Transvaal Supergroup and Ventersdorp Supergroup which supports the geology of the applied area, with the evidence of a desktop study that was done the area is rich in manganese.

This report is based on the desktop study and site assessment that was conducted at the 5km radius from the proposed project area as the access to site was not granted by the landowner Mr Booysen. During our site visit we observed that the project area is accessible through other farm portion of which Mr Booysen is also a landowner for those properties. At the 5 km Radius we observed Powerlines which might be cutting through the project area, natural vegetation (Mainly grassland and trees) and a house of the adjacent landowner was spotted on the adjacent farm (Remaining Extent of the farm Lizbeth 325)

On the 29th of September 2022 we managed to have a meeting with the landowner requesting access to the site however the permission to access the farm was not granted and he further put an objection on the project based on the agricultural activities he's performing in all the farms he owns.

Table 1: Details of the Environmental Technician who prepared the report.

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Table 2: Details of the EAP who reviewed the report.

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1.1 EAP expertise

Singo Consulting was established in 2008 as an independent consulting company focused on creating opportunities in the mining and environmental industry. Over time, Singo Consulting diversified its services, providing high-value geological, hydrological, environmental, cleaning and rehabilitation services to clients across a range of industries focused primarily on natural resources.

1.2 EAP's experience in carrying out Environmental Impact Assessments

Ndinannyi Kenneth Singo holds a PhD in Environmental Geology, an MSc in Environmental Management, and a BSc (Hons) Mining and Environmental Geology.

Dr Singo is a registered competent person with the South African Council of Natural Science Professions (SACNASP: Earth Science Reg. No: 400069/16), Geological Society of South Africa (GSSA), the Land Rehabilitation Society of Southern Africa (LaRSSA) and South African Affiliates of the International Association for Impact Assessment.

Dr Singo has knowledge of mine water and mine environmental management (acid mine drainage, heavy metal assessments and tailings management) in various commodities including coal, gold, magnesite, and base metals (Cu, Pb, Zn). He has extensive knowledge of defunct mining waste and wastewater impact assessments in communities in the vicinity of mines. Dr Singo has sound knowledge of risk assessment in terms of human and environmental health. He is experienced in the appraisal of potential constraints, and devising mitigation measures through remedial strategy development, feasibility, and validation.

During his PhD studies, Dr Singo learned how to operate in contaminated lands. His PhD largely focused on disused mines (gold, copper, and magnesite) ranging from Phase I and Phase II investigations to development of remedial strategies (i.e., Phase III). His PhD equipped him to understand waste classification, profiling and understanding of the implications associated with the management of waste, landfill disposal profiling and development of beneficiation strategies.

2 LOCATION OF THE OVERALL ACTIVITY

Farm name	Portion 1 of Farm Lizeth 325
Application area (ha)	210.680
Magisterial district	John Taolo Gaetswe (Kuruman)
Distance and direction from nearest town	The project is located approximately 35.23 Km Northwest of Ga-Segonyana. The farm is accessible through adjacent farms (RE of the farm Lizbeth 325, Marthavale 322, etc). This project is in the Joe Morolong Local Municipality, of the John Taolo Gaetsewe District Municipality, in Northern Cape Province, in the Republic of South Africa.
21-digit Surveyor General Code for each farm portion	C04100000000032500001

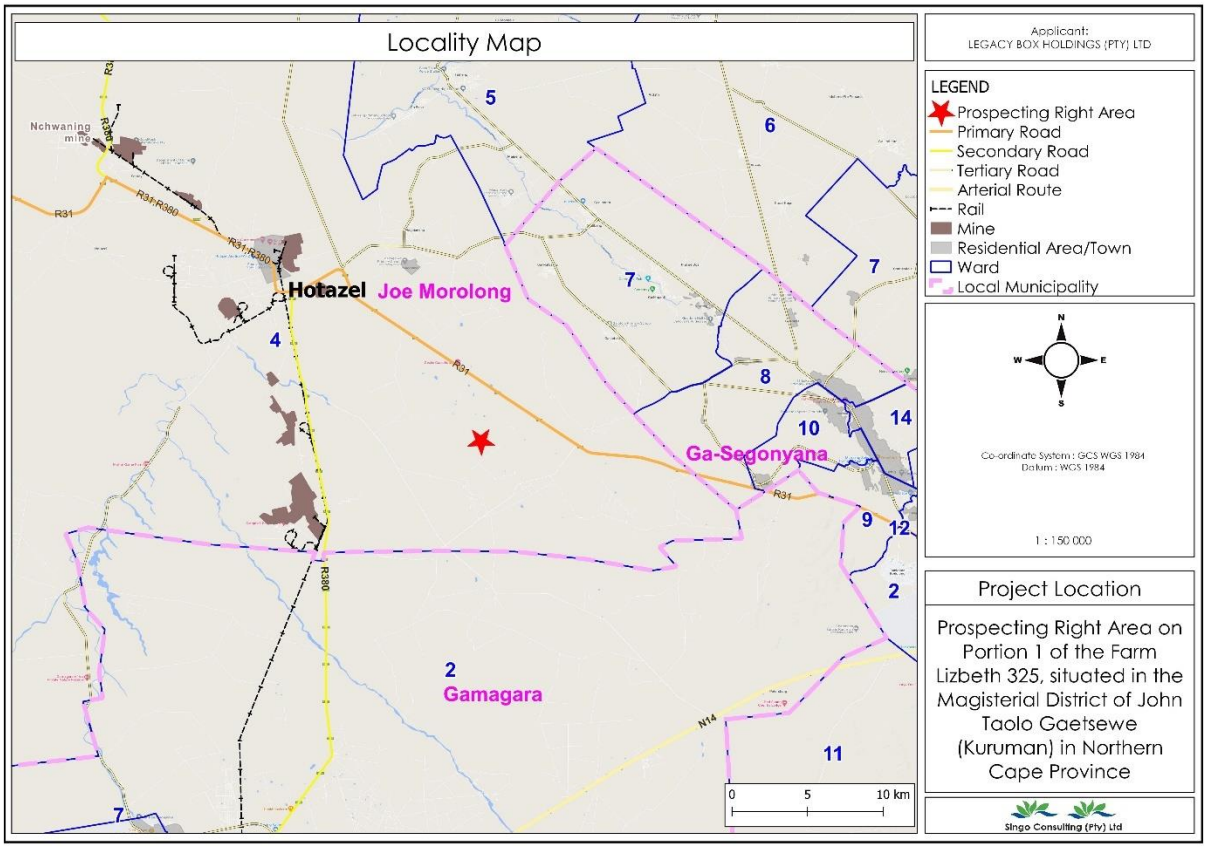

Figure 1: Locality of the project area.

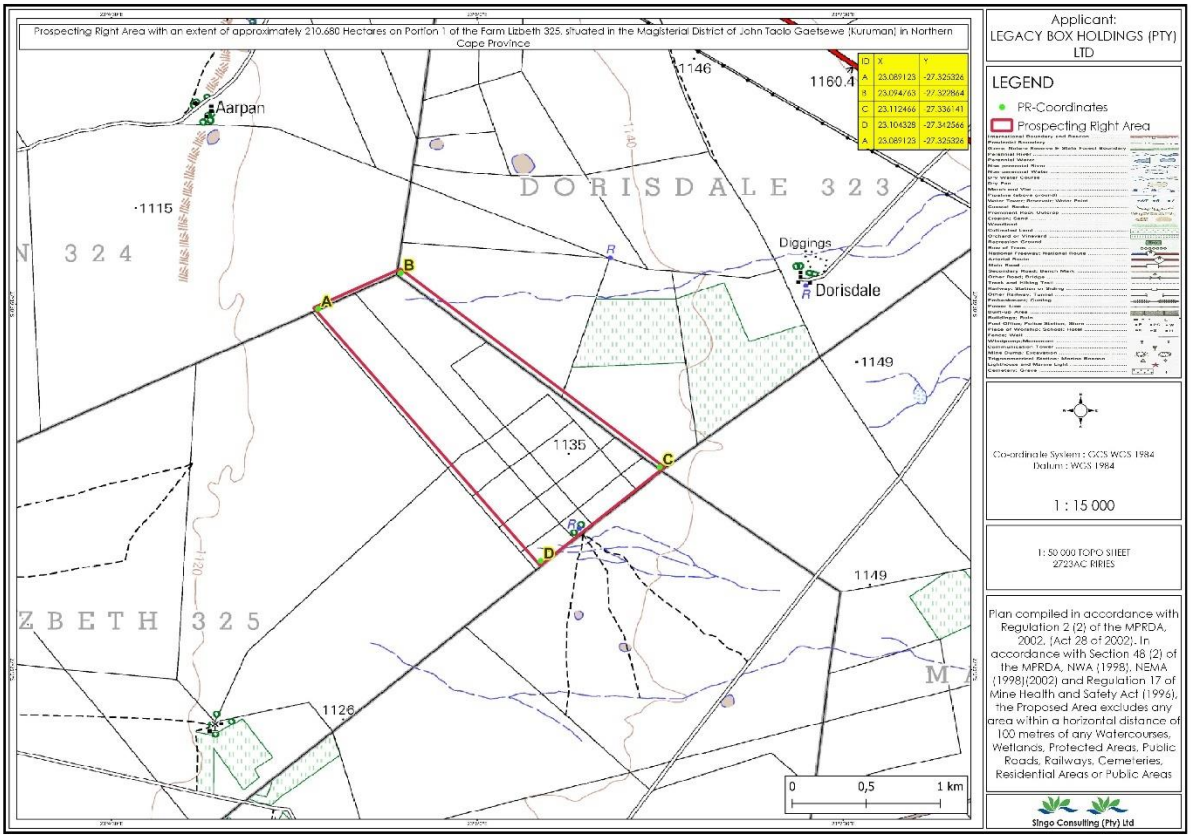

Figure 2: Regulation 2(2) map.

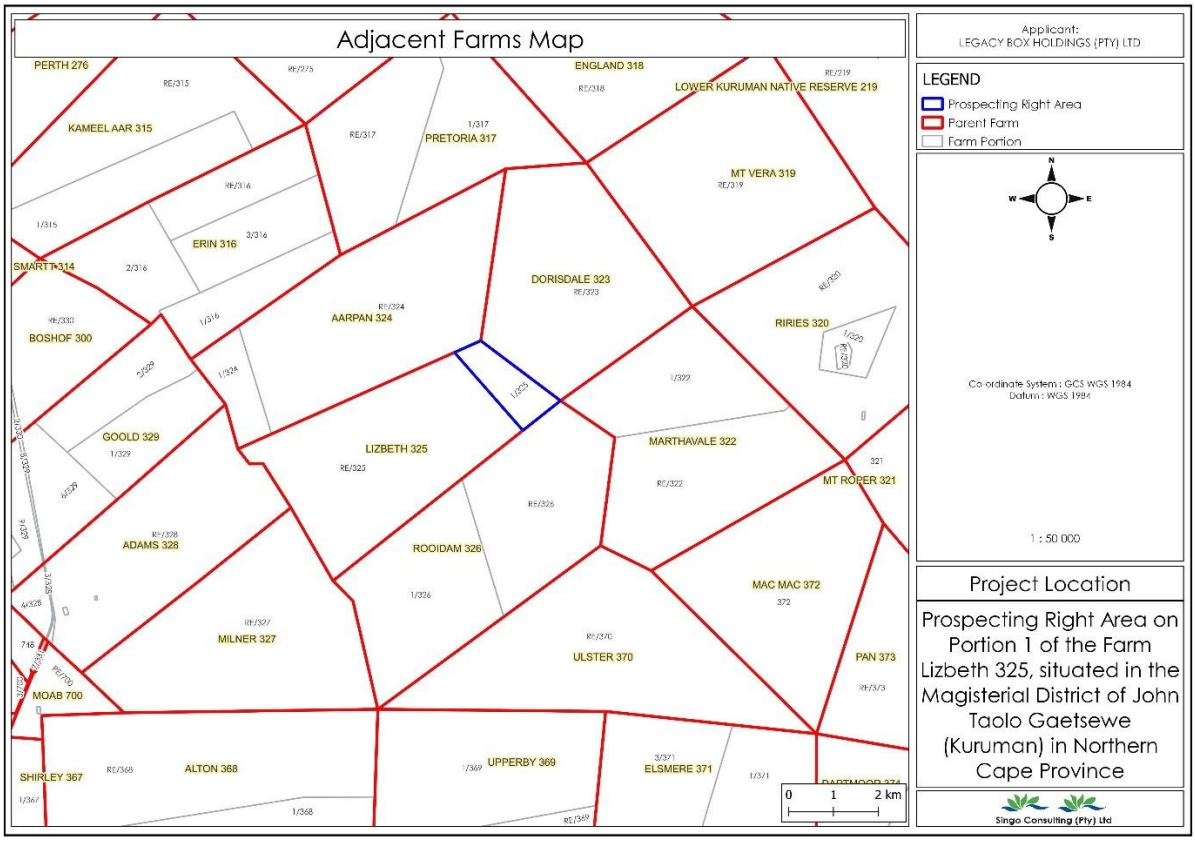

Figure 3: Adjacent farms.

3 SCOPE OF THE PROPOSED OVERALL ACTIVITY

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

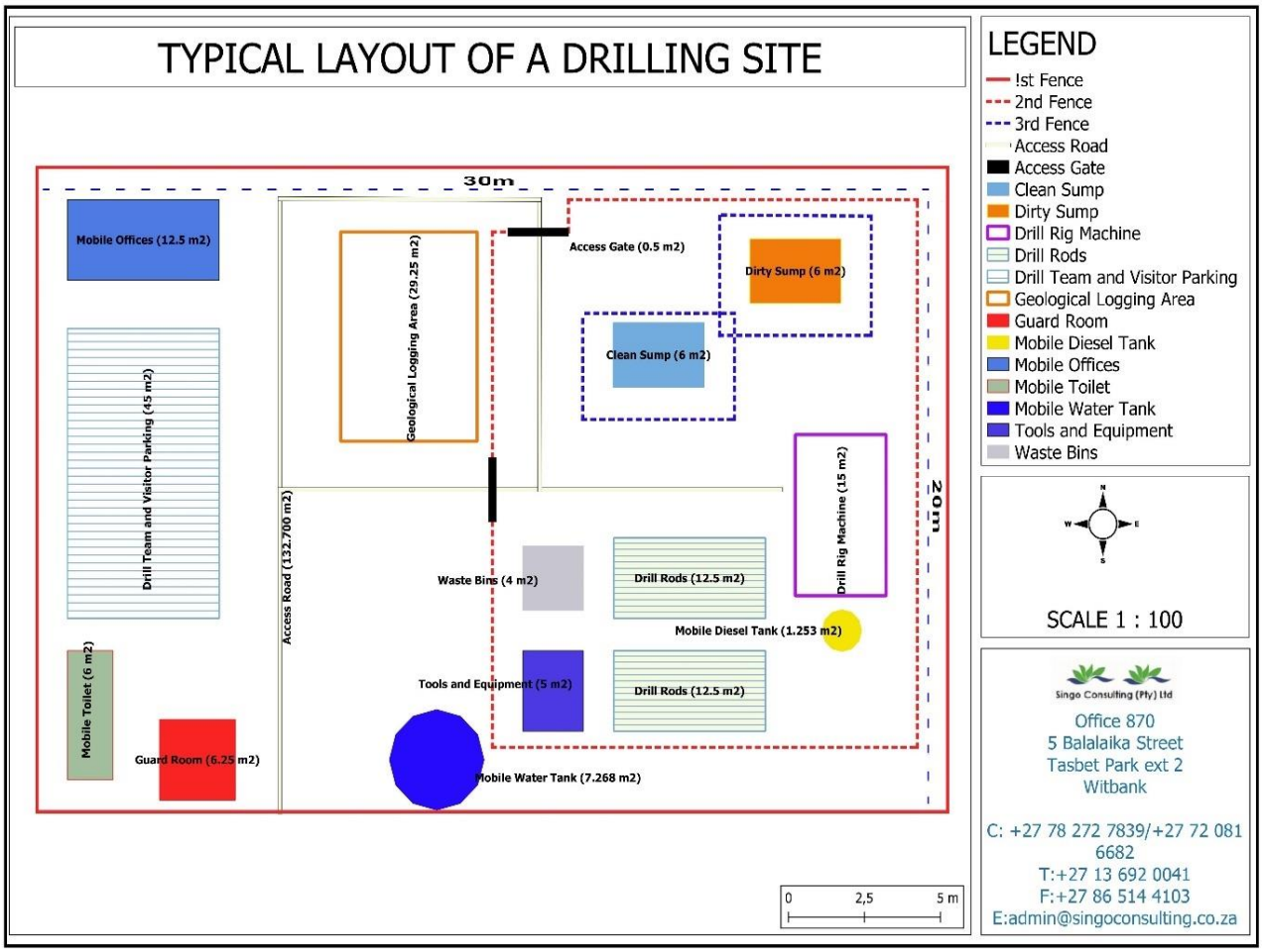

Figure 4: Regulation sketch plan for the proposed area.

3.1 Listed and specified activities

Section 16 of the MPRDA requires, upon request of the Minister, that an EMPr be submitted, and that the applicant must notify and consult with Interested and Affected Parties (I&APs). Section 24 of the NEMA requires that activities, which may impact the environment, be authorised by a relevant authority before commencement. These activities are listed under Regulations Listing Notice 1 Government Notice (GN) 517, Listing Notice 2 GN 517 and Listing Notice GN 517 (dated 11 June 2021) of the NEMA.

Name of activity E.g., for prospecting (drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)	**Aerial extent of the activity** Ha or m^2	**Listed activity** Mark with an X where applicable/ affected	**Applicable listing notice** GN 517, 11 June 2021
Prospecting by means of diamond drilling 6 boreholes.	210.680ha of the prospecting area (Disturbed area: 0.06 ha per hole x 6 boreholes = 0.36 ha)		GN 517, Listing Notice 1, Activity 20
Vegetation clearance for drilling (includes drill site). Invasive prospecting by means of diamond drilling 6 boreholes. The holes will be drilled to an average depth 100 m. The demarcated working area (total area to be disturbed) per site is 30 m x 20 m = 600 m^2 (0.06 ha). Then 600 m^2 x 6 boreholes =3 600 m^2 The total area to be disturbed is 3 600 m^2 /10 000 = 0.36 ha	0.36 ha (total disturbed area) of 210.680 ha (extent of application area)		Not listed
Mobile office	12.5 m^2		Not Listed
Mobile toilet	6 m^2		Not listed
Drill team and visitor team parking	45 m^2		Not listed
Access road	132.7 m^2		Not listed
Guard room	6.25 m^2		Not listed
Geological logging area	25.29 m^2		Not listed
Waste bins and tools	9 m^2		Not Listed
Drill machine	15 m^2		Not listed
Drill rods	25 m^2		Not listed
Clean sump	6 m^2		Not listed
Dirty sump	6 m^2		Not listed
Mobile tank	1.253 m^2		Not listed

Name of activity E.g., for prospecting (drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc.)	**Aerial extent of the activity** Ha or m^2	**Listed activity** Mark with an X where applicable/ affected	**Applicable listing notice** GN 517, 11 June 2021
Water tank	7.268 m^2		Not listed

Drilling method	Diamond core drilling
Number of boreholes	6
Depth of boreholes	100 m
Duration of drilling	A borehole takes about 2 days to complete; 6 boreholes will take about 12 days.
Demarcated working area	600 m^2 (600 m^2 per drilling site based on a 20 m x 30 m grid) which is equal to 0.06 ha per site
Total area to be disturbed	0.36 ha (600 m^2 x 6 boreholes =3 600 m^2 (0.36Ha) of 210.680Ha

Table 3:Proposed drilling programme with depth

3.2 Description of the activities to be undertaken

The following section presents a detailed description of all the activities associated with the proposed prospecting application. Due to the nature of the prospecting works programme (PWP) and the fact that the specific prospecting activities depend on the preceding phase, assumptions are presented where required. These assumptions are based on similar projects undertaken by the applicant.

3.2.1 Access roads

Access to the proposed prospecting area will be accessible via Marthavale farm and other neighbouring farms with the access road extending from the unnamed gravel road, existing pathways in the project area will be used to access boreholes, no new roads will be constructed.

Figure 5: Access to site via adjacent farms

3.2.2 Water supply

The prospecting activity will involve drilling of boreholes preferred by the applicant. This signifies that no water resource will be used for the purpose of drilling purpose however, water requirements relate to the potable water supply for employees and workers. A temporary 20 L on-site vertical water storage tank (for drinking water and general use by persons) will be provided at the drill site.

Figure 6: Example of a water storage tank.

3.2.3 Ablution

On-site ablution facilities will include the installation of drum/tank-type portable toilets (see Figure 7). Since the prospecting activity will be of limited duration, portable toilets are preferred.

Figure 7: Portable toilets to be installed.

3.2.4 Temporary office area

A temporary, shaded site office will be erected at the drill sites. No on-site electricity will be generated by generators. Meals will be provided to staff and workers as no heating and/or cold storage facilities will be available. A shaded eating area will be provided.

Figure 8: Temporary site office to be used.

3.2.5 Accommodation

Staff will be accommodated in nearby villages (not on site) and transported to and from the site daily. Night security staff will be employed once equipment has been established on site.

3.2.6 Blasting

There will be drilling for prospecting activities which is meant for core recovery. Due to the fact that prospecting does not involve mining activities no blasting is planned.

3.2.7 Storage of dangerous goods

During drilling, limited quantities of diesel fuel, oil and lubricants will be stored on site. A maximum amount of 60 m^3 diesel will be stored in above-ground diesel storage tanks.

Figure 9: Storage of dangerous goods.

3.3 Prospecting method(s) to be implemented

3.3.1 Planned non-invasive activities

3.3.1.1 Desktop study

Initial phase 1 work includes collecting and interpreting available data (extensive exploration was conducted in the proposed project area) and compiling a Geographic Information Systems (GIS) database. Data to be collected include aerial photos, orthophotos, aeromagnetic data, topo-cadastral maps, geological maps, historic exploration programmes and other published literature and maps. The study will aid in compiling a preliminary geological model of the area to be used in drillhole planning, geological mapping and sighting.

Figure 10: Desktop study example.

3.3.1.2 Geological mapping

Figure 11: Geological mapping example.

3.3.1.3 Sample analysis

Drill core will be sampled where a mineralised section is intersected. The core will be split into two halves, with one half of the core taken for assay purposes and the other half being retained. Each sample will be measured and weighed, and the sample lengths will be recorded before dispatch for assays at a South African National Accreditation System (SANAS) accredited laboratory.

3.3.1.4 Preliminary economic assessment

A preliminary economic assessment will be conducted to determine project viability. At this stage, the mineralisation, regardless of quantity and quality, is considered a mineral resource. This study is based on industry standards rather than detailed site-specific data.

4 PRE-FEASIBILITY STUDY

The pre-feasibility and feasibility studies will be more detailed. By the time a decision is made to proceed with a pre-feasibility study, a preliminary mineral resource report would have been finalised and an ore body model demonstrating its shape, tonnes, and grade will be available. A resource cannot be converted to a reserve unless backed by (at least) a pre-

feasibility study, since it will show with more certainty whether the project is viable. At this point, the mineral resource, or a portion thereof, becomes a mineral reserve.

4.1 Description of planned invasive activities

Diamond drilling will be used to prospect for mineralisation in the proposed project area. Geological, structural and geotechnical logging will be performed by experienced geologists to ensure appropriate and sufficient mineral resources estimation, mining and metallurgical studies. Twenty boreholes will be drilled during prospecting. The results of Phases 1 and 2 will assist in determining ideal borehole location. Only ten boreholes will be drilled during Phase 3. After Phase 3, results will be used to design a systematic drilling programme aimed at delineating the mineral resources. The final number of boreholes will depend on the results of Phase 3 drilling. A further ten boreholes are planned for Phase 5 drilling.

Figure 12: Example of drilling machinery.

4.2 Description of pre-feasibility studies

Pre-feasibility studies are detailed studies that use metrics and data specific to the project in question (not standard industry methods). These studies usually include a range of options for the technical and economic aspects of a project and are used to justify continued exploration, complete the required project or attracting a joint venture partner. The overriding aim of a pre-feasibility study is to select the preferred option (base case scenario) for project development. This base case scenario is then developed in enough detail to underpin decisions to devote additional funds required to move the project through subsequent stages of development and to a final feasibility study

4.3 Prospecting phases to be implemented

See

Table 4 for the intended prospecting activities to be conducted using the aforementioned methods.

Table 4: Planned prospecting phases.

Phase	Activity (what are the activities that are planned to achieve optimal prospecting)	Skill(s) required (refers to the competent personnel that will be employed to achieve the required results)	Timeframe (in months) for the activity)	Outcome (What is the expected deliverable, e.g. Geological report, analytical results, feasibility study, etc.)	Timeframe for outcome (deadline for the expected outcome to be delivered)	What technical expert will sign off on the outcome? (e.g. geologist, mining engineer, surveyor, economist, etc)
Phase 1	✦ Compilation of all available geological, remote sensing, and exploration data	Geologist	6	Geological and structural map	Month 6	Geologist
	✦ Site preparation – accessibility, water supply, set-up of field camp, consultation with land-owners, general infrastructure and logistics, etc.	Geologist, Field Assistant, Drilling Contractor	6	Preparation for prospecting	Month 12	Geologist
Phase 2	✦ Extensive detailed field mapping	Geologist	6	Prospecting Plan	Month 18	Geologist
	✦ Initial Diamond core drilling of 3 NQ boreholes average depth of 100m, to test the pyroxenite outcrops of the lower critical zones.	Geologist, Drilling Contractor, Laboratory	4	Borehole core data	Month 22	Geologist
	✦ Logging and sampling of the boreholes					
	✦ Consolidation of results and report writing	Geologist	2	Interim geological report	Month 24	Geologist
	✦ Assessment and target selection for the next phase					
Phase 3	✦ Wide-spaced drilling and sampling to determine the distribution and lateral extent of the Chrome layers established in the previous drilling phase (3 NQ holes averaging 100m at > 1 km spacing)	Geologist, Drilling Contractor	8	Borehole core data	Month 32	Geologist
	✦ Detailed geological logging and sampling of the drill core.					

	✦ Analyses for copper, Chrome, PGM and Nickel samples	Geologist, Laboratory	2	Assay results	Month 34	Geologist
	✦ Construction of preliminary geological model.	Resource Geologist	2	Preliminary geological model	Month 36	Geologist
Phase 4	✦ Consolidation of results and report writing Selection of targets for next stage ✦ Metallurgical & Geotechnical tests		2 2	Updated geological model	Month 38 Month 40	Metallurgist
	✦ Update preliminary geological model.		2	Resource estimation	Month 42	
	✦ Statistical analysis of geological data.		4		Month 46	
	✦ Resource area selection		2		Month 48	
	✦ Mineral resource estimation.		2		Month 50	
Phase 5	✦ Bulk sampling / trial mining	Geologist, Drilling Contractor, Laboratory, Mining Engineer, Plant Processing Specialist/Metallurgist, Environmentalist	10	Borehole core data	Month 60	Geologist
	✦ Pilot plant tests			Mine design and planning		Mining Engineer
	✦ Full mine design with cost estimates			Mining Feasibility Studies		
	✦ Detailed evaluation of infrastructure and facilities to support the project					
	✦ Market study					
	✦ Reserve estimation					
	✦ Financial feasibility study					
	✦ Compilation of CPR					

4.4 Policy and legislative context

Table 5: Policy and legislative context.

Applicable legislation and guidelines used to compile the report	Reference were applied	Development's compliance with and response to the policy and legislative context
Specific Environmental Management Acts (SEMAs)		
National legislation		
NEMA	This BAR and EMPr	An application for EA was submitted to the Northern Cape DMRE, and the application was accepted.
National Water Act (NWA), 1998	Groundwater abstraction as part of drilling activities	According to Government Notices Regulation 399, the applicant is permitted to extract 75 m3 of groundwater per ha per year from the D41K (Vaal) Quaternary Catchments. This use will be widely permitted. The proposed drilling method will be in accordance with the NWA.
MPRDA	Application for prospecting as per Section 16	The applicant submitted a PR application to the DMRE.
Municipal plans		
Commission on Restitution of Land Rights	Land claims	On the 24th of September 2022 an email of land claim enquiry was sent to the department of Rural Development and Land Rights, on the 26th of September 2022 we received an email with a confirmation that as at the date of this letter no land claims appear on the database in respect of the Properties including the database for claims lodged by 31 December 1998; and those lodged between 1 July 2014 and 27 July 2016 in terms of the Restitution of Land Rights Amendment Act, 2014 land enquiry started that there is no land claim on portion 1 of the farm Lizeth 325, kindly refer to figure 17.

Northern Cape strategic development framework (SDF)	Alternatives	The applicant recognises the importance of maximising economic benefit from mining, industrial, business, agricultural, and tourism development in the area, as well as promoting an economic development climate consistent with the Northern Cape SDF.
Municipality by-laws: Waste Management by-law Act 59 of 2008, Air Quality Management By-law Act 39 of 2004, Noise control by-law, Spatial Planning and Land Use Management act no 16 of 2013 (SPLUMA)	Environmental Management measures awareness plan	Best practice guidelines will be followed for any by-law's management and the development of the mine environmental and other legislative management.
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) (CARA)	Alternatives	The conservation of soil, water resources and vegetation are promoted. Management plans to eradicate weeds and invader plants must be established to benefit the integrity of indigenous life. The prospecting activity ensures that environmental disturbance is minimal, and rehabilitation is done.

4.5 Need for and desirability of the proposed activities

Prospecting activities do not provide many tangible benefits because they are the first stage of mining. Prospecting comes before mining, but it is during the prospecting phase that conclusions are made about whether the available reserves can be mined for a profit. Because it is recognised that mining plays an important role in the South African economy and employs a large number of people, a greater emphasis is placed on prospecting for mining benefits. This proposed activity doesn't intend to disturb any surrounding agricultural activities as it has minimal impact toward the environment.

Although prospecting activities are not labour intensive, approximately 10 people will be hired to assist with general activities. The services required can also be sourced locally depending on their availability thus growing the economy of Kuruman. With the existence of different mines located within 15km radius from the prospecting area collaboratively with the geological information, the area has the potential of the Manganese Ore. Legacy Box Holdings (Pty) Ltd intends to start mining application once the prospecting activities have proven viable outcome.

Prospecting activities are needed to:

➢ Confirm and obtain additional information concerning potential targets through non-invasive (e.g. desktop studies) and minimally invasive (e.g. drilling) activities.

➢ Assess if the resource can be extracted in an environmentally, socially and economically viable manner. Prospecting activities should prove that there are feasible mineral to allow mining, a new mine may be developed, which would generate extensive employment opportunities in an area where employment is required.

The Department of Environmental Affairs has released an updated Need and Desirability Guideline Document dated 2017. Need and desirability is based on the principle of sustainability, set out in the Constitution and in NEMA, and provided for in various policies and plans, including the National Development Plan 2030 (NDP). Addressing the need and desirability of a development is a way of ensuring sustainable development – in other words, that a development is ecologically sustainable and socially and economically justifiable – and ensuring the simultaneous achievement of the triple bottom-line.

The concept of "need and desirability" relates to, amongst others, the nature, scale and location of development being proposed, as well as the wise use of land. While essentially, the concept of "need and desirability" can be explained in terms of the general meaning of its two components in which need primarily refers to time and desirability to place (i.e. is this the right time and is it the right place for locating the type of land-use/activity being proposed?), "need and desirability" are interrelated and the two components collectively can be considered in an integrated and holistic manner.

Having regard to the above, the need for and desirability of an application must be dealt with separately and in detail, inter alia the following questions:

Table 6: Need for and desirability of the proposed activities.

Part 1: Need		
Questions (Notice 792, NEMA, 2012)		**Answers**
1	Is the land use associated with the activity being applied for considered within the timeframe intended by the existing approved SDF agreed to be the relevant environmental authority?	Yes. Mining is an integral part of its rationale for utilising the area's abundant natural resources to create a strong, resilient, and prosperous municipality. The proposed area is surrounded by mines at about 15 km radius.
2	Should the development, or if applicable, expansion of the town/area concerned in terms of this land use occurs here at this point in time?	PR is an initial phase of mining therefore there will be no town expansion or any sort of development.
3	Does the community/area need the activity and the associated land use concerned? This refers to the strategic as well as local level.	Unemployment is high in Joe Morolong Local Municipality. Mining necessitates a wide range of skills, and local residents must be employed before considering nearby towns. Unfortunately, this application is for prospecting; there is no economic benefit from it, but it is an important stage in determining the possibility of having a mine.
4	Are the necessary services with adequate capacity currently available (at the time of application) or must additional	Yes. For the existing and proposed PR, all infrastructure for services and capacity is adequate. The proposed project will make use of municipal water services. The road networks are completely intact, and the project

	capacity be created to cater for the development?	will have no significant impact on traffic congestion. There is no need to create additional capacity for the development; existing infrastructure will be used for this proposed activity.
5	Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of the services and opportunity cost)?	The development is not provided for in the infrastructure planning of the municipality as it is a small development of local importance. The proposed project will not have any implications for the infrastructure planning, as no services and/or infrastructure needs to be upgraded or created to cater for this project. The proposed project will use mobile structures.
6	Is the project part of a national programme to address an issue of national concern or importance?	Mining output in South Africa increased 0.1% year on year in January 2022, following a downwardly revised 15% drop the previous month and falling short of market expectations of 3.45% growth. Higher levels of output from manganese ore (19.6%), gold (7%), and diamonds (16.3%) were offset by a drop in iron ore (-13.4%). Mining production increased 5.4% on a seasonally adjusted monthly basis, following an upwardly revised 5.5% decline the previous month (Source: Statistics South Africa). The current Russian-Ukrainian conflict has benefited South Africa's mining industry. Because operations in these countries are not running, there is a possibility of high profit.
Part 2: Desirability		
7	Is the development the best practicable environmental option for this land/site?	Yes, it is. The proposed prospecting project has little environmental impact and involves only 13 drill holes. Prospecting activities will not interfere with any activities that may take place on the proposed project site.
8	Would the approval of this application compromise the integrity of the existing approved and credible IDP, and SDF as	Partly. The project will not compromise the plans of the municipality because the total area of prospecting is 0.36 ha, but the land use will be affected for a short period of time.

	agreed to by the relevant authorities?	
9	Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g. as defined in EMFs), and if so, can it be justified in terms of sustainability considerations?	No, the integrity of the existing environmental management priorities for the area will not be compromised by this development and rehabilitation plan will be in line with the local municipalities.
10	Do location factors favour this land use at this place? (This relates to the contextualization of the proposed land use on this site within its broader context).	Yes, the location for the proposed project is for farming, however this area is located far from the majority of the population. The prospecting activity will be at a small scale, therefore even the current land-use will not be affected much.
11	How will the activity of the land use associated with the activity being applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	An application was made on the SAHRA and on the NBKB in order to check for any heritage/cultural sensitivity of the area. The screening report was also conducted to check for any environmental sensitivity of the area.
12	How will the development impact on people's health and well-being? (E.g. In terms of noise, odours, visual character and sense of place, etc.)?	The proposed prospecting project will have very little impact on the people. The project area is far away from the communities, with very few houses. Borehole planning considered the location of these houses. Possible well-being and mitigation impacts: • Visual: Low • Dust: Low-Medium • Noise: Medium • Sense of place: Medium
13	Will the proposed activity or the land use associated with the activity being applied for, result in unacceptable opportunity costs?	No. The mining industry in South Africa has been a cornerstone of the economy for a long period of history. South Africa offers ongoing proof that mineral revenues can create sizeable benefits to the economy in countries where they are sourced.
14	Will the proposed land use result in unacceptable cumulative impacts?	No. The proposed project has only been identified to have minimal cumulative impacts that can be mitigated to an acceptable level.

4.6 Motivation for the overall preferred site, activities and technology alternative

The proposed site was chosen after extensive research and analysis of previous prospecting activities in the area. The proposed prospecting methods and technologies are based on previously successful prospecting processes in the area. Because the prospecting activities proposed in the PWP are dependent on the previous phase, no alternatives are suggested, but rather a phased approach of trusted prospecting techniques.

5 DETAILS OF THE DEVELOPMENT FOOTPRINT ALTERNATIVES CONSIDERED

5.1 Location alternatives

There is no preferred site alternative for the proposed prospecting project because the minerals the applicant proposes to prospect are located in the preferred site.

5.2 Design/layout alternatives

Since exploration is temporary, no permanent structures will be constructed. Negotiations and agreements will be made with the landowners to use any existing infrastructure like access roads for the explorers.

5.3 Technology alternatives

The diamond drilling technique is the only major method used in exploring for deposits of this type and also for resource definition and evaluation. The technology to be used cannot be replaced by any other methods thus these are the preferred activities such as Air Flush

5.4 Operational alternatives

The principal prospecting activity will be diamond core drilling. One drill rig will be used to drill, namely NQ – 60 mm diameter. Since this core size provides sufficient sample mass for laboratory analysis, no other methods have been considered.

5.5 The option of not implementing the activity (no-go alternative)

The no-go alternative is the option of not undertaking prospecting activities on the project site and leaving the site in its current state. Drilling is needed to investigate the potential and feasibility of minerals on site. There is no potential for future investment in a mine without confirming the mineral resource through drilling. Should the PR not be granted, the minerals being applied for will not benefit the local community through, e.g. job creation.

The mining sector is the backbone of South Africa's economy. John Taolo Getsewe District Municipality (JTGDM) is a main contributor to the provincial gross domestic product (GDP) and, as such, not carrying out the prospecting activities would prevent future mining prospects and reduce GDP contribution. The jobs that would have been created during prospecting will also be missed, increasing the number of people dependant on social grants.

The state of the natural environment will remain the same, and there will be no:

- Geological and soil disturbance
- Waste generation
- Compaction of pathways affecting the growth pattern of grasses and movement of micro animals
- Disturbance of wildlife in the surrounding game farms

6 DETAILS OF THE PUBLIC PARTICIPATION PROCESS FOLLOWED

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

- Identification and recording of key I&APs and other stakeholders on the stakeholder database.
- Placement of site notices around the farm, and other accessible public areas.
- Publication of a newspaper advert, in the local newspaper.
- Formal notification of the application to key I&APs and other stakeholders via distribution of a notification letter and the background information document.
- Compilation of a consultation report with all responses from I&APs and the EAP.

6.1 Identification of key Interested and Affected Parties

Public participation is the involvement of all parties who are potentially interested and/or affected by the proposed development. The principal objective of public participation is to inform decision-making.

Landowners (affected and adjacent) were identified during the site visit. Additional relevant organisations were identified and notified of the application. This includes municipal and state departments with jurisdiction in the project area. I&APs representing the following sectors of society were identified and notified: Landowners, adjacent landowners, adjacent landowners, local municipalities, local municipalities, government departments and the community.

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

The project was announced as follows:

Newspaper advertisement	The project was announced (in English) in the *Noordkaap bulletin* of 22nd of September 2022. The newspaper notified all I&APs of the proposed project and invited them to register as project stakeholders.
Written notification	A Background Information Document (BID) notifying I&APs and other key stakeholders of the project was shared on 22nd of September 2022
Site notice	To inform surroundings, locate landowners and adjacent landowners of the proposed development, site notices were erected on and close to site on the 28th of September 2022

Figure 13: Erection of site notices

Landowners and notification methodology

- The landowner of the farm LIZETH 325 was not found on site, we attempted several to time however on the 29th of September we managed to meet the landowner Mr. Booysen we the hope that he will grant us access to the farm, but he denied us access to the farm with the reason that we have to pass through his other farms to access the proposed area.
- All gates heading to the gate of the farm were locked, we then provided his employees with the right documentations that explains the applied activities, site notices were erected in all the gates heading to the proposed area.

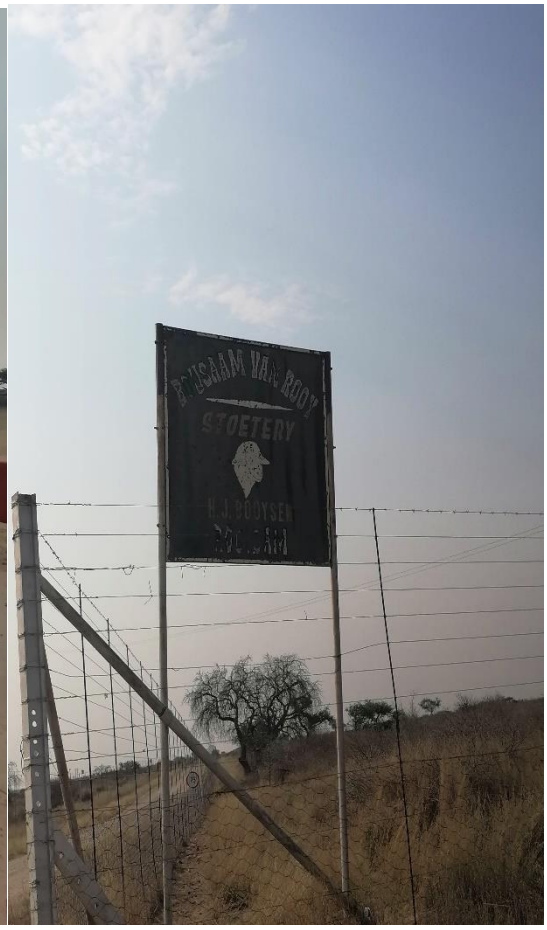

Figure 14: Erection of site notice at the gate of the proposed area

22 September 2022 NoordkaapBulletin NEWS NUUS 9

Severe memory loss not natural part of aging

World Alzheimer Month is an annual international event in September to raise awareness and challenge the stigma surrounding the disease.

Alzheimer's disease is the most common type of dementia.

Dementia is a collective name for conditions in which progressive degeneration of the brain affects memory, thinking, behaviour and emotion.

While the risk of developing dementia increases dramatically with age, most older people do not develop the condition. It is not an inevitable consequence of getting older.

Just one in five people in their 80s, for example, are affected by it.

Dementia is not a normal part of ageing and it knows no social, economic, ethnic or geographical boundaries.

Although individuals experience dementia in their own way, eventually those affected are unable to care for themselves and need help with all aspects of daily life. There is currently no cure.

Some of the misconceptions on Alzheimer's disease are:

- Memory loss is a natural part of aging: Experts now recognise severe memory loss as a symptom of a disease.
- Alzheimer's disease is not fatal: The disease slowly destroys the brain cells resulting in the loss of bodily functions and death. It slowly takes away a person's ability to connect with others, think, eat, talk, walk and find his or her own way around.
- Only older people can get Alzheimer's: It can affect people in their 30s, 40s and even 50s.
- Drinking out of aluminium cans or cooking in aluminium pots and pans can lead to the disease: Studies have failed to confirm any role aluminium has in causing the disease.
- Aspartame causes memory loss: No scientific evidence has been presented to prove this.
- Silver in dental fillings increases the risk of Alzheimer's disease: According to scientific evidence, there is no relationship between silver in dental fillings and the disease.
- There are treatments available to stop the progression of the disease: At this time, there is no treatment to cure or stop the disease. There are drugs that can slow the worsening of symptoms.
- The person is bewitched: Although this is a common belief, there is no truth in it.

Call the national helpline on 0800-102-481, or visit alzheimers.org.za.

NOTICE OF PUBLIC PARTCIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION

AFRIKAANS

Kennisgewing van die Prospekteerreg Aansoek: Legacy Box Holdings (Pty) Ltd het 'n aansoek by die Department van Minerale Hulpbronne en Energie **(DMRE Ref: NC 30/5/1/1/2/12658 PR) vir die doel om Mangaanerts** te prospekteer op op die **Gedeelte 1** van die **Plaas LIZBETH 325 geleë in die Landdrosdistrik Kuruman in Northern Cape Provinsie.**

Kennis geskied hiermee ingevolge die Wet op die Ontwikkeling van Minerale en Petroleumhulpbronne (MPRDA) (Wet 28 van 2002) en OIB-regulasies 2014, gepubliseer onder Staatskennisgewing No. 982 in Staatskoerant No. 3822 van 8 Desember 2014, gewysig op 7 April 2017 , dat **Legacy Box Holdings (Pty) Ltd** aansoek gedoen het om Prospekteerreg vir bogenoemde minerale.

UITNODIGING OM KOMMENTAAR

Registrasie as Belanghebbende & Geaffekteerde Party: As deel van die OIB-proses, meer veral die Openbare Deelnameproses (PPP) vir hierdie voorgestelde projek, word Belanghebbende en Geaffekteerde Partye (B&GPe) genooi om te registreer en vriendelik enige kommentaar of bekommernisse in te dien om **Mnr Ayanda Vilakazi** deur die kontakbesonderhede hieronder verskaf. Die publiek word ook uitgenooi om die Konsep Basiese Evalueringsverslag(KBE) en Omgewingsbestuursprogramverslag (OBPr) te hersien en daarop kommentaar te lewer. Die konsep BAR & EMPr sal beskikbaar wees vir hersiening vir 30 dae kalenderperiode vanaf die **24ste Oktober 2022 tot die 22ste November 2022.** Hierdie verslag sal beskikbaar wees by Joe Morolong Plaaslike Munisipaliteit (D320 Cardington Rd, Churchill, Mothibistad, 8474). 'n Sagte kopie is op aanvraag beskikbaar by **Singo Consulting (Pty) Ltd**, deur die Omgewingstegnikus (OT) se kontakbesonderhede hieronder te gebruik. Kommentaar oor die DBER en OBPr moet by die Ass. WHP nie later nie as die **22ste November 2022**

ENGLISH

Notice of the Prospecting Right Application: Legacy Box Holdings (Pty) Ltd has lodged an application with the Department of Mineral Resources and Energy **(DMRE Ref: NC 30/5/1/1/2/12658 PR)** for the purpose of prospecting **Manganese Ore** on the **Portion 1** of the Farm LIZBETH 325 situated in the Magisterial District of **Kuruman in Northern Cape Province.**

Notice is hereby given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) and EIA regulations 2014, published under Government Notice No. 982 in Gazette No. 3822 of 8 December 2014, amended on 7 April 2017, that **Legacy Box Holdings (Pty) Ltd** has applied for Prospecting Right for the above-mentioned mineral.

INVITATION TO COMMENT

Registration as Interested & Affected Party: As part of the EIA process, more especially the Public Participation Process (PPP) for this proposed project, Interested and Affected Parties (I&APs) are invited to register and kindly submit any comments or concerns to reach **Mr. Ayanda Vilakazi** using the contact details provided below. The public is also invited to review and comment on the Draft Basic Assessment Report (BAR) and Environmental Management Programme Report (EMPr). The draft BAR & EMPr will be available for review for 30 days calendar period from the **24th of October 2022 to the 22nd of November 2022.** This report will be available at **Joe Morolong Local Municipality** (D320 Cardington Rd, Churchill, Mothibistad, 8474). A soft copy is available upon request from **Singo Consulting (Pty) Ltd**, using the Environmental Technician's (ET) contact details below. Comments on the DBAR and EMPr must be submitted to the ET no later than the **22nd of November 2022.**

ET'S DETAILS

Singo Consulting (Pty) Ltd

Office 870, 5 Balalaika Street, T asbet park Ext 2, Witbank, 1040
Contact person: Mr. Ayanda Vilakazi
Tel: 013 692 0041
Fax: 086 514 4103
Cell: 082 577 6396
Email: ayanda@singoconsulting.co.za

APPLICANT'S DETAILS

Legacy Box Holdings (Pty) Ltd

Tunbar Building, 38 Osborn Road, Wadeville, Germiston
Contact person:
Mr. MULALO COLIN TSHIVHASE
Fax: 086 515 3178
Cell: 082 899 1473
Email: mulalo@gundogroup.co.za

NOTICE OF PUBLIC PARTCIPATION FOR PROSPECTING RIGHT AND ENVIRONMENTAL AUTHORIZATION APPLICATION

AFRIKAANS

Kennisgewing van die Prospekteerreg Aansoek: Legacy Box Holdings (Pty) Ltd het 'n aansoek by die Department van Minerale Hulpbronne en Energie **(DMRE Ref: NC 30/5/1/1/2/12659 PR)** vir die doel om Mangaanerts te prospekteer op op die **Gedeelte 2** van die **Plaas EAST 270 geleë in die Landdrosdistrik Kuruman in Northern Cape Provinsie.**

Kennis geskied hiermee ingevolge die Wet op die Ontwikkeling van Minerale en Petroleumhulpbronne (MPRDA) (Wet 28 van 2002) en OIB-regulasies 2014, gepubliseer onder Staatskennisgewing No. 982 in Staatskoerant No. 38224 van 8 Desember 2014, gewysig op 7 April 2017 , dat **Legacy Box Holdings (Pty) Ltd** aansoek gedoen het om Prospekteerreg vir bogenoemde minerale.

UITNODIGING OM KOMMENTAAR

Registrasie as Belanghebbende & Geaffekteerde Party: As deel van die OIB-proses, meer veral die Openbare Deelnameproses (PPP) vir hierdie voorgestelde projek, word Belanghebbende en Geaffekteerde Partye (B&GPe) genooi om te registreer en vriendelik enige kommentaar of bekommernisse in te dien om **Mnr Ayanda Vilakazi** deur die kontakbesonderhede hieronder verskaf. Die publiek word ook uitgenooi om die Konsep Basiese Evalueringsverslag(KBE) en Omgewingsbestuursprogramverslag (OBPr) te hersien en daarop kommentaar te lewer. Die konsep BAR & EMPr sal beskikbaar wees vir hersiening vir 30 dae kalenderperiode vanaf die **24ste Oktober 2022 tot die 22ste November 2022.** Hierdie verslag sal beskikbaar wees by **Joe Morolong Plaaslike Munisipaliteit** (D320 Cardington Rd, Churchill, Mothibistad, 8474). 'n Sagte kopie is op aanvraag beskikbaar by **Singo Consulting (Pty) Ltd**, deur die Omgewingstegnikus (OT) se kontakbesonderhede hieronder te gebruik. Kommentaar oor die DBER en OBPr moet by die OT nie later nie as die **22ste November 2022.**

ENGLISH

Notice of the Prospecting Right Application: Legacy Box Holdings (Pty) Ltd has lodged an application with the Department of Mineral Resources and Energy **(DMRE Ref: NC 30/5/1/1/2/12659 PR)** for the purpose of prospecting **Manganese Ore** on the **Portion 2 of the Farm EAST 270** situated in the Magisterial District of **Kuruman in Northern Cape Province.**

Notice is hereby given in terms of the Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002) and EIA regulations 2014, published under Government Notice No. 982 in Gazette No. 3822 of 8 December 2014, amended on 7 April 2017, that **Legacy Box Holdings (Pty) Ltd** has applied for Prospecting Right for the above-mentioned mineral.

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Office 870, 5 Balalaika Street, T asbet park Ext 2, Witbank, 1040
Contact person: Mr. Ayanda Vilakazi
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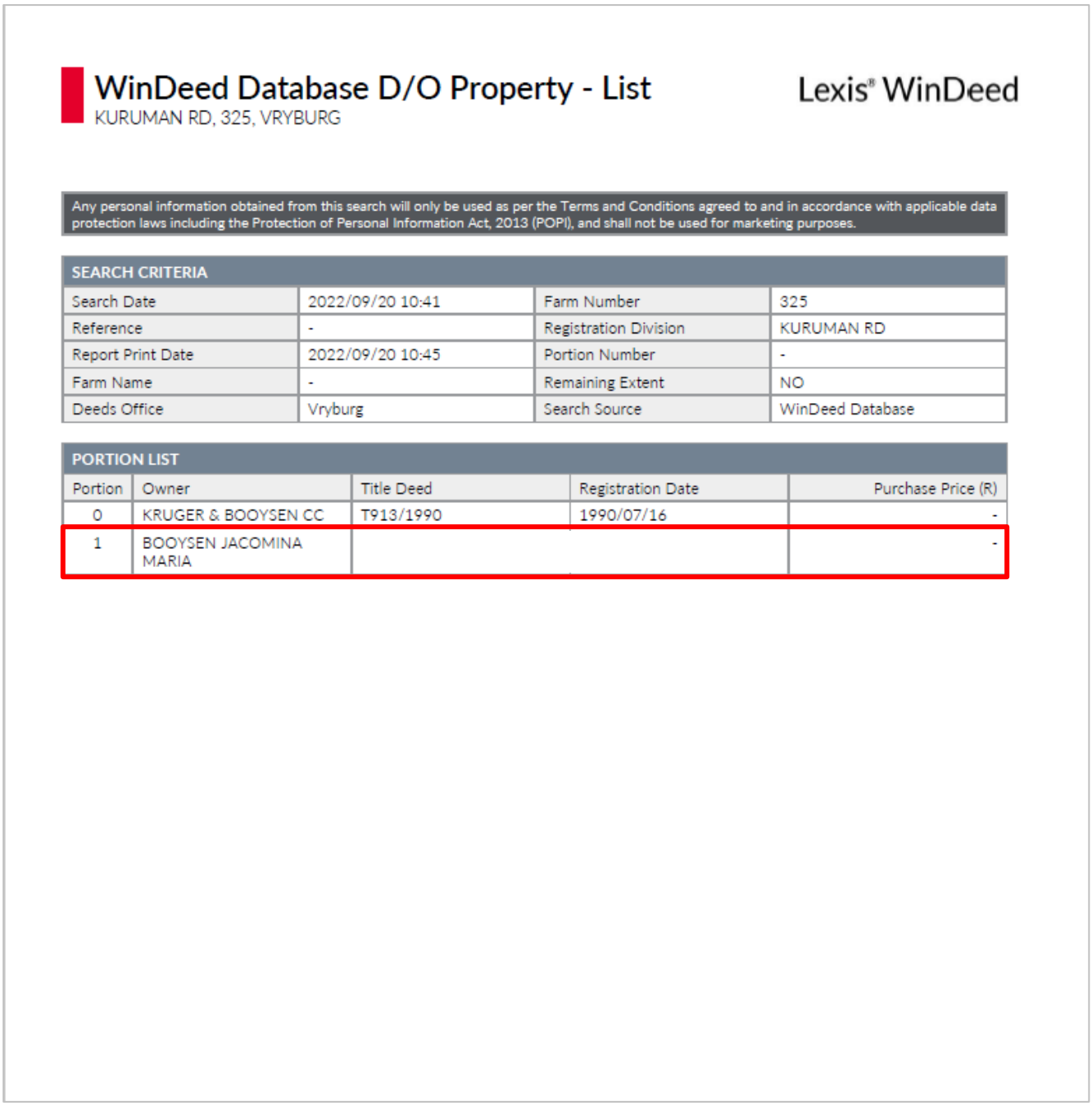
APPLICANT'S DETAILS

Legacy Box Holdings (Pty) Ltd

Tunbar Building, 38 Osborn Road, Wadeville, Germiston
Contact person:
Mr. MULALO COLIN TSHIVHASE
Fax: 086 515 3178
Cell: 082 899 1473
Email: mulalo@gundogroup.co.za

Figure 15: Proof of newspaper advertisement (red boarder).



WinDeed Database D/O Property - List
KURUMAN RD, 325, VRYBURG

Lexis® WinDeed

Any personal information obtained from this search will only be used as per the Terms and Conditions agreed to and in accordance with applicable data protection laws including the Protection of Personal Information Act, 2013 (POPI), and shall not be used for marketing purposes.

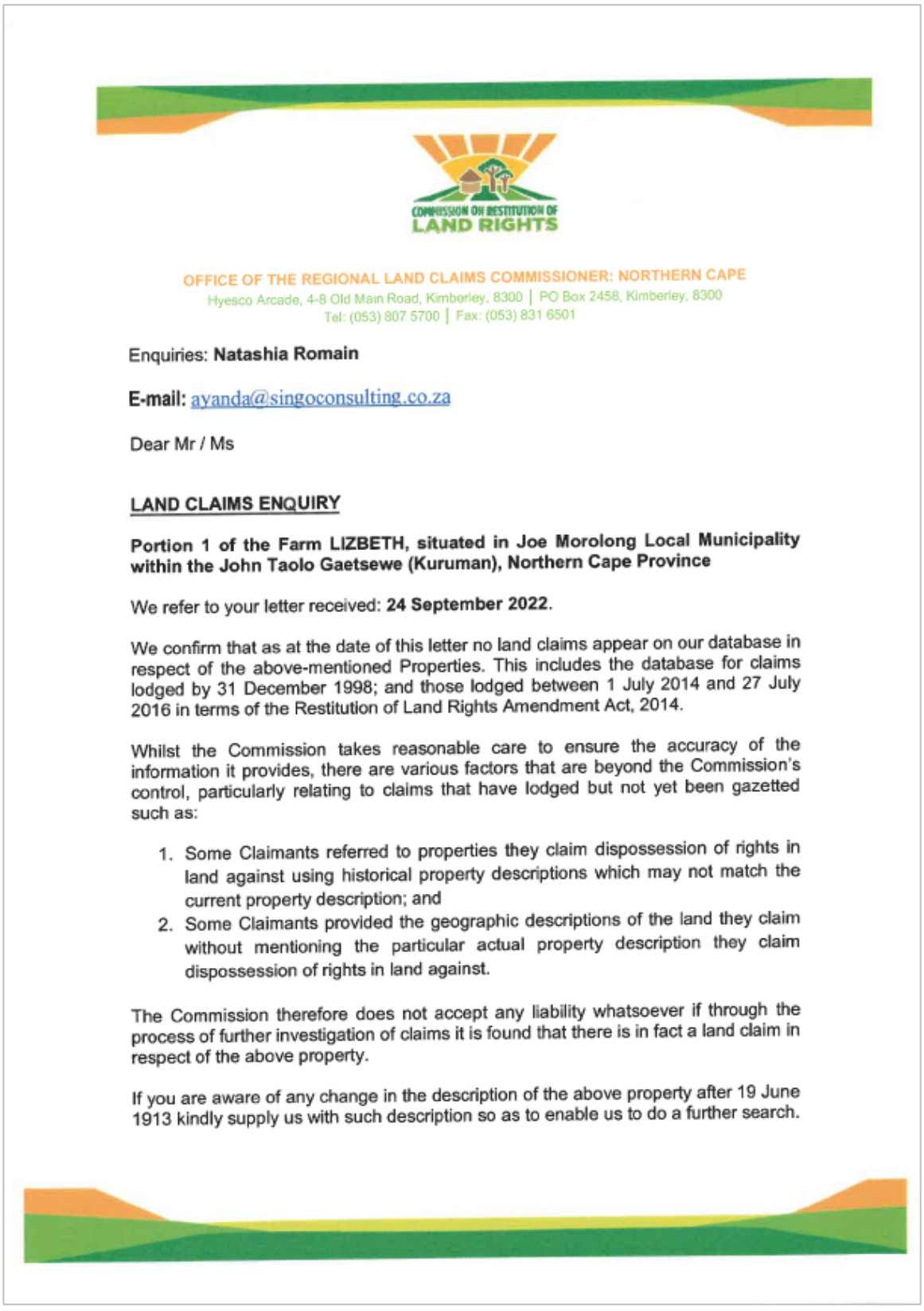
SEARCH CRITERIA			
Search Date	2022/09/20 10:41	Farm Number	325
Reference	-	Registration Division	KURUMAN RD
Report Print Date	2022/09/20 10:45	Portion Number	-
Farm Name	-	Remaining Extent	NO
Deeds Office	Vryburg	Search Source	WinDeed Database

PORTION LIST				
Portion	Owner	Title Deed	Registration Date	Purchase Price (R)
0	KRUGER & BOOYSEN CC	T913/1990	1990/07/16	-
1	BOOYSEN JACOMINA MARIA			-

Figure 16: Deed search

6.3 Land claim enquiry

On the 24th of September 2022 an email of land claim enquiry was sent to the department of Rural Development and Land Rights, on the 26th of September 2022 we received an email with a confirmation that as at the date of this letter no land claims appear on the database in respect of the Properties including the database for claims lodged by 31 December 1998; and those lodged between 1 July 2014 and 27 July 2016 in terms of the Restitution of Land Rights Amendment Act, 2014 land enquiry started that there is no land claim on LIZETH 325 (See figure 17).



COMMISSION ON RESTITUTION OF LAND RIGHTS

OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: NORTHERN CAPE
Hyesco Arcade, 4-8 Old Main Road, Kimberley, 8300 | PO Box 2458, Kimberley, 8300
Tel: (053) 807 5700 | Fax: (053) 831 6501

Enquiries: **Natashia Romain**

E-mail: ayanda@singoconsulting.co.za

Dear Mr / Ms

LAND CLAIMS ENQUIRY

Portion 1 of the Farm LIZBETH, situated in Joe Morolong Local Municipality within the John Taolo Gaetsewe (Kuruman), Northern Cape Province

We refer to your letter received: **24 September 2022**.

We confirm that as at the date of this letter no land claims appear on our database in respect of the above-mentioned Properties. This includes the database for claims lodged by 31 December 1998; and those lodged between 1 July 2014 and 27 July 2016 in terms of the Restitution of Land Rights Amendment Act, 2014.

Whilst the Commission takes reasonable care to ensure the accuracy of the information it provides, there are various factors that are beyond the Commission's control, particularly relating to claims that have lodged but not yet been gazetted such as:

1. Some Claimants referred to properties they claim dispossession of rights in land against using historical property descriptions which may not match the current property description; and
2. Some Claimants provided the geographic descriptions of the land they claim without mentioning the particular actual property description they claim dispossession of rights in land against.

The Commission therefore does not accept any liability whatsoever if through the process of further investigation of claims it is found that there is in fact a land claim in respect of the above property.

If you are aware of any change in the description of the above property after 19 June 1913 kindly supply us with such description so as to enable us to do a further search.

Figure 17: Proof of land claim search results.

6.4 Summary of issues raised by Interested and Affected Parties

Table 7: Issues raised by Interested and Affected Parties.

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**	**Issue(s) raised**	**EAPs response to issues as mandated by the applicant**	**Section and paragraph in this report where the issues and/or response were incorporated**
Affected parties					
Landowners					
Portion 1 of the farm LIZETH 325	x	29/09/2022 Face-2-face	No issue(s) has been raised yet.	• On the 29th of September 2022 we had a meeting with Mr Booysen at his company (Booysen Bore Drilling Co (Pty) Ltd) in Kuruman with aim of requesting access to site after attempting to access the area several times without any luck. Mr. Booysen Objected the project on the spot and also refused to grant us access to site due to the fact that we have pass through his other properties to access the proposed area. He further shared with us his contact detail for further Communication. • We shared the Landowner Notification letter with Deed search to landowner	

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**	**Issue(s) raised**	**EAPs response to issues as mandated by the applicant**	**Section and paragraph in this report where the issues and/or response were incorporated**
				employees as the landowner was not on site.	
Lawful occupiers of the land					
N/A					
Landowners or lawful occupiers on adjacent properties					
No Adjacent Landowners were spotted onsite					
Municipality					
Joe Morolong Local Municipality	X	27/09/2022 Face-2-face	No issue(s) have been raised	• On the 27th of September 2022 a visit was done to the local Municipality we consulted Ms Seneo Seleka from the environmental department, BID was shared with her, and she further shared her email with us so that we may share all the relevant documents.	
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA					

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**	**Issue(s) raised**	**EAPs response to issues as mandated by the applicant**	**Section and paragraph in this report where the issues and/or response were incorporated**
Department of Agriculture, Forestry and Fisheries	X	24/09/2022 Email	No issue(s) raised yet.	On the 24th of September 2022, a consultation email enclosing a Background Information Document were sent via email	
Department of Public Works	X	24/09/2022 Email	No issue(s) raised yet,	On the 24th of September 2022, a consultation email enclosing a Background Information Document were shared via email	

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**	**Issue(s) raised**	**EAPs response to issues as mandated by the applicant**	**Section and paragraph in this report where the issues and/or response were incorporated**
 **Department of Water and Sanitation**	X	24/09/2022 Email	No issue(s) raised yet,	• On the 24th of September 2022, a consultation email enclosing a Background Information Document were shared via email	
	X	24/09/2022 Email	No issue(s) raised yet,	• On the 24th of September 2022, a consultation email enclosing a Background Information Document were sent via email	

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**	**Issue(s) raised**	**EAPs response to issues as mandated by the applicant**	**Section and paragraph in this report where the issues and/or response were incorporated**
TRANSNET	X	24/09/2022 Email	No issue(s) raised yet,		
Department of Rural Development and Land Reform (DRDLR)					
Commission on Restitution of Land Rights	X	24/10/2021 via email)	Please note that there are no land claims appear on the database in respect of the Properties including the database for claims lodged by 31 December 1998; and those lodged between 1 July 2014 and 27 July 2016 in terms of the Restitution of Land Rights Amendment Act, 2014 land enquiry stated that there is no	Kindly note that Singo Consulting (Pty) Ltd acknowledges the response letters for possible land claims. Your assistance in this regard is highly appreciated.	Part A: Section 6, Sub section 6.4

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**	**Issue(s) raised**	**EAPs response to issues as mandated by the applicant**	**Section and paragraph in this report where the issues and/or response were incorporated**
			land claim on LIZETH 325.		
Traditional leaders					
N/A					
Community					
 **Ester Molete Community Library**	x		No comments have been received to any community member	• On the 27th of September 2022, a visit was done by the EAP to the community Library of Ester Molete regarding the applied activities, we spoke to the lady in charge she allowed us to erect site notices as a way of notifying the n nearby community so that they can submit any comments or any local knowledge	
Other affected parties					

7 GEOLOGY

The Northern Cape Province is the largest of the nine provinces, with most of the mineral deposits concentrated along its northern sector, which has been stripped of its Karoo cover.

As the climate tends to be arid, the availability of water becomes a major factor in the establishment of mining ventures at any scale. However, the Orange River traverses part of

the mineral-rich area, whilst the infrastructure has been steadily developed since the 1950's,

when the Sishen Iron Ore Mine came into production, and was further stimulated in the early

1970's, by the discovery of substantial base metal orebodies and the construction of the

Sishen-Saldanha rail link. The mineral potential of the Province is briefly discussed under three

headings viz. that of larger producing mines, smaller producing mines and quarries and lastly, deposits with mining potential. The area of prospecting application is situated in the Kgalagadi District in the Northern Cape and which constitute the Transvaal Supergroup and Ventersdorp supergroup. The strata graphic composition of the area contains some several out crops which are also occurring with the mineral.

LARGER PRODUCING MINES

The Sishen Iron Ore Mine in the Postmasburg district produces 22 Mt of iron ore annually of

which 67% is exported, while the rest is consumed within South Africa. The Kalahari manganese field is located some 65 km further to the north. Manganese ore is produced from 5 operating mines. The entire manganese field is overlain by a sand cover, known as the Kalahari Formation. Lead-zinc-copper-silver ore is exploited at Aggeneys in Namaqualand, some 100 km northnortheast of Springbok. Of the 4 orebodies, only one is presently being mined, whilst a second is being prepared for future mining. The ore is concentrated on site as copper, lead and zinc concentrates

and transported first by road to the Sishen-Saldanha rail, then by rail to Saldanha from where the concentrates are either exported or distributed to local refineries.
Kimberlite-hosted diamonds have been produced from the cluster of diamond mines around Kimberley, which once were the backbone of the South African diamond industry. Current production still comes from the Finsch Mine some 40 km east of Postmasburg as well as from the Dutoitspan and Wessel ton Mines at Kimberley. Alluvial diamonds are worked, mostly on a small scale, from ancient river-borne gravels intermittently preserved from the Barkly West diamond fields (adjacent the Vaal River near Kimberley), westwards through Bitterputs in Namaqualand to the lower Orange River, and near the West coast. Marine diamonds are exploited at irregular intervals along the West coast at Koingnaas, Kleinzee and Alexander Bay, the latter being the oldest operation.

SMALLER PRODUCING MINES AND QUARRIES

Iron ore and mineral pigments, are mined on a smaller scale at the Beeshoek Mine west of
Postmasburg and at Rooinekke further to the south, while exploitation of the adjacent Postmasburg manganese field was discontinued in favour of the larger Kalahari field. Copper ore is mined at Nigramoep and concentrated and refined at Nababeep, some 14 km northwest of Springbok in Namaqualand. This mineralisation has been known since 1685, but regular exploitation started in 1852 and has continued till the present. Limestone for the cement industry is mined at Ulco, Postmasburg and Barklay West, while gypsum, also used for the cement industry, is mined at Warrenton. Gypsum is also extracted from deposits at Grootlemoenkop in the Calvinia District as well as in the Districts of Namaqualand and Prieska. Limited quantities of Silicified asbestos, known as tiger's eye, is obtained from near surface occurrences in the Niekerkshoop-Griquatown area and sold as a very popular semiprecious stone. Both sillimanite and wollastonite are exploited from small open workings in Namaqualand whilst barite is produced from Gamsberg near Aggeneys.

Although the Namaqualand-Kenhardt pegmatite belt is very extensive and contains thousands of pegmatite bodies, only a few have been exploited successfully in the past. Attempts to mine several other pegmatites on a small scale have failed due

either to a lack of water or infrastructure as well as the limited size of the pegmatites. The odd Kenhardt pegmatite is being exploited mainly for its feldspar which is used in the ceramics industry, whilst the pegmatites in the vicinity of Blesberg in Namaqualand, yield small quantities of tantalite, bismuth, mica and feldspar. Salt is beneficiated from some 24 saltpans scattered over a large part of the province; there are two salt workings in the Britstown area, two near Calvinia, three near Herbert, four near the Hopetown, one in the Jacobsdal, one in the Kimberley, nien in the Gordonia, one in the Douglas and one in the Vryburg Districts.

Granite and charnockite are extracted as dimension stone at Springbok and Garies in
Namaqualand. The Springbok operations require road transport to the nearest railhead at Bitterfontein. Some marginal operations, such as that extracting the Lekkersing quartzite in the Richtersveld, closed down due to a total lack in infrastructure and weak demand. Ceramic clay is produced in the Calvinia and Hopetown Districts, while kieselguhr, used
principally as a filtering agent, is exploited from pans in the Hay District.

DEPOSITS WITH MINING POTENTIAL

The Gamsberg zinc deposit near Aggeneys and the Black Mountain deposit at Aggeneys have yet to be mined. At present the price of zinc metal is too low to allow for profitable extraction from these deposits. The three small copper orebodies at Putsberg have no potential for a larger operator, nevertheless, with the appropriate feasibility study, they may sustain a small operator. Although the Prieska Mine at Copperton has closed down and the Areachap orebody is too small to be mined, the rocks of the Areachap Group constitute a sulphide-rich province, the true potential of which has yet to be fully evaluated. The pegmatite belt presents the small operator with many challenges and problems, but for the
dedicated and hardworking operator, there may be some opportunity for extracting feldspar, mica and rose quartz, in the Kenhardt and Namaqualand Districts.

The Iron Ore and Manganese Ore deposits which are situated on the Southeastern boundary of Black Rock town where the proposed prospecting is situated show the

viability of reserve in the area. The area is constituted by several stratiform lense of hard, high-grade hematite ore, hosted by the Paleoproterozoic Kuruman Iron ore formation of the Asbestos Hill subgroup of the Transvaal Supergroup. The other area can be described as a discontinuous rim of hematite ore, developed along the contact between the Kuruman Iron ore formation and a zoned carbonatitesyenite dyke.

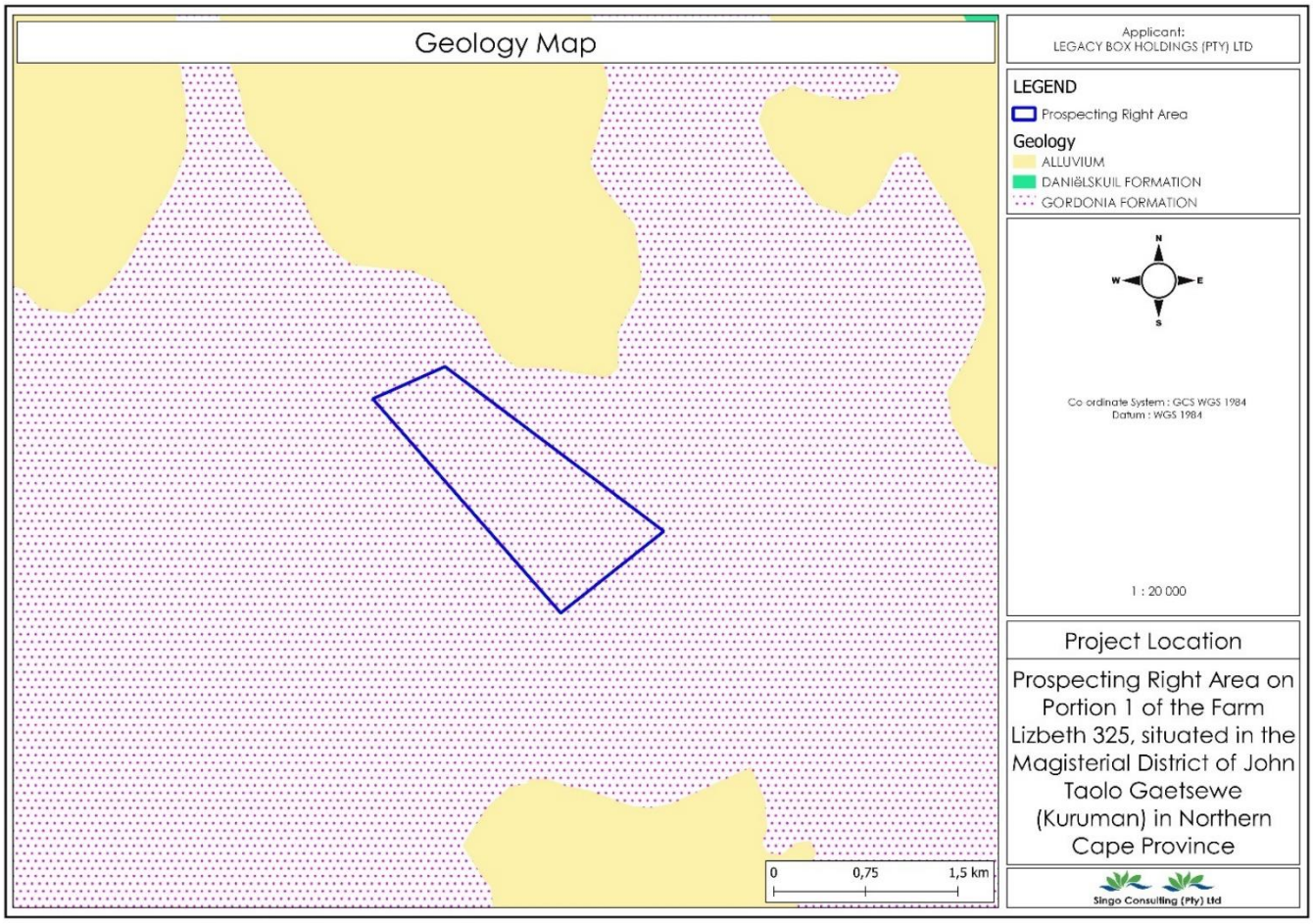


Figure 18: Geological of the proposed site.

8 REGIONAL CLIMATE

8.1 Climate

Climate is the state of the atmosphere over long time periods, such as over years, decades, centuries or greater and weather is defined as atmospheric conditions of an area over a short period of time (Naomi, 2004). Climate for the purpose of the study is chosen based on the fact that it does not change over a long period of time whereas weather conditions fluctuate more rapidly, and its data cannot be relied upon.

In Kuruman, a dry season is experienced in June, July, August, and September, with January been the warmest month and has an average maximum temperature of 31°C. July is the coldest month in Kuruman, with an average maximum temperature of 18°C, this is also the driest month with an average precipitation of 4mm. Most rainfall is experienced in the month of February with an average of 74 mm precipitation (Climate and average monthly weather in Kuruman, South Africa (weather-and-climate.com)

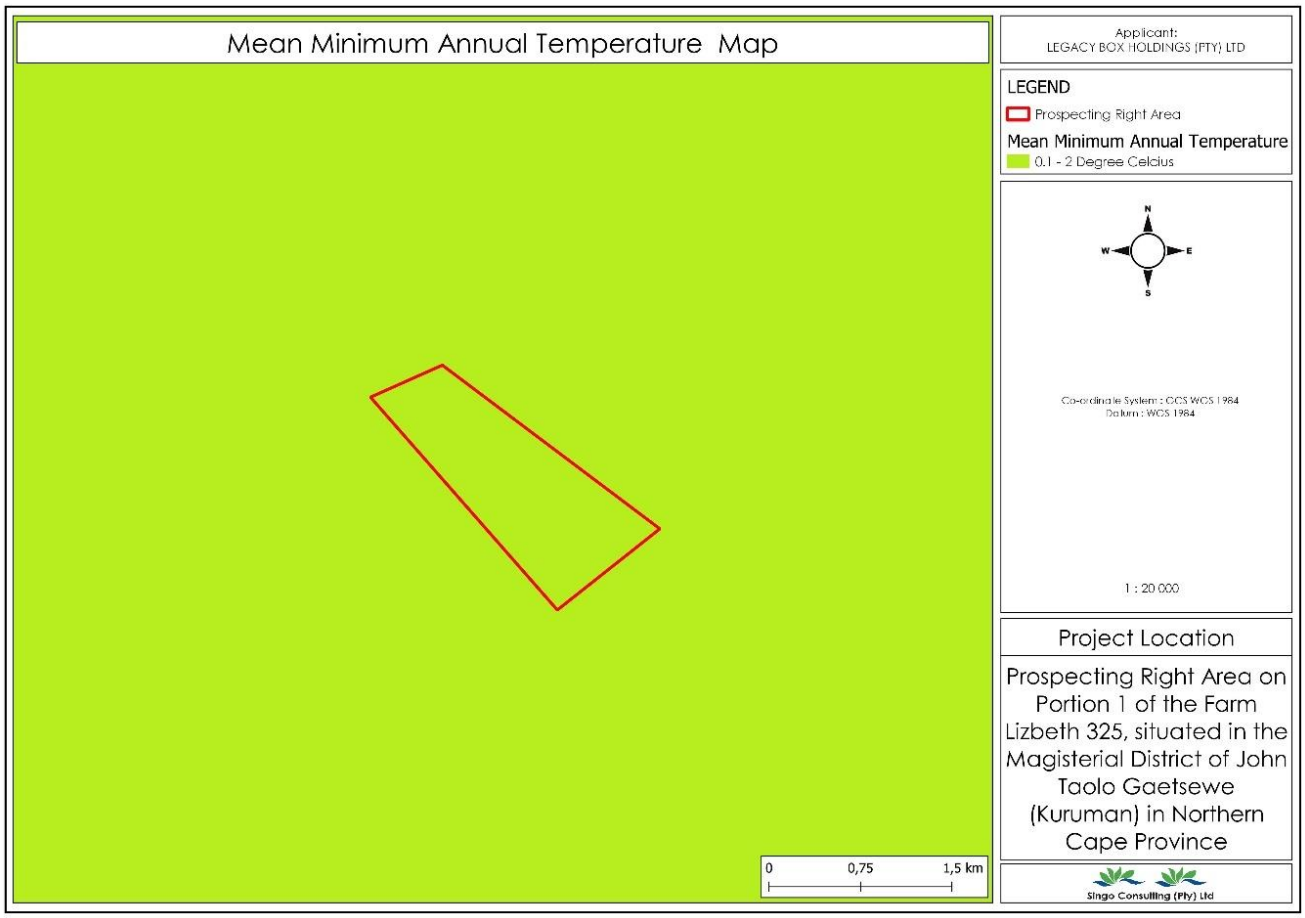


Figure 19:Mean Annual temperature map

8.2 Soil type

The soil classes map in Figure 4 below, shows that the prospecting right area is largely covered with the **freely drained, structureless soils**.

Freely drained, structureless soils:

The freely drained, structureless soils can be defined based on their soil depth, Soil Drainage, erodibility, and natural fertility.

Soil depth

Depth of the soil profile is from the top to the parent material or bedrock. This type of soil can be classified as a restricted soil depth. A restricted soil depth is a nearly continuous layer that has one or more physical, chemical, or thermal properties.

Soil Drainage

Soil drainage is a natural process by which water moves across, through, and out of the soil because of the force of gravity. The soils in the proposed area have an excessive drainage due to the soils having very coarse texture. Their typical water table is less than 150.

Erodibility

Erodibility is the inherent yielding or non-resistance of soils and rocks to erosion. The freely drained structureless soils have high erodibility. A high erodibility implies that the same amount of work exerted by the erosion processes lead to a larger removal of material.

Natural Fertility

Soil fertility refers to the ability of soil to sustain agricultural plant growth, i.e., to provide plant habitat and result in sustained and consistent yields of high quality. The soil, as a nature of them, contains some nutrients which is known as 'inherent fertility'. Among the plant nutrients, nitrogen, phosphorus, and potassium is essential for the normal growth and yield of crop. The proposed area has a low natural fertility soil.

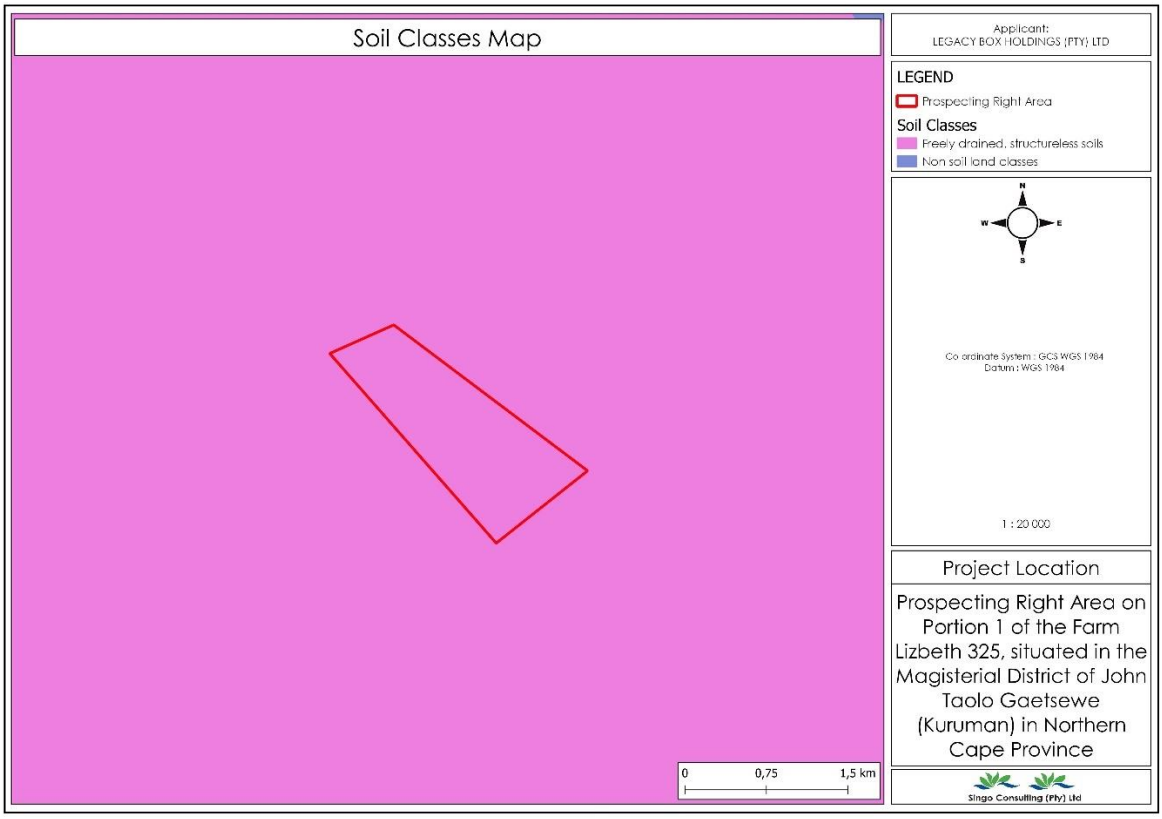


Figure 20: Soil classification.

8.3 Topography

The topology of the area is illustrated below by Figure 5. A Topographic map is a map which indicates, to scale, the natural features of the Earth's surface, as well as human features, with features at the correct relationship to each other (Oxford Dictionary; 2020). The topography map other than showing landform features, rivers, and associated water resources, it also shows the height above sea level with the use of contour lines. Contour lines are an Imaginary line on the ground surface joining the points of equal elevation. The topographical map used is of 20 meters contour interval and a scale of 1: 20 000. The scale is a representation of the real world and that of the map, which implies that 1 unit on the map equals 20 000 units on the ground.

In this environmental project, topography is used to determine how surface water flows during rainy seasons or how it would flow during the existence of the project. The topography also influences groundwater vulnerability, as topography also influences run-off and infiltration. The project area is situated on a flat topography, and the water bodies identified using Figure 6: Google earth view illustrating waterbodies and the landscape, includes the depression wetland and the non-perennial river.

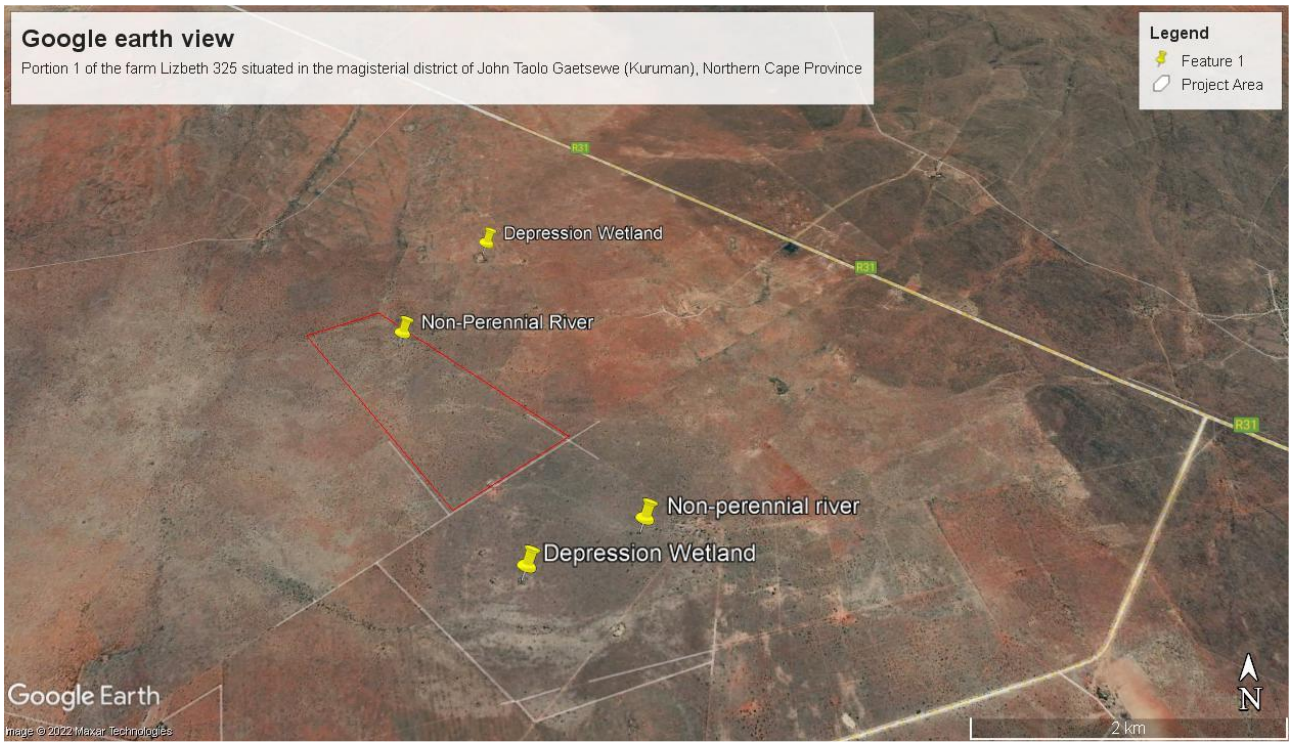


Figure 21: Google Earth View showing water bodies

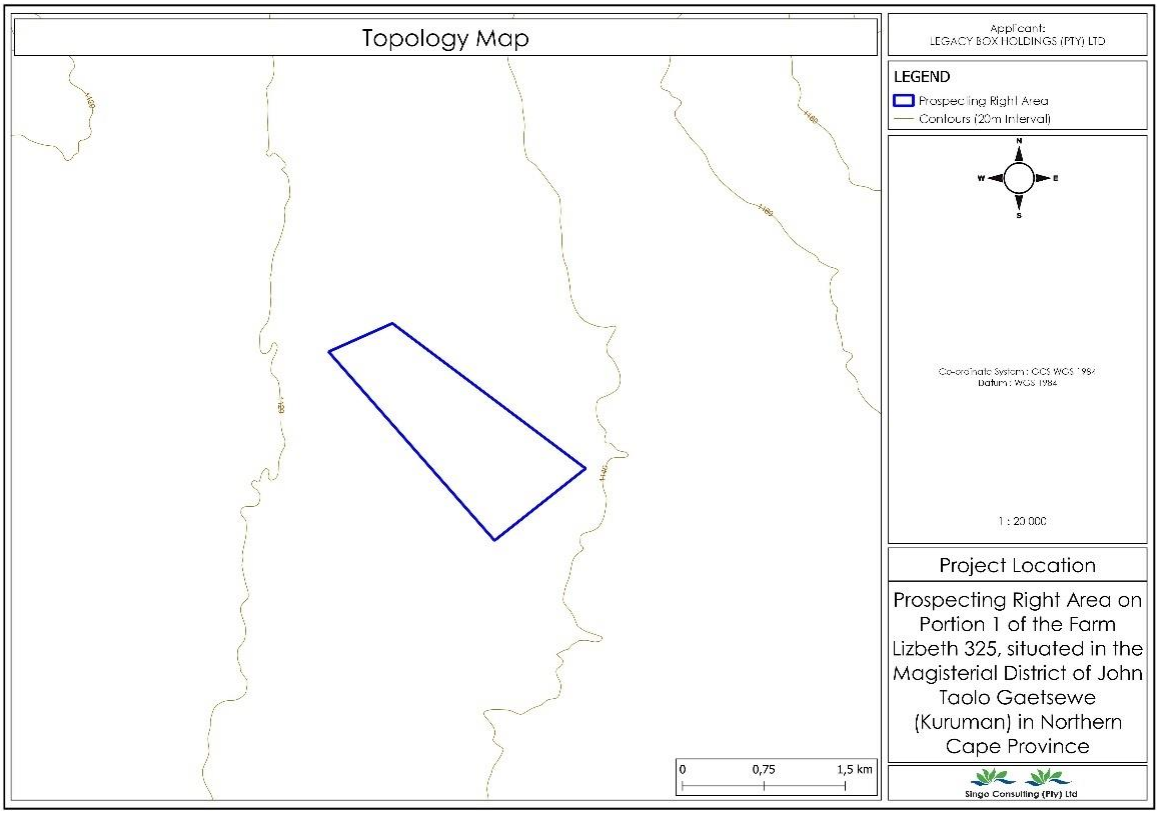


Figure 22: Topology Map

8.4 Hydrology

The hydrology surrounding the proposed area is of vital importance. In this context hydrology is all the surface waters appearing within and nearby the proposed project area, where a potential to be impacted upon by the project existence. The hydrology map, illustrates that the following water bodies exists within and nearby the project area:

➢ **Depressions:** Two depressions are identified outside the study area, in the northeastern direction and also western direction.

➢ **Non-Perennial River:** A non-perennial river is identified in the northern direction of the study area.

There will be procedures and guidelines put in place for this project to avoid the risk of water contamination through nearby waterbodies identified, such as ensuring strict management of waste material and buffering. It will be advised on more mitigation measures to ensure the waterbodies as seen on the hydrology map are not contaminated.

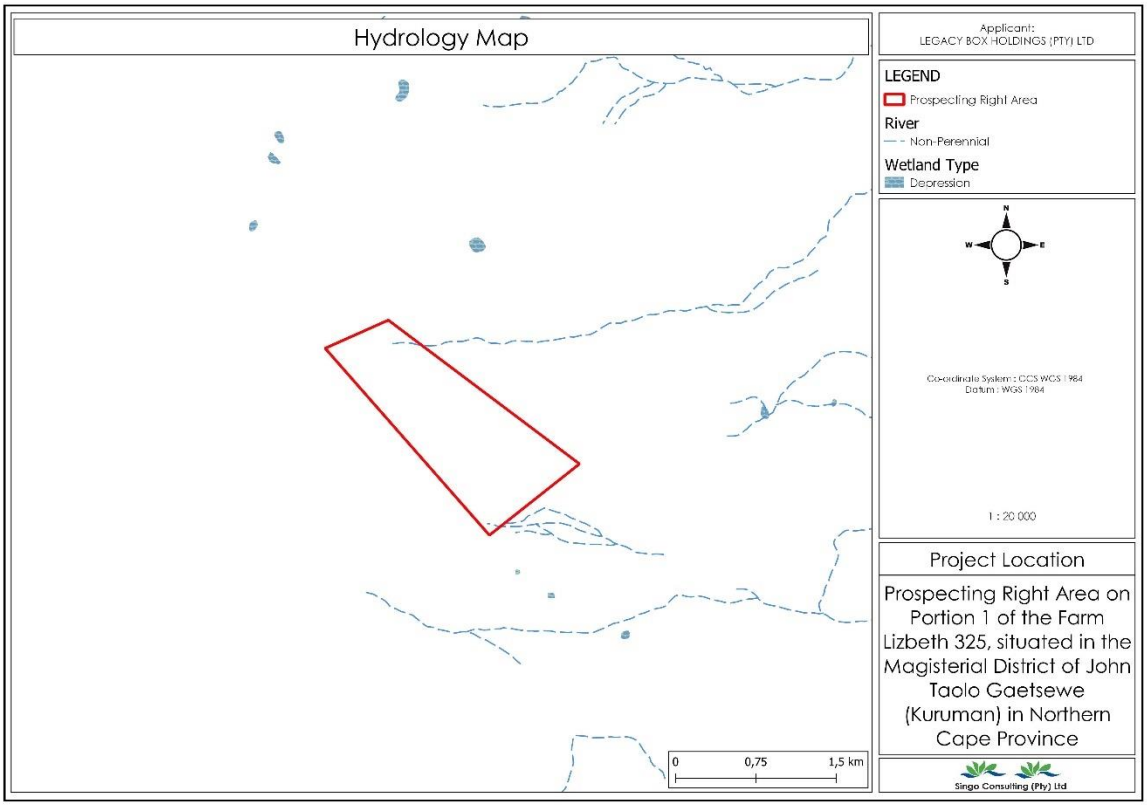


Figure 23: Hydrology of the area.

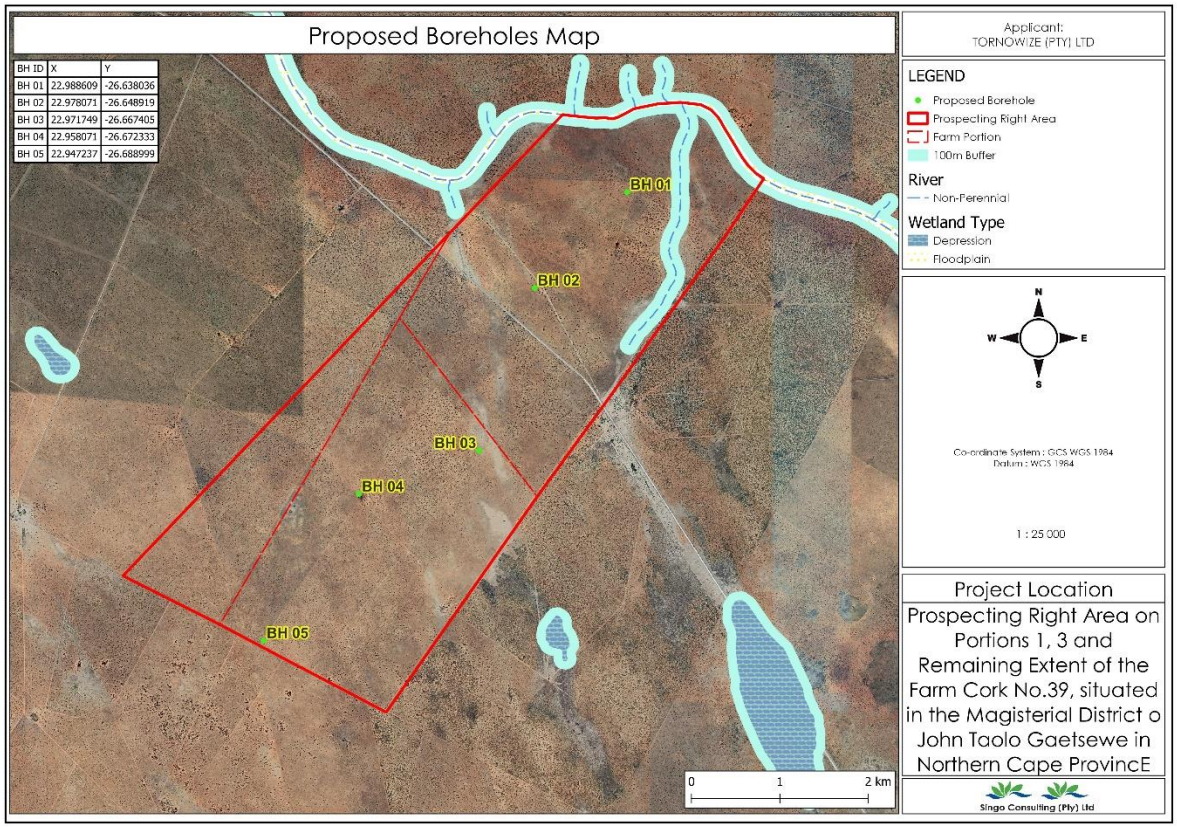


Figure 24: Proposed Borehole Map

8.5 Buffers

The natural environment is still being destroyed at an alarming rate, all over the globe (Ebregt and Greve, 2000).

According to the National Environmental Management: Protected area Act of 2003 no 57, Buffers are areas peripheral to a specific protected area, where restrictions on resource use and special development measures are undertaken to enhance the conservation value of the protected area.

Within and around the study area, there is a presence of the following identified waterbodies, the waterbodies identified and must be buffered:

- **Non- Perennial River**
- **Depression**

To ensure that such water bodies remain protected throughout the existence of the project, buffers are put in place to mitigate the impacts which such project will have on the protected area. For the proposed site, buffers in place are 100 m, which implies that the proposed project should not operate within 500m from the waterbody.

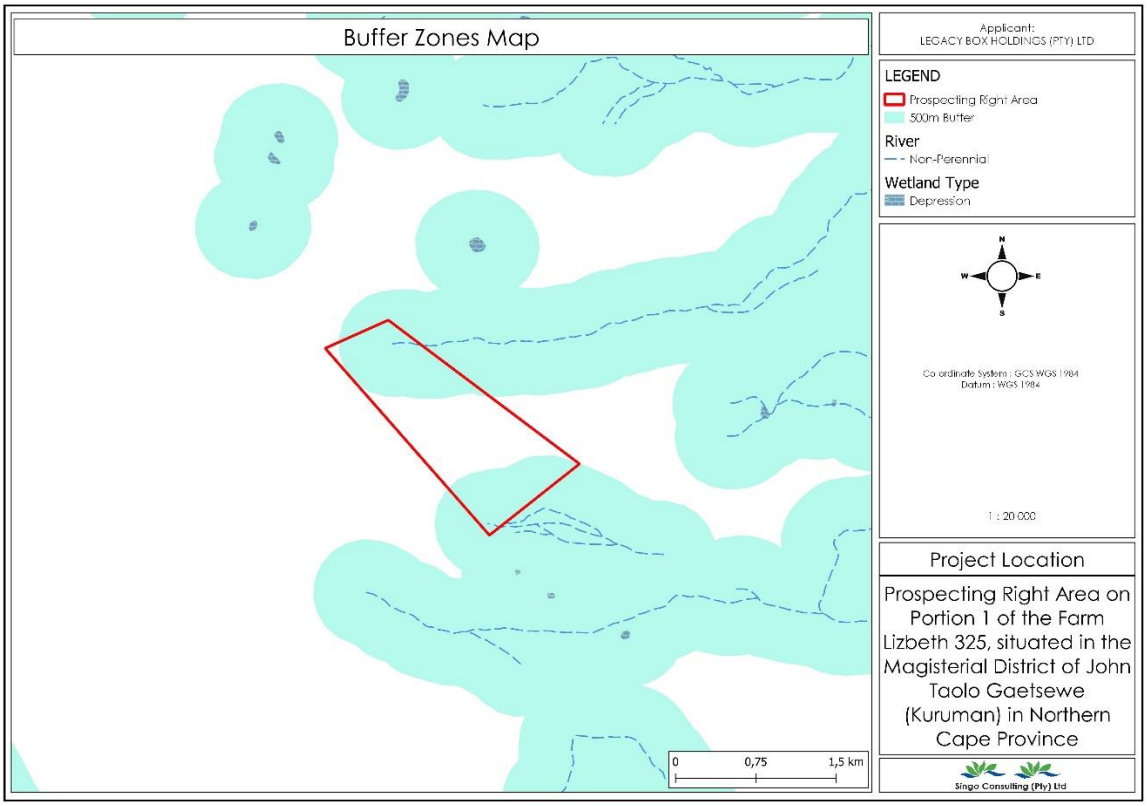


Figure 25: Buffer Zone Map

8.6 Rainfall

Kuruman experiences significant seasonal variation in monthly rainfall. The rainy period of the year lasts for 7.9 months, from September 19 to May 16, with a sliding 31-day rainfall of at least 13 millimeters. The month with the most rain in Kuruman is February, with an average rainfall of 55 millimeters.

The rainless period of the year lasts for 4.1 months, from May 16 to September 19. The month with the least rain in Kuruman is July, with an average rainfall of 2 millimeters.

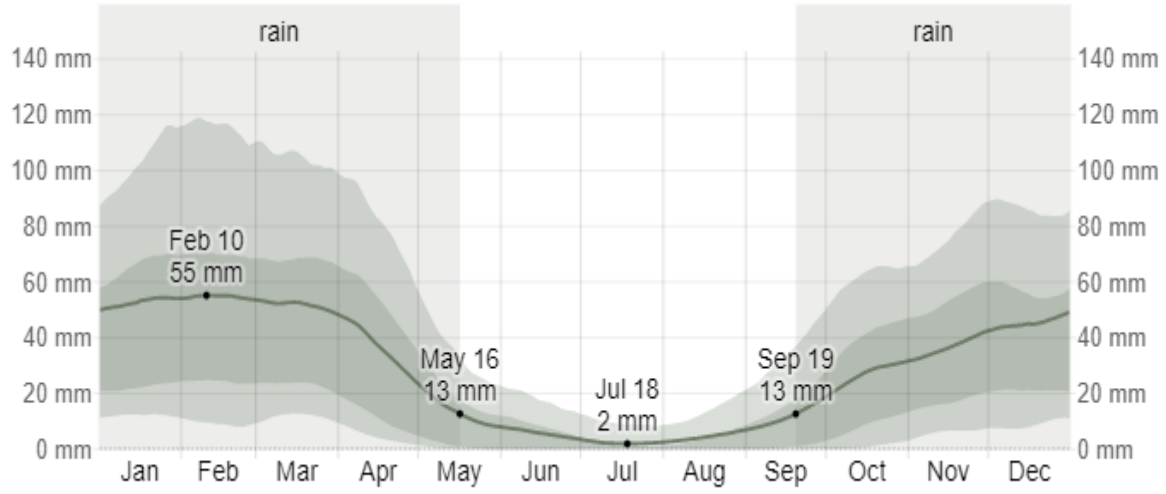


Figure 26: Graph showing summary of average monthly rainfall for the proposed site. (Source: weatherspark.com).

The proposed project area receives mean annual rainfall range from 201 mm to 400 mm as indicated in figure 26 below.

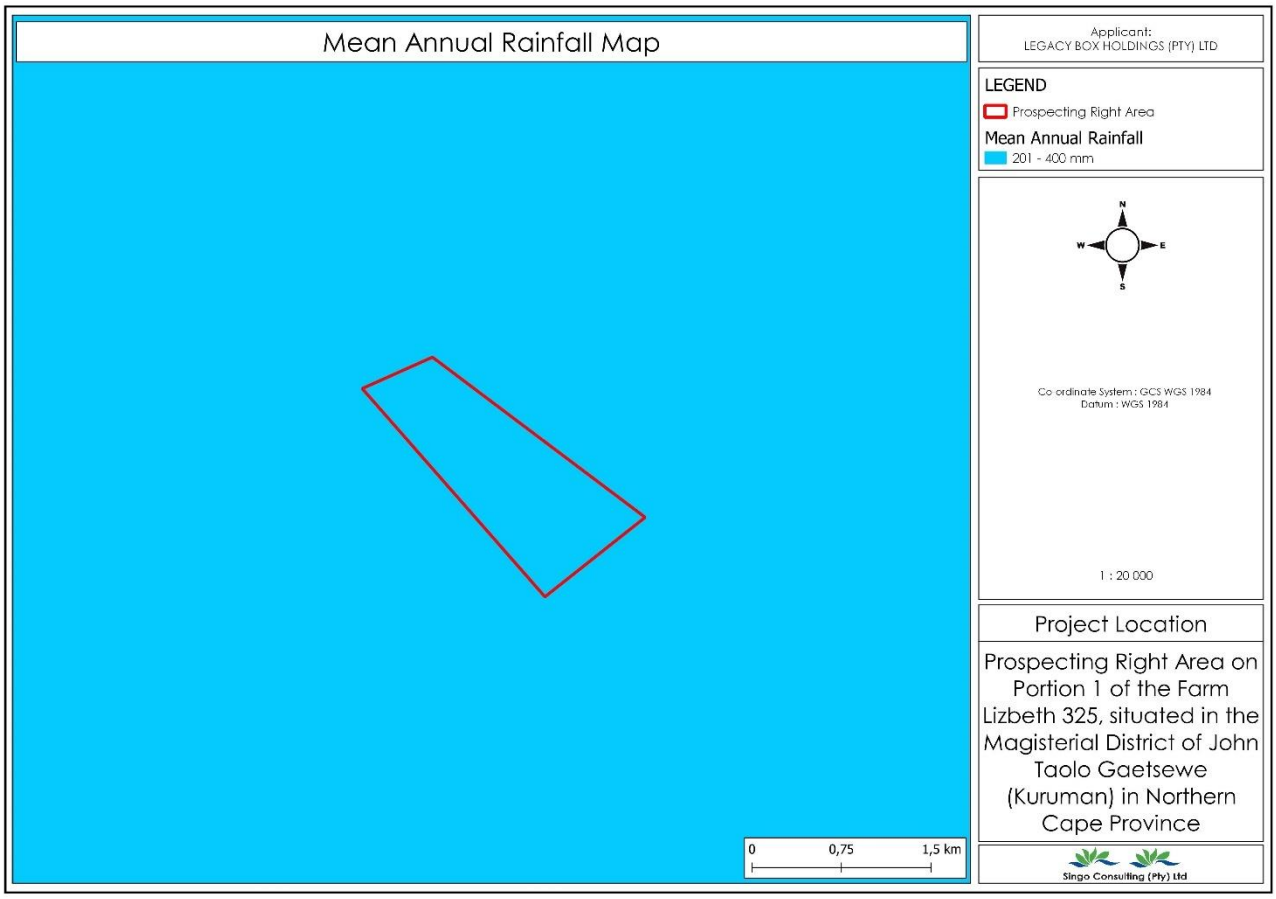


Figure 27: Mean Annual Rainfall Map of the study area.

8.7 Vegetation cover

According to the vegetation Map created by Singo Consulting GIS Specialist it shows that the area is dominated by Kalahari Plains Thorns Bushveld. According to Low & Rebelo (1996), the dominant vegetation type is that of Kalahari Plains Thorn Bushveld and falls into the Savanna Biome. The Kalahari Plains Thorn Bushveld is characterised by a fairly well-developed tree stratum, the shrub layer is moderately developed, and the grass cover depends on the amount of rainfall during the growing season. (https://sahris.sahra.org.za/sites/default/files/additionaldocs/App%20J%20-%20Soil%20and%20Land%20Capabilty.pdf). According to screening tool report is shows that the type of vegetation that occupies the area is characterized as low sensitive.

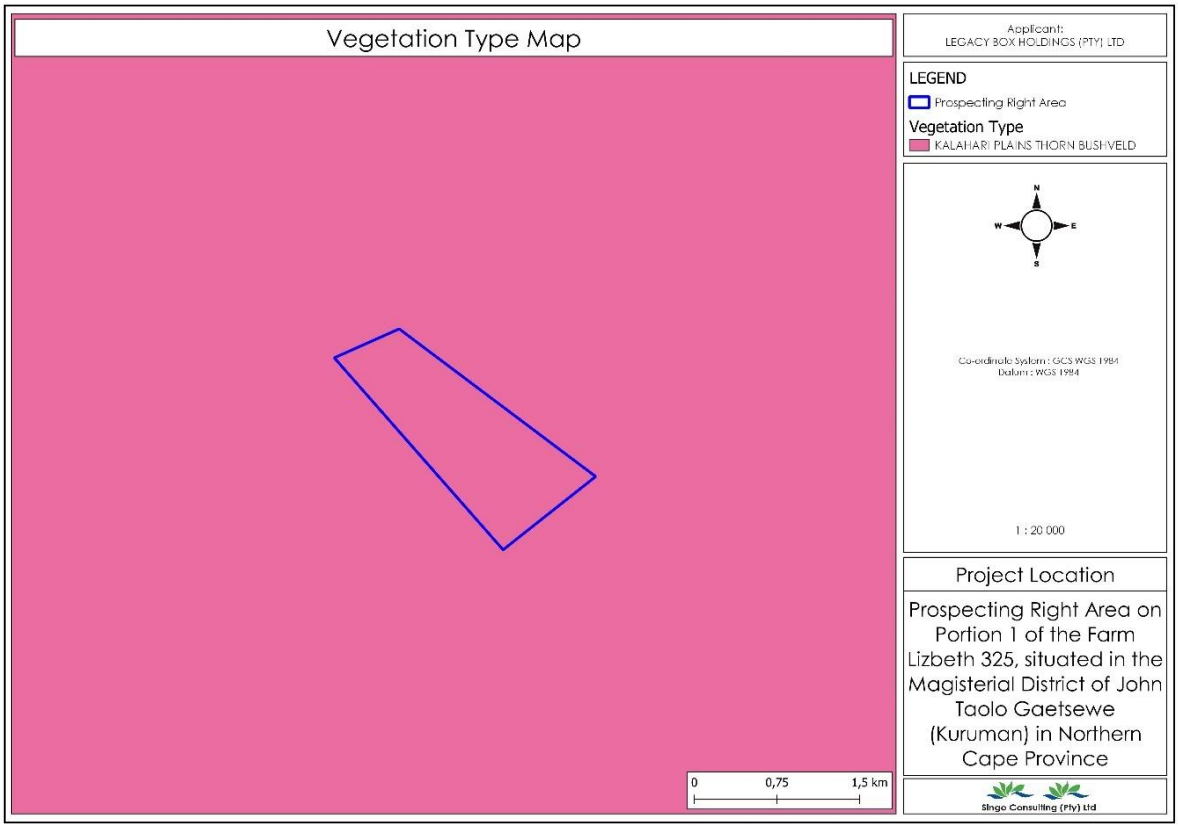


Figure 28: Vegetation in the area.

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

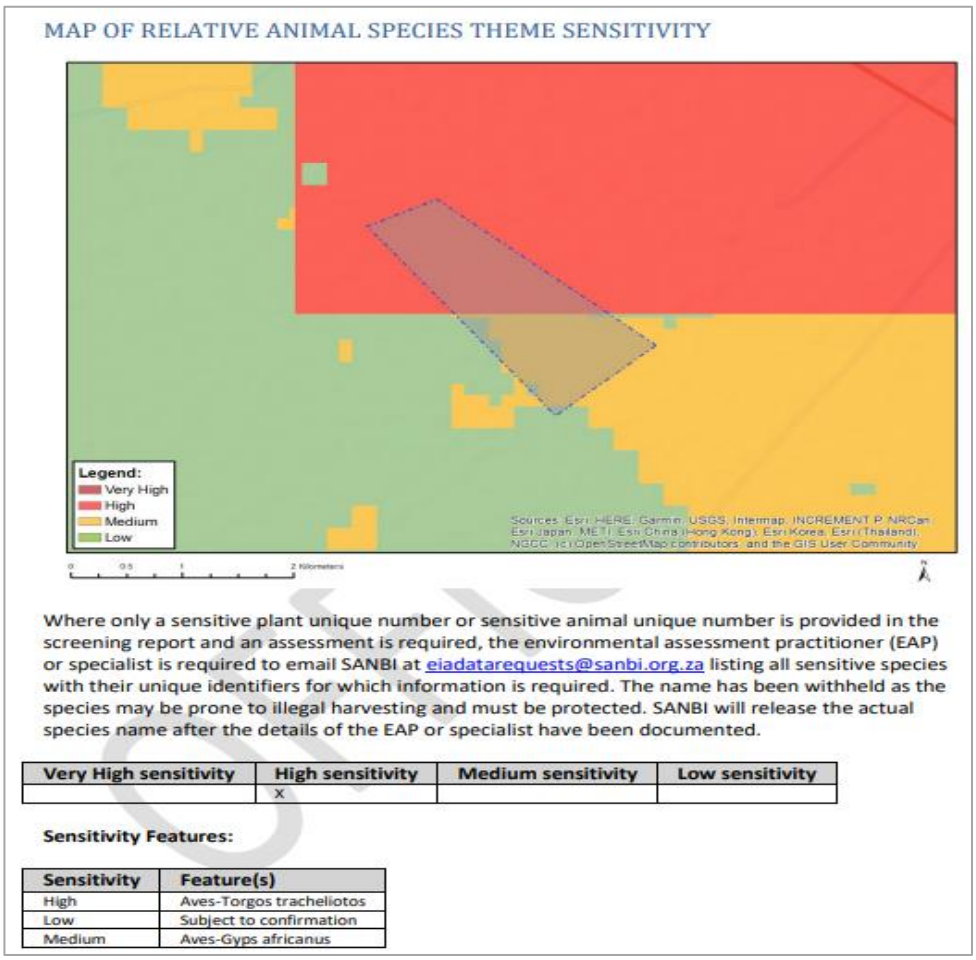
Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

Figure 29: Map of the Relative Plant species sensitivity

8.8 Fauna

According to screening tool report the area is characterised as high sensitivity area. Screening tool deduced Aves-Gyps africanus as medium sensitive animal species that is found in the proposed area and Aves-Torgos tracheliotos as highly sensitive animal species that is found in the area.



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Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Torgos tracheliotos
Low	Subject to confirmation
Medium	Aves-Gyps africanus

Figure 30: Map of Relative Species Theme Sensitivity

8.9 Biodiversity

According to the biodiversity map below the proposed project area is located within Other Natural Areas and according to the screening tool report it shows that the aquatic biodiversity of the area is characterised as highly sensitive simply because of the non-perennial streams that are within the area as indicated by the Hydrology Map on figure 25, the screening tool also indite that terrestrial biodiversity of the area is characterized as low sensitive. There must be no habitat loss and this biodiversity category must be maintained in its natural state. Low-impact operations must be carried out on the land to stop additional biodiversity loss.

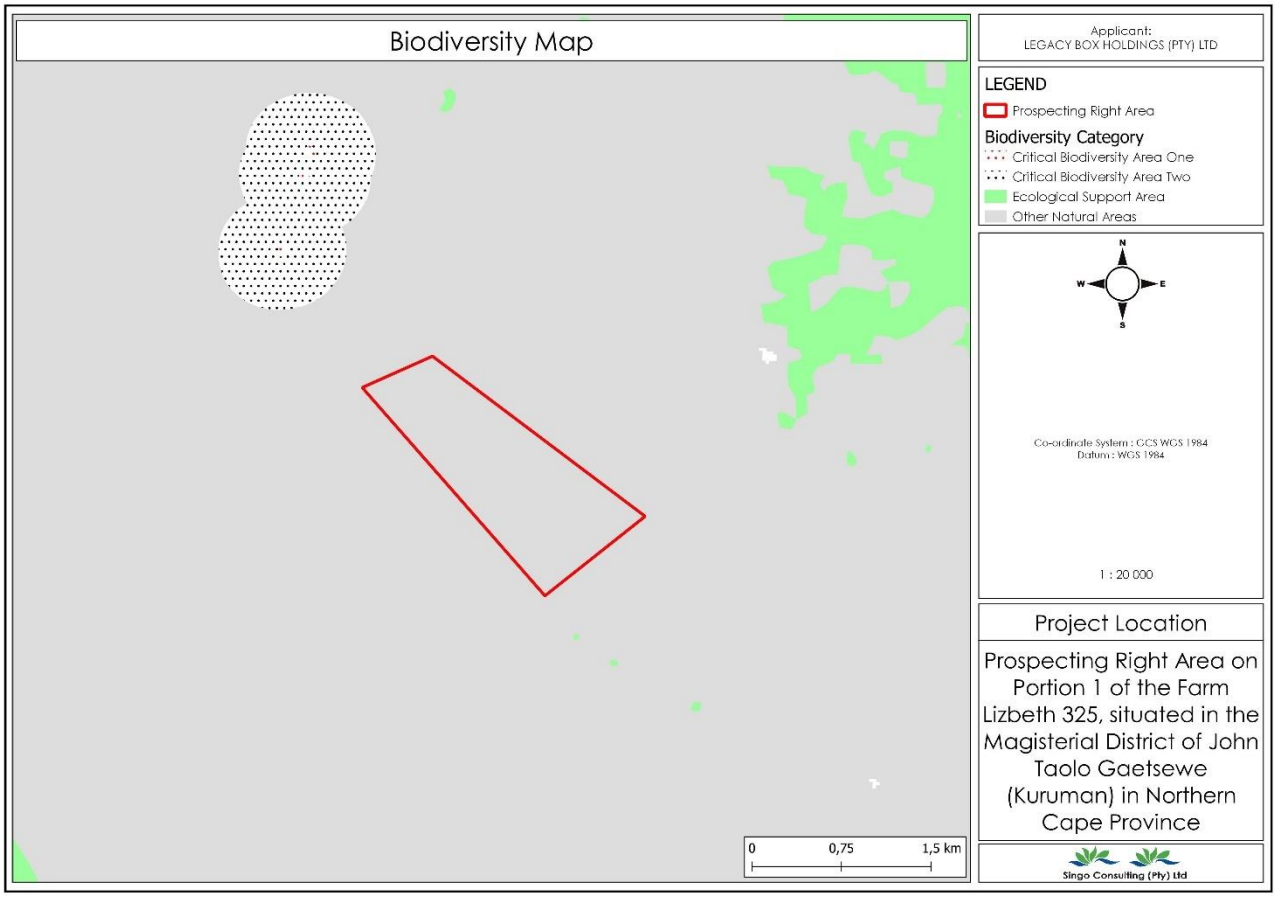
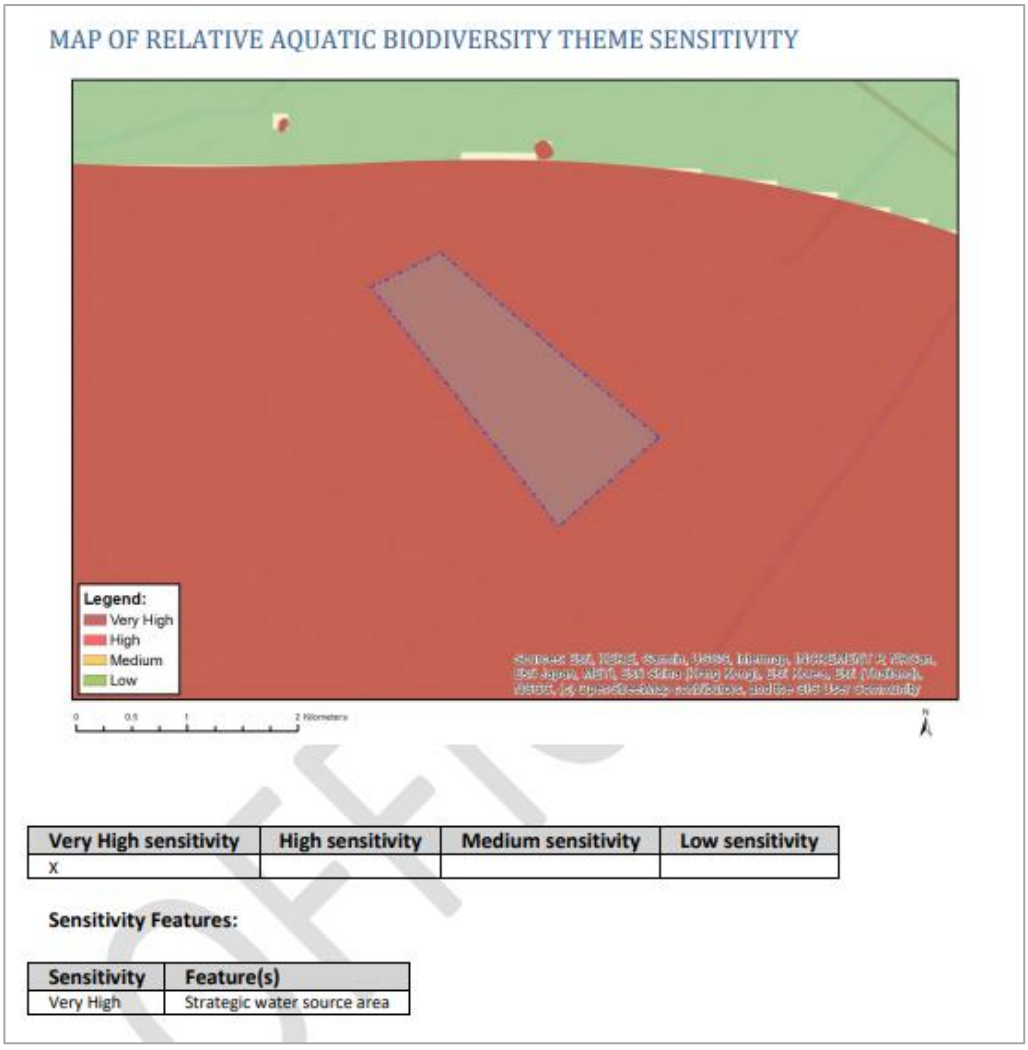


Figure 31: Biodiversity of the area.

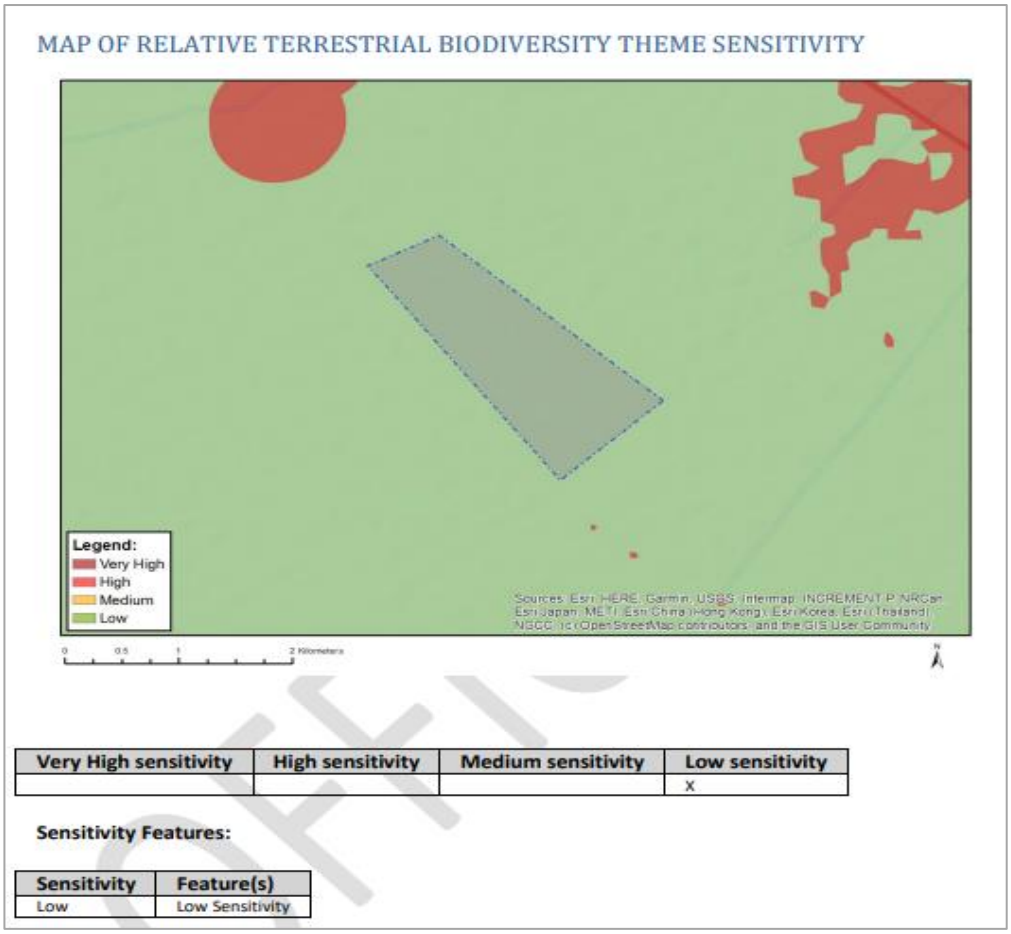


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Strategic water source area

Figure 32: Map of the Relative Aquatic biodiversity theme sensitivity



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

Figure 33: Map of Relative Terrestrial Biodiversity Theme Sensitivity

- Biome

The Savanna Biome is the largest Biome in southern Africa, occupying 46% of its area, and over one-third the area of South Africa, the largest biome in southern Africa is the savanna. It is well developed in South Africa's lowveld and Kalahari regions. Over a grassy ground layer, it has a distinct top layer of woody plants. When the vegetation is close to the ground, it is referred to as shrub veld, when it is dense, as woodland, and when it is in between, as bushveld. Savanna vegetation is primarily grazed by game or livestock. Goats are the predominant stock in the southernmost forms of savanna. Crops and subtropical fruit are grown in various locations. These primarily fall under the categories of Clay Thorn Bushveld, Mixed Bushveld, and Sweet Lowveld Bushveld.

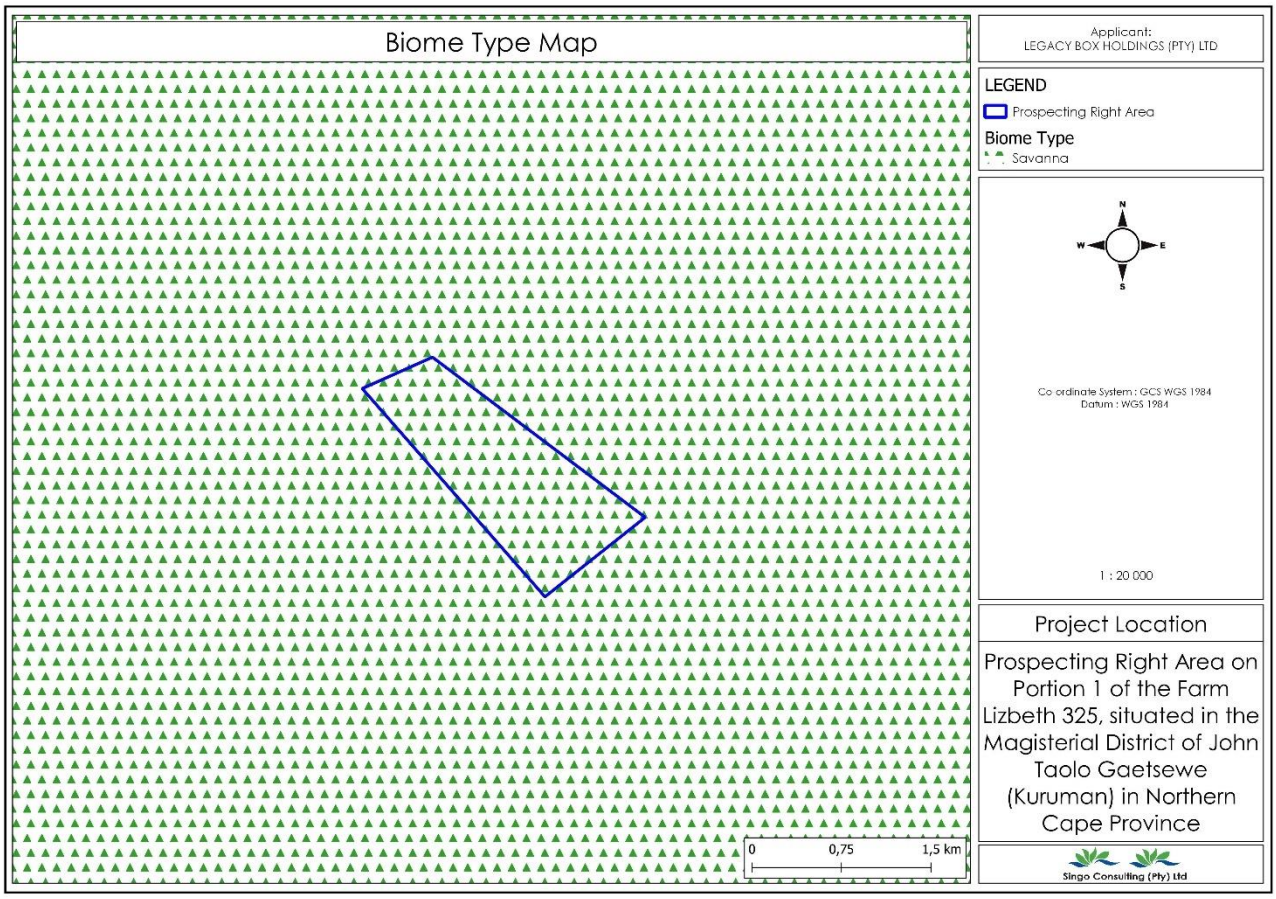
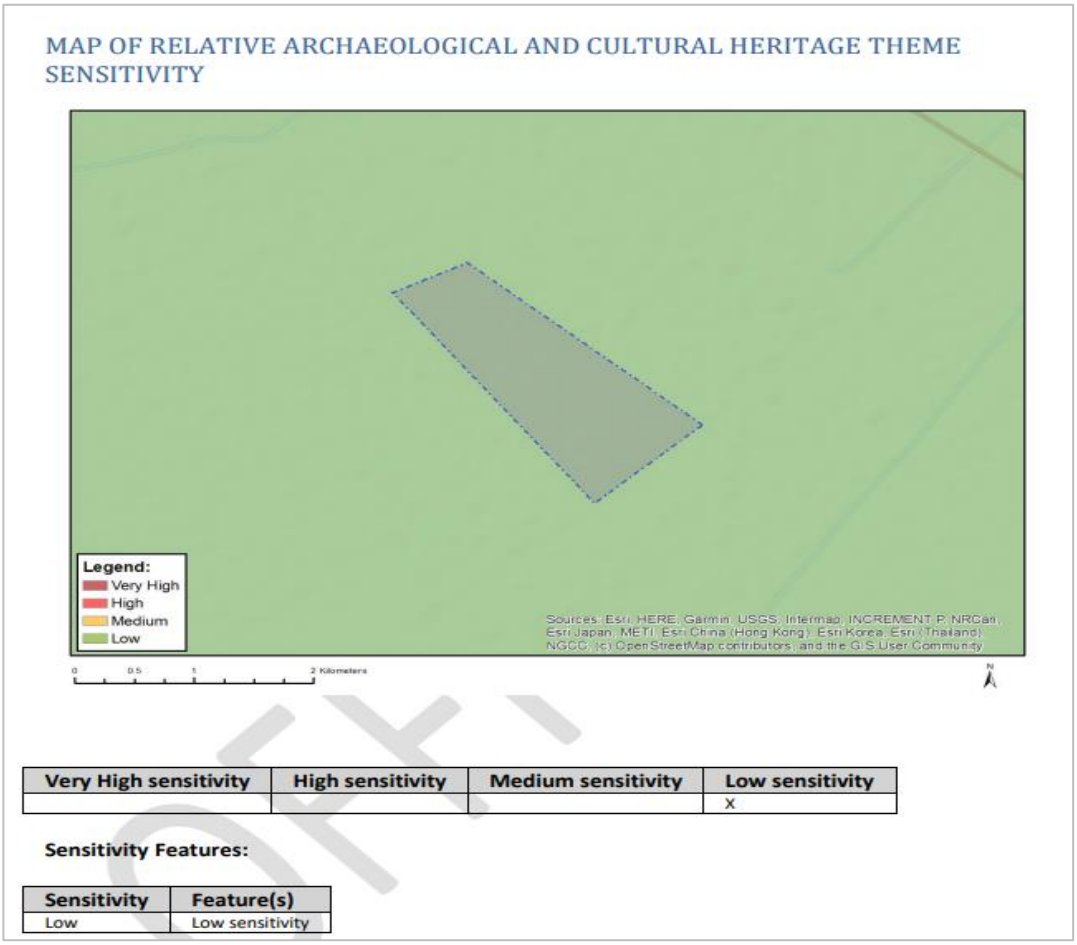


Figure 34: Biomes Map

8.10 Cultural and Archaeological

According to screening tool report the Relative Archaeological and Cultural Heritage Theme Sensitivity is characterised as low sensitive area, without being able to access the site we can't confirm that the has any archaeological structures within the site.



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

Figure 35: Map of Relative Archaeological and Cultural Heritage Theme Sensitivity

8.11 Socio-economic status

8.11.1 Demographics

Proposed Application for prospecting right is lodged on the farm LIZETH 325 which is situated in the Magisterial District of John Taolo Gaetswe (Kuruman), Northern Cape Province. Joe Morolong Local Municipality formerly known as Moshaweng Local Municipality is an average small area spreading over about 9477.4560 square kilometers. It is located in Northern Cape Province of South Africa within John Taolo Gaetsewe District Municipality. The area is mostly rural with about 60% of it

compromising virgin land surface. The total population of the area is less than 100 000 with only 58% of it being economically active.

Figure 36:John Taolo Gaetswe District Municipality Structure

John Taolo Gaetsewe (formerly Kgalagadi) is one of the five districts of the Northern Cape province of South Africa. The seat of the authority is Kuruman. The majority of its 176,899 people speak Setswana (2001 Census). The district code is DC45.

8.11.2 Employment profile

Employment opportunities are mostly found in the secondary and tertiary sectors in urban area of the local municipality. Majority of the population is employed but also the number of the unemployment and "not economically active" is very high. The unemployment rate was 33, 7% during the 2011 census. The municipality still has challenges that hinders employment rate to go up. 13.6% reported inadequate employment 36 opportunities as being the major challenge in their municipality. The high unemployment rate results to poverty especially on the rural areas of the

municipality. The level of unemployment in the municipality results to slow growth since the community cannot pay for services.

The number of those who are not economically active is very high, which means a large portion of the population depends on social grants and those employed. The number of employed people increased from 5 924 in 2001, to 7 841 in 2011; a decrease in unemployment from 45.3% in 2001, to 39.7% in 2011.

8.12 Description of the current land uses

According to the Baseline soil study that was conducted by Singo Consulting it indicate that the entire prospecting right area is covered with natural vegetation. Natural vegetations are the endowments of nature, growing naturally by following the climatic variables. The types of natural vegetation differ according to precipitation, soil, climate, and topography. Therefore, the natural vegetations are expected to vary from one location to the other.

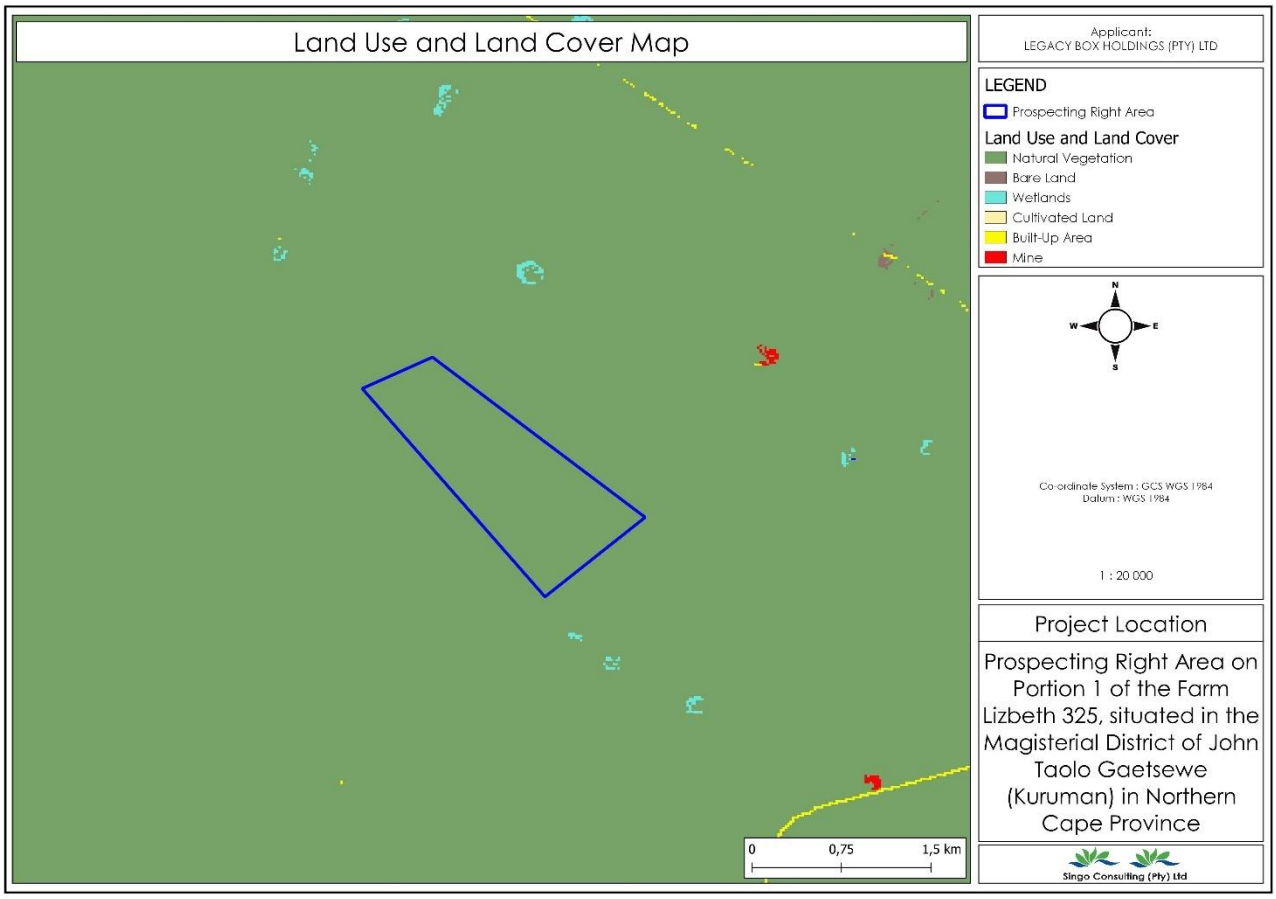


Figure 37: Current land use on the area

8.13 Land Capability

The Land capability classification is one of several interpretation groups that was made for agricultural purposes. As with all the interpretation groups, the land capability classification starts with one soil-mapping unit, which is the building block of the system.

The land capability is classified as grazing, grazing lands have the potential to provide food for people, secure clean water and wildlife habitat, and store carbon in the soil, which helps to mitigate climate change. Furthermore, grazing lands help to cycle nutrients and build healthy soil through vigorous vegetation growth. In this classification the arable soils are grouped according to their potentialities and limitations for sustained production of the common cultivated crops that do not require specialized site conditioning or site treatment.

Nonarable soils (soils unsuitable for long time sustained use for cultivated crops) are grouped according to their potentialities and limitations to produce permanent vegetation and according to their risks of soil damage if mismanaged. The land capability of the proposed area is classified as an arable land and grazing. Arable land is any land capable of being ploughed and used to grow crops.

The prospecting area is suitable for growing crops as it is classified as arable, and small portion of the study area is classified as grazing as seen on Figure 6.

The capability grouping of soils is designed:

0. To help landowners and others use and interpret the soil maps,

1. To introduce users to the detail of the soil map itself, and

2. To make possible broad generalizations based on soil potentialities, limitations in use, and management problems.

The capability classification provides three major categories of soil groupings:

0. Capability unit,

1. Capability subclass, and

2. Capability class.

The first category, capability unit, is a grouping of soils that have about the same responses to systems of management of common cultivated crops and pasture plants. Soils in any one capability unit are adapted to the same kinds of common cultivated and pasture plants and require similar alternative systems of management for these crops. Long-time estimated yields of adapted crops for individual soils within the unit under comparable management do not vary more than about 25 percent.

The second category, the subclass, is a grouping of capability units having similar kinds of limitations and hazards. Four general kinds of limitations or hazards are recognized: (1) Erosion hazard, (2) wetness, (3) rooting zone limitations, and (4) climate.

The third and broadest category in the capability classification places all the soils in eight capability classes. The risks of soil damage or limitations in use become progressively greater from class I to class VIII. Soils in the first four classes under good management can produce adapted plants, such as forest trees or range plants, and the common cultivated field crops ^ and pasture plants. Soils in classes V, VI, and VII are suited to the use of adapted native plants. Some soils in classes V and VI are also capable of producing specialized crops, such as certain fruits and ornamentals, and even field and vegetable crops under highly intensive management involving elaborate practices for soil and water conservation. Soils in class VIII do not return on-site benefits for inputs of management for crops, grasses, or trees without major reclamation.

The grouping of soils into capability units, subclasses, and classes is done primarily based on their capability to produce common cultivated crops and pasture plants without deterioration over a long period of time. To express suitability of the soils for range and woodland use, the soil mapping units are grouped into range sites and woodland-suitability group.

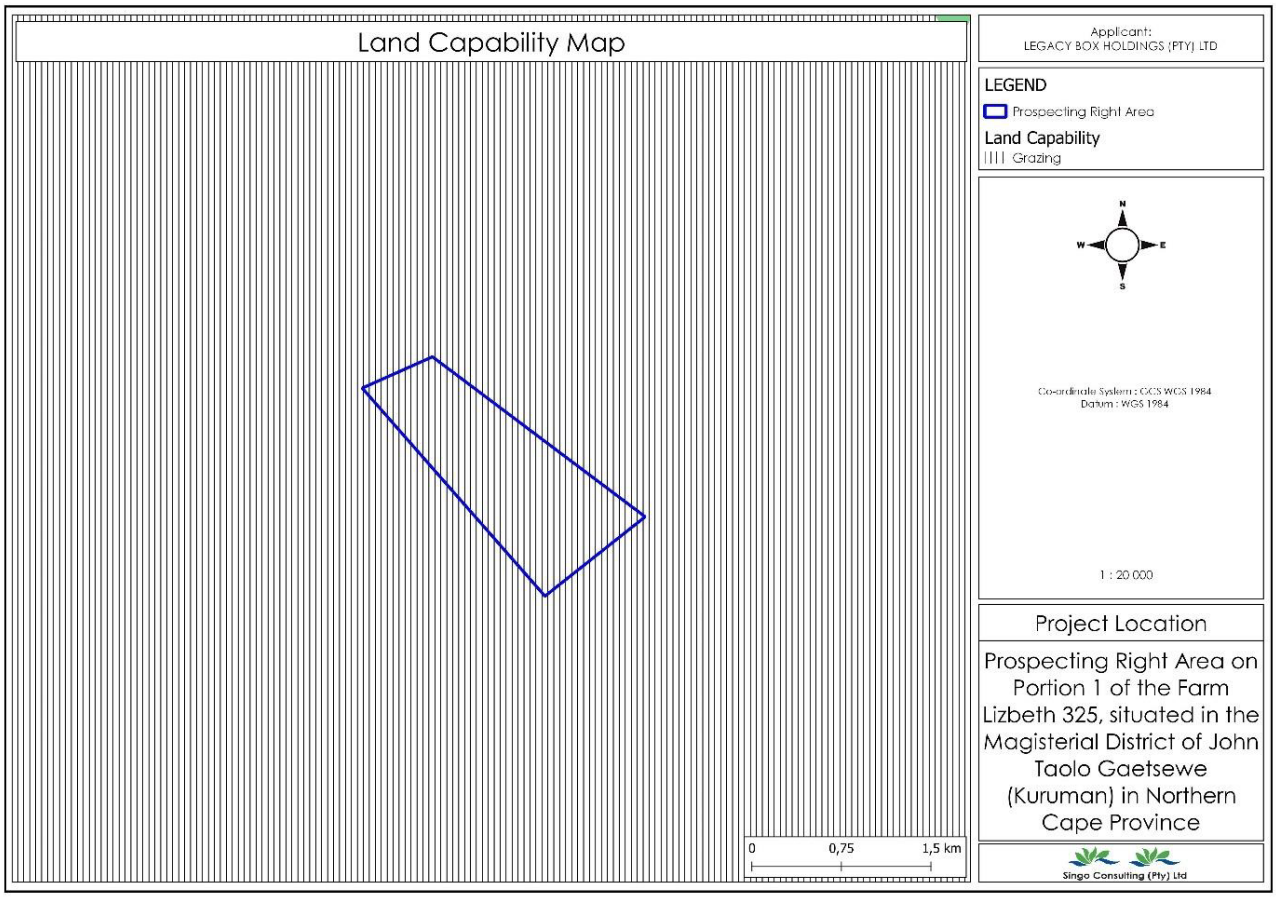


Figure 38: Land Capability Map

9 IMPACTS AND RISKS IDENTIFIED INCLUDING 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).

Table 8: Impacts identified.

Unite Number	Activity	Aspect	Impact	Significance Rating Before Mitigation Measures									Mitigation Measures	Significance Rating after Mitigation Measures								
				I	F	D	E	P	S	C	IS	SIGNIFICANCE		I	F	D	E	P	S	C	IS	SIGNIFICANCE
1, 0	Employment of workers and procurement of materials	Social	Creation of employment. The nature of the project is one where a contractor is outsourced therefore the project is minuscule and only general workers may be employed	1	1	1	1	0, 4	1, 0	1, 0	0, 4	(P) Very Low	Procumbent opportunities will be maximised as much as possible. Services may be sourced from the local community.	2	1	1	1	0, 6	1, 3	1, 2	0,7	(P) Very low

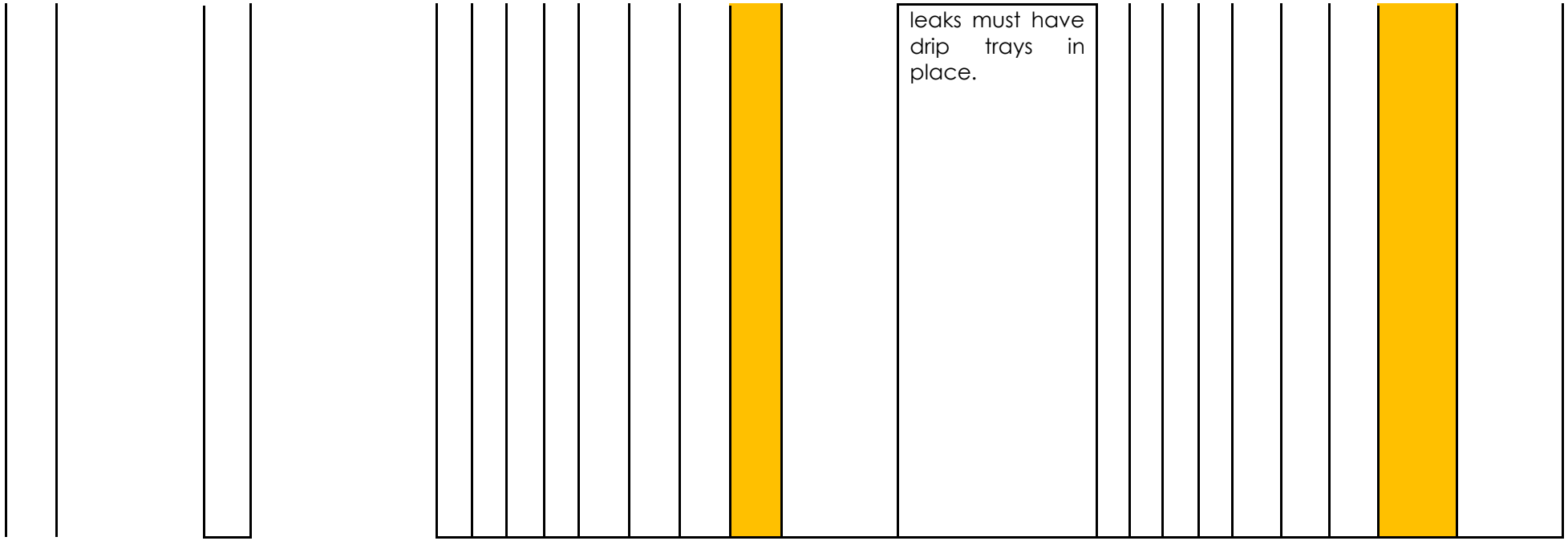
2,0	Transportation of equipment and material to site	Air Quality	Dust generation emanating from the movement of the drill rig onto the site.	3	1	1	1	1,0	1,7	1,3	1,3	Low	Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; Vehicles will obey speed limits.	2	1	1	1	0,8	1,3	1,2	0,9	Very low
		Topography and Visual Environment.	Topographical change Negative visual impact caused by driling	2	1	1	1	0,8	1,3	1,2	0,9	Very low	Ensure liaison with the local authorities for the maintenance and upkeep of roads; Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; and Vehicles will obey speed limits.	2	1	1	1	0,6	1,3	3,0	1,8	Very low

			Surface and ground water		2	5	4	1	0,8	3,7	2,3	1,9	Low	All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; All vehicles and machinery to be serviced in a hard park area or at an off-site location; Storage of hydrocarbons and explosives must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973);		2	5	5	2	0,6	4,0	3,0	1,8	Low	

												Hydrocarbons and explosives storage facilities must be in a hard park bunded facility; and Vehicles with leaks must have drip trays in place.											
		Maize Crop	Clearance of maize where borehole is to be drilled	3	1	1	1	1,0	1,7	1,3	1,3	Low	Drilling will only occur after harvest. No crops will be removed. Drilling will occur during the dry seasons. Area will be rehabilitated immediately to prepare for planting of seeds	2	1	1	1	1,0	1,3	0,8	0,8	Very low

		Soil	Soil compaction.	3	1	1	1	0,8	1,7	1,3	1,1	Low	If possible, vegetation clearance can be scheduled to coincide with low rainfall conditions when soil moisture is anticipated to be relatively low such that the soils are less prone to compaction (during dry seasons) The movement of heavy vehicle (drill rig) should be limited to existing roads.	2	1	1	1	0,8	1,3	1,2	0,9	Very low

3.	Use and storage of fuel and lubricants.	Soil	Soil contamination and degradation.	3	1	1	1	0,8	1,7	1,3	1,1	Low	All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; All vehicles and machinery to be serviced in a hard park area or at an off-site location; Storage of hydrocarbons must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); and Vehicles with	2	5	5	2	0,6	4,0	3,0	1,8	Low


leaks must have drip trays in place.

		Surface Water	Impacts on surface water resources as a result of hydrocarbon spills.	3	3	1	2	0,6	2,3	2,2	1,3	Low	In case whereby contractors bring on site mobile bowsers and lubricants, these are to be stored in a bunded area when parked at the construction areas; All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; All vehicles and machinery to be serviced in a hard park area or at an off-site location;	2	3	1	1	0,4	2,0	1,5	0,6	Very low

	Storage of hydrocarbons must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); and Vehicles with leaks must have drip trays in place.

		Groundwater	Groundwater contamination	4	3	1	2	0,6	2,7	2,3	1,4	Low	In case whereby contractors bring on site mobile bowsers and lubricants, these are to be stored in a bunded area when parked at the construction areas; All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; All vehicles and machinery to be serviced in a hard park area or at an off-site location;	2	2	1	1	0,4	1,7	1,3	0,5	Very low

														Storage of hydrocarbons must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); and Vehicles with leaks must have drip trays in place.										
4,0	4. Site clearance as a result of the preparations for temporary surface infrastructure.	Air Quality	Dust generation emanating from the activities associated with prospecting	4	4	1	3	1,0	3,0	3,0	3,0	Moderate	The area of disturbance must be restricted to the required footprint size; Ensure that only vegetation within the designated areas is removed; Gravel roads to be wetted by a	3	3	1	2	0,8	2,3	2,2	1,7	Low

												water browser and/or any applicable dust suppressant so as to reduce dust plumes.										
		Topography and Visual Environment	Disturbance of scenery due to site and machinery	3	1	1	1	1,0	1,7	1,3	1,3	Low	Machinery and site set up will only be present during the specified, communicated and agreed upon timeframe.	2	1	1	1	1,0	1,3	1,2	1,2	Low

		Soil erosion and generation of dust.	3	3	1	2	0,8	2,3	2,2	1,7	Low	Dust can be mitigated by suppressants so that the construction phase does not produce bursts of dusts	3	2	1	2	0,6	2,0	2,0	1,2	Low
		Soil compaction.	3	3	1	1	0,8	2,3	1,7	1,3	Low	If possible, vegetation clearance and commencement of related activities (construction of haul road), can be scheduled to coincide with low rainfall conditions when soil moisture is anticipated to be relatively low such that the soils are less prone to compaction; The movement	2	2	1	1	0,8	1,7	1,3	1,1	Low

											of heavy vehicle should be limited to existing roads										
		Loss of land capability and land use potential	2	1	1	1	0,8	1,3	1,2	0,9	Very low	• Any compacted soils must be ripped to alleviate compaction; • The footprint should be re-vegetated with the relevant seed mixture as soon as possible	2	1	1	1	0,6	1,3	1,2	0,7	Very low
		Loss of vegetation communities.	2	1	1	1	0,6	1,3	1,2	0,7	Very low	• Ensure site clearing is restricted to the footprint of the designated areas to limit the degradation and destruction of the cultivated land • All activities are to occur after harvest so as to not disturb production of maize	2	1	1	1	0,4	1,3	1,2	0,5	Very low

		The destruction or degradation of watercourse vegetation.	2	5	5	2	0,6	4,0	3,0	1,8	Low	• Ensure the flow of water through the moist grassland areas remain unchanged. • Monitor the presence of hydrophytes and species with an affinity for moist soils within the moist grasslands. Should such species decrease of be replaced by terrestrial species, then it is likely that the hydrological regime on the site has changed. • If moist grasslands are found to become drier, the Crinum species must be relocated to suitable habitat. • Input of sediment due to any related mining activities should be	2	4	4	1	0,6	3,3	2,2	1,3	Low

													prevented at all cost. • Pollution of the surface and groundwater. Mitigation for this potential impact includes: o In the case of pollution of any surface or groundwater, the Regional Representative of the Department of Water Affairs must be informed immediately; o Store all litter carefully so it cannot be washed or blown into the water course; o Storage of potentially hazardous materials should be above any 100-year flood line or the functional wetland boundary (and its associated									

	buffer zone). These materials include fuel, oil, cement, bitumen etc.; o Surface water draining off contaminated areas containing oil and petrol would need to be channelled towards a sump which will separate these chemicals and oils; o No uncontrolled discharges of water from the mine to any surface water resources shall be permitted. Any discharge points need to be approved by the relevant authority.

		Destruction of Maize filed.	3	2	1	1	1,0	2,0	1,5	1,5	Low	The contractors setting up should use the EMPR to oversee construction activities and ensure the following: • Keep the development footprint in Medium categories as small as possible. • A temporary fence or demarcation must be erected around the construction area (include the actual footprint, as well as areas where material is stored) to prevent access to adjacent sensitive vegetation. • Maintain site demarcations in position until the cessation of construction work. • Only remove	2	4	4	1	0,6	3,3	2,2	1,3	Low

													vegetation where necessary and retain vegetation in place for as long as possible prior to removal. • Prohibit vehicular or pedestrian access into natural areas beyond the demarcated boundary of the construction area. • Formalise access roads and make use of existing roads and tracks where feasible, rather than creating new routes through naturally vegetated areas. • Implement a vegetation rehabilitation plan to ensure areas that can be rehabilitated post construction are									

											adequately vegetated with indigenous grass species. • After construction, the land must be cleared of rubbish, surplus materials, and equipment, and all parts of the land must be left in a condition as close as possible to that prior to construction.							

		Erosion and subsequent sedimentation or pollution of proximate moist grassland (watercourse).	3	3	1	1	0,8	2,3	1,7	1,3	Low	• Make use of existing roads and tracks where feasible, rather than creating new routes through cultivated areas.. • Do not remove any vegetation unnecessarily and only remove as per the specified extent. • Runoff from access roads must be managed to avoid erosion and pollution problems. • Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and work areas. • Prevent spillage of	3	2	1	1	0,6	2,0	1,5	0,9	Very low

													construction material, oils or other chemicals, strictly prohibit other pollution. Ensure there is a method statement in place to remedy any accidental spillages immediately. • After construction clear any temporarily impacted areas of all foreign materials, re-apply and/or loosen topsoil's and landscape to surrounding level.									

		Surface and ground water	Siltation of surface water resources.	3	2	1	2	0,8	2,0	2,0	1,6	Low	• Ensure site clearing is limited to the designated areas	2	1	1	1	0,6	1,3	1,2	0,7	Very low
			Contamination of water resources	3	2	1	2	0,8	2,0	2,0	1,6	Low	• Ensure that no infrastructure, containers, or machinery is leaking during the construction phase. • Groundwater monitoring of the water quality and levels must take place. A tray or cover must be in place for objects with hazardous substances to avoid any possible leaks/spillage.	2	1	1	1	0,8	1,3	1,2	0,9	Very low
		Noise	Noise emanating from the construction of the site and vehicles impacting on surrounding sensitive receptors.	3	2	1	2	0,6	2,0	2,0	1,2	Low	• Ensure site clearing activities are only undertaken during daylight hours; • Ensure equipment and machinery is	2	2	1	2	0,6	1,7	1,8	1,1	Low

												switched off when not in use.										
5,0	Storage, use and control of fuel and lubricants to be used for the drilling activities.	Soil	Soil contamination and degradation	4	4	1	1	0,8	3,0	2,0	1,6	Low	• All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; • Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; • All vehicles and machinery to be serviced in a hard park area or at an off-site location; • Storage of hydrocarbons must be managed according to the Hazardous Substances Act,	2	4	1	1	0,6	2,3	1,7	1,0	Low

											1973 (Act No. 15 of 1973); • Hydrocarbons storage facilities must be in a hard park bunded facility; and • Vehicles with leaks must have drip trays in place.										
		Groundwater	Groundwater contamination	5	3	1	2	1,0	3,0	2,5	2,5	Moderate	• All potential hydrocarbon leaks must be repaired immediately and spillages be cleaned up immediately and the soils remediated; • Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; • All vehicles and machinery to be serviced in a hard park area	4	2	1	1	0,8	2,3	1,7	1,3	Low

													or at an off-site location; • Storage of hydrocarbons and explosives must be managed according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); • Hydrocarbons and explosives storage facilities must be in a hard park bunded facility; and • Vehicles with leaks must have drip trays in place; and • Groundwater monitoring of the water quality and levels must take place quarterly especially for the water supply boreholes to ensure a sustainable resource and identify impacts on local users.									

6,0	Vehicular activity.	Air Quality	Fugitive dust generation emanating.	3	3	1	2	0,8	2,3	2,2	1,7	Low	• Ensure the area of disturbance during the prospecting activities is restricted to the extent of the drilling area • Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; • Vehicles will obey speed limits. Maintenance equipment and heavy vehicle speeds should be reduced, where possible, to prevent dust emissions.	2	3	1	2	0,6	2,0	2,0	1,2	Low
		Topography and Visual	Topography change and disruption of surface water flow	3	2	1	2	0,8	2,0	2,0	1,6	Low	• Ensure that existing access roads are used as much as possible. • Ensure that dust suppressants are applied to gravel or	2	2	1	1	0,6	1,7	1,3	0,8	Vey low

											unpaved roads that are in use; and • Vehicles will obey speed limits.									
	Soil	Soil contamination and degradation.	3	3	1	2	1,0	2,3	2,2	2,2	Moderate	• All potential hydrocarbon spillages and leaks must be cleaned up immediately and the soils remediated; • Spillage control kits will be readily available on site to contain the mobilisation of contaminants and clean up spills; • All vehicles and machinery to be serviced in a hard park area or at an off-site location; • Storage of hydrocarbons and explosives must be managed	2	3	1	2	0,8	2,0	2,0	1,6	Low

											according to the Hazardous Substances Act, 1973 (Act No. 15 of 1973); • Hydrocarbons and explosives storage facilities must be in a hard park bunded facility; and • Vehicles with leaks must have drip trays in place.									
	Fauna and Flora	Loss of biodiversity and minimise impacts on floral species	3	2	1	2	0,8	2,0	2,0	1,6	Low	• Ensure that dust suppressants are applied to gravel or unpaved roads that are in use; • Vehicles will obey speed limits.	2	2	1	2	0,6	1,7	1,8	1,1	Low
	Wetlands and Aquatic	Contamination and sedimentation of the wetland systems and aquatic ecosystems	2	2	1	2	1,0	1,7	1,8	1,8	Low	• Ensure a Storm Water Management Plan is implemented; • Ensure that dust suppressants are applied to gravel or unpaved roads	2	1	1	2	0,6	1,3	1,7	1,0	Low

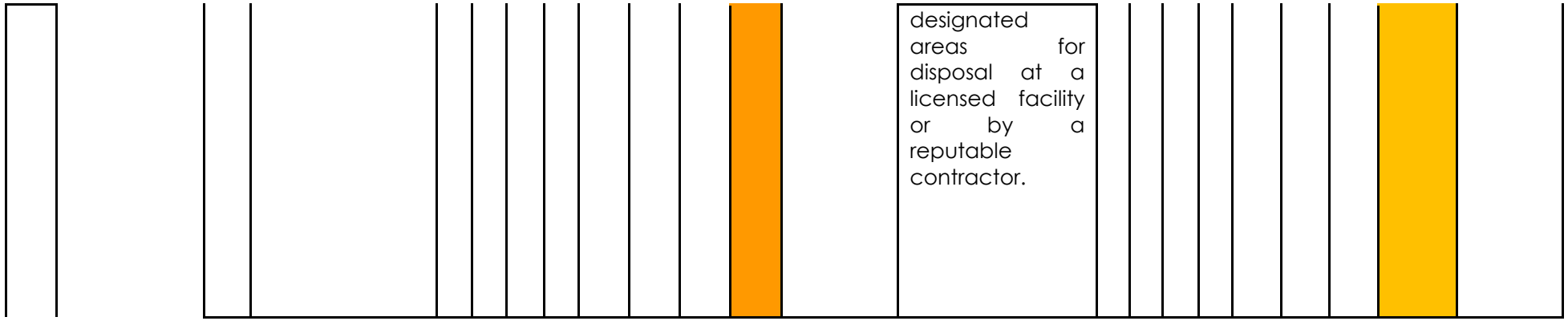
											that are in use and exposed surfaces; • Cover the road going trucks from the tip to KPS with a tarpaulin to prevent coal dust generation; • Vehicles will obey speed limits; and • Implement a biannual Aquatic Monitoring Programme to monitor potential impacts and implement corrective actions, should it be required.										
	Surface Water	Contamination and sedimentation of clean water resources.	3	2	1	2	0,8	2,0	2,0	1,6	Low	• Ensure that dust suppressants are applied to gravel or unpaved roads that are in use and exposed surfaces; • Vehicles will obey speed limits; and	2	1	1	1	0,6	1,3	1,2	0,7	Very low

											• Monitor surface water resources around project area to identify potential contamination.									
	Noise	noise emanating from mining and vehicular activities impacting on surrounding sensitive receptors.	4	4	1	2	1,0	3,0	2,5	2,5	Moderate	• Prospecting related machines and vehicles should be serviced prior to commencement of activities and should there be an issue the equipment must be serviced immediately to avoid further generation of noise outside that of the drilling • Ensure equipment and machinery is switched off when not in use. • Adhere to the set speed limit in accordance with the	2	4	4	1	0,8	3,3	2,2	1,7	Low

												Management Plan.										
	Traffic	Degradation of the road structures resulting in potential health and safety risks and soil erosion.	3	2	1	2	0,8	2,0	2,0	1,6	Low	• existing roads must be used as much as possible. Road use should remain in the working hours stipulated in the management programme. • Adhere to the set speed limit in accordance with the Management Plan.	2	2	1	2	0,4	1,7	1,8	0,7	Very low

7,0	Waste and sewage generation and disposal.	Topography and Visual	Topography change	2	3	1	2	0,8	2,0	2,0	1,6	Low	• Waste must be stored away from surface water and drainage lines; and • General and hazardous waste must be removed and disposed of frequently at a registered disposal site.	2	2	1	1	0,6	1,7	1,3	0,8	Very low
		soil	Degradation and contamination of soil	4	3	1	2	0,8	2,7	2,3	1,9	Low	• Burying of any waste including domestic waste, empty containers on the site must be strictly prohibited; • Proper waste storage facilities should be available and used for the correct separation and storage of waste prior to collection and disposal; and • Generated waste must be removed to an	3	2	1	1	0,4	2,0	1,5	0,6	Very low

											approved disposal facility.										
	Surface Water	Contamination of clean water resources.	4	3	1	2	1,0	2,7	2,3	2,3	Moderate	• The sewer waster collected from the workings must be disposed of at a licensed sewage treatment facility; • Monitor surface water resources up and downstream of the Project area to identify potential contamination; • Remove core log after analysis • Waste must be separated at source and stored in appropriately	3	2	1	2	0,6	2,0	2,0	1,2	Low


designated areas for disposal at a licensed facility or by a reputable contractor.

10 METHODOLOGY USED TO DETERMINE AND RANK 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).

Table 9: Severity Criteria

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

FREQUENCY = HOW OFTEN THE IMPACT OCCURS	***RATING***
Seldom: impact occurs once or twice	*1*
Occasional: impact occurs every now and then	*2*
Regular: impact is intermittent but does not occur often	*3*
Often: impact is intermittent but occurs often	*4*
Continuous: the impact occurs all the time	*5*

DURATION = HOW LONG THE IMPACT LASTS	***RATING***
Very short-term: impact lasts for a very short time (less than a month)	*1*
Short-term: impact lasts for a short time (months but less than a year)	*2*
Medium-term: impact lasts for the for more than a year but less than the life of operation.	*3*
Long-term: impact occurs over the operational life of the proposed extension.	*4*
Residual: impact is permanent (remains after mine closure)	*5*

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

EXTENT = SPATIAL SCOPE OF IMPACT/ FOOTPRINT AREA / NUMBER OF RECEPTORS	***RATING***
Limited: impact affects the prospecting area	*1*
Small: impact extends to the neighbouring farmers	*2*
Medium: impact extends to surrounding farmers beyond the immediate neighbours	*3*
Large: impact affects the area covered by the municipal area	*4*
Very Large: The impact affects an area larger than the municipal area	*5*

Negative impacts:

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

Positive impacts:

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

11 POSITIVE AND NEGATIVE IMPACTS OF THE PROPOSED ACTIVITY (IN TERMS OF INITIAL SITE LAYOUT) AND ALTERNATIVES ON THE ENVIRONMENT AND COMMUNITY

There is no alternative project layout. Should comments be received that warrant changing site layout, Legacy Box Holdings will implement the necessary changes to ensure that no one is negatively affected. The drilling of (at least) six exploration holes will have a minimal environmental and social impact as the drill site will cover only about 0.36 ha (600m^2) of the property. The identified impacts will only occur for a limited time and be localised. These impacts can be suitably mitigated; residual impact ratings are of low significance. After drilling has been completed and drill pads rehabilitated to pre-drilling status, the impacts will cease.

Table 10: Positive and negative impacts.

Impacted environment	Impact	Impact status
Planning phase		
Legislative	Non-compliance with legislative requirements resulting in non-/delayed commencement of proposed project.	Negative
Economic	Project expenditure (incl. direct capital investment).	Negative/positive
Site establishment		
Fauna and flora	Destruction/loss of indigenous vegetation and plants of ecological importance due to site establishment activities.	Negative
	Disturbance of animal and bird species at the proposed site.	Negative
	Disturbance of wildlife on neighbouring game farms.	Negative
	Potential spread of alien invader plants/seeds.	Negative
Groundwater	Potential groundwater contamination due to fuel, lubricant and chemical spills.	Negative
Air quality	Nuisance stemming from vehicle emissions.	Negative
Noise and dust generation	Nuisance to surrounding landowners caused by moving vehicles and drill rigs.	Negative

Impacted environment	Impact	Impact status
	Disturbance of wildlife on neighbouring game farms.	Negative
Soils	Potential soil erosion during site establishment.	Negative
	Potential soil contamination due to spillages.	Negative
Socio-economic	Potential employment and skills development opportunities.	Positive
Visual aspect	Visual disturbance due to machinery, vehicles, signs and drill rigs.	Negative
Cultural/heritage-historical resources	Potential impact on heritage and archaeological resources.	Positive/negative
Waste generation	Generation of solid and other waste from ablution facilities.	Negative
Traffic	Increase of traffic in the area as vehicles access the sites.	Negative
Socio-economic	Potential increase of theft and poaching in the area.	Negative
	Potential friction with I&APs and landowners due to disturbance of local businesses.	Negative
Health and safety	Potential risk to the health and safety of employees and neighbouring occupants.	Negative
Drilling phase		
Fauna and flora	Destruction/loss of indigenous vegetation and plants of ecological importance due to site establishment activities.	Negative
	Disturbance of animal and bird species at the proposed site.	Negative
	Disturbance of wildlife on neighbouring game farms.	Negative
	Potential spread of alien invader plants/seeds.	Negative
Soils	Potential soil erosion during drilling.	Negative
	Potential soil contamination due to spillages.	Negative
Socio-economic	Potential friction with I&Aps and landowners due to disturbance of local businesses.	Negative
	Potential increase of theft and poaching in the area.	Negative
	Potential employment and skills development opportunities.	Positive

Impacted environment	Impact	Impact status
Groundwater	Potential groundwater contamination due to fuel, lubricant and chemical spills.	Negative
	Potential occurrence of drawdown due to borehole drilling.	Negative
Geology	Removal of rock material for logging and sampling during drilling.	Negative
Noise and dust generation	Nuisance to surrounding landowners caused by moving vehicles and drill rigs.	Negative
	Disturbance of wildlife on neighbouring game farms.	Negative
Cultural-historical resources	Potential impact on heritage and archaeological resources.	Positive/negative
Air quality	Nuisance from vehicle and machine emissions.	Negative
Socio-economic	Potential increase of theft and poaching in the area.	Negative
Health and safety	Potential risk to the health and safety of employees and neighbouring occupants.	Negative
Decommissioning		
Air quality	Nuisance from vehicle and machine emissions.	Negative
Noise and dust generation	Nuisance to surrounding landowners caused by moving vehicles and drill rigs.	Negative
	Disturbance of wildlife on neighbouring game farms.	Negative
Traffic	Increased traffic in the area as vehicles exit the site.	Negative
Socio-economic	Potential friction with I&APs and landowners due to disturbance of local businesses.	Negative
	Potential increase of theft and poaching in the area.	Negative
Health and safety	Potential risk to the health and safety of employees and neighbouring occupants.	Negative

12 POSSIBLE MITIGATION MEASURES AND RISK LEVEL

See Table 11 for possible mitigation measures to address issues related to the proposed project and raised by I&APs.

12.1 Motivation where no alternative sites were considered

The nature of the proposed activity dictates the proposed site location. The applicant conducted preliminary studies that indicate that the minerals to be prospected can only be found in the proposed area. Since exploration is temporary in nature, no permanent structures will be constructed, negotiations and agreements will be made with the farm owners to use any existing infrastructure like accommodation for the explorers, access roads and other things, like workshops. In addition to the information provided, each of the phases depend on the results and success of the preceding phase. The location and extent of soil sampling and possible drilling will be determined based on information derived from the geophysics surveys. Sampling and drill sites will be selected to avoid water courses where practicable.

12.2 Impact significance

The impact magnitude and significance rating are used to rate each identified impact in terms of its overall magnitude and significance.

Table 11: Impact magnitude and significance rating.

Unit	Activity	Aspect	Impact	Significance rating before mitigation measures									Mitigation measures
				I	F	D	E	P	S	C	IS	Significance	
		Topography and visual environment	• Topography changes and disruption of surface water flow. • Soil erosion and topsoil loss. • Visual impact caused by vegetation and topsoil removal.	3	3	4	1	0,8	3,3	2,2	1,7	Low	• Only clear vegetation and topsoil when necessary and in demarcated areas. • Vegetate topsoil stockpiles as soon as possible. • Contour topsoil stockpiles to a steepness of less than 18° to prevent slope failure and erosion, and aid in vegetation establishment. • Vegetate topsoil stockpiles kept for more than a year to sustain ecological components and prevent dust emissions and alien vegetation.
		Soil	• Soil contamination and degradation during soil stripping and management. • Soil erosion and dust generation.	3	4	4	1	0,8	3,7	2,3	1,9	Low	• Limit excavation and long-term soil stockpiling in demarcated areas. • Clearly and permanently demarcate and locate stockpiles (especially topsoil) in no-go areas.

Unit	Activity	Aspect	Impact	Significance rating before mitigation measures									Mitigation measures
				I	F	D	E	P	S	C	IS	Significance	
													• Restrict mechanical handling; each handling increases compaction and soil structure changes. • Conduct soil stripping in line with a topsoil stripping plan. • Stockpile different soils separately (if possible) to obtain highest post-mining land capability. • Revegetate stockpiles to establish vegetation cover as an erosion control measure. Keep these stockpiles free of alien vegetation to prevent loss of soil quality. • Construct temporary berms around stockpile areas where vegetation cover is not yet established, to avoid soil loss through erosion.
			Soil compaction	4	5	4	1	1,0	4,3	2,7	2,7	Moderate	• If possible, schedule vegetation clearance and commencement of mining activities (haul road construction) to coincide with low

Unit	Activity	Aspect	Impact	Significance rating before mitigation measures									Mitigation measures
				I	F	D	E	P	S	C	IS	Significance	
													rainfall conditions when soil moisture is anticipated to be relatively low, to reduce soil compaction. • Limit heavy vehicle movement to existing roads and areas where haul roads are constructed.
			Loss of land capability and land use potential	2	1	4	1	0,8	2,3	1,7	1,3	Low	• Rip compacted soils to alleviate compaction. • Replace stored topsoil (if any) and grade the footprint to a smooth surface. • Backfill and reprofile landscape to mimic the natural topography for potential agricultural activities and grazing opportunities post-mining. If possible, ensure continuation of the pre-mining surface drainage pattern. • Slopes of the backfilled surface should change gradually since abrupt changes in slope gradient increase susceptibility to erosion.

Unit	Activity	Aspect	Impact	Significance rating before mitigation measures									Mitigation measures
				I	F	D	E	P	S	C	IS	Significance	
													• Determine soil fertility status through soil chemical analysis after levelling (before seeding/re-vegetation). • Complete soil amelioration, if needed, according to soil specialist recommendations, to correct pH and nutrition status before revegetation.
			Loss of vegetation communities	4	1	5	1	0,8	3,3	2,2	1,7	Low	• Restrict site clearing to the footprint of the designated areas to limit degradation and destruction of natural habitats. • Vegetate open and exposed areas to prevent soil erosion and establishment of alien invasive vegetation. • Restrict access and avoid identified faunal and floral SSC, adjacent to mining activities. • No deforestation in a CBA: Irreplaceable area (southern section of the permit).

Unit	Activity	Aspect	Impact	Significance rating before mitigation measures									Mitigation measures
				I	F	D	E	P	S	C	IS	Significance	
													• Rescue and relocate important plant species. • Restrict access and avoid sensitive landscapes, like wetlands and ridges, adjacent to mining operations. • Stockpile topsoil to be used for rehabilitation according to the rehabilitation plan. Compaction of stockpiled topsoil must be avoided to ensure seed bank viability.
			Influx and establishment of alien invasive vegetation.	3	3	4	2	0,8	3,3	2,7	2,1	Moderate	• Identify and remove alien invasive vegetation to throughout the project.
		Wetlands and equatic ecology	Sedimentation of wetland areas downstream of the stockpiles.	3	3	4	1	0,8	3,3	2,2	1,7	Low	• Implement and maintain soil management programme to minimise erosion and sedimentation. • Actively rehabilitate, re-slope, and re-vegetate disturbed areas immediately after construction.

Unit	Activity	Aspect	Impact	Significance rating before mitigation measures									Mitigation measures
				I	F	D	E	P	S	C	IS	Significance	
													• Implement and maintain alien vegetation management programme. • Provide appropriate sanitary facilities for the duration of construction activities and move all waste to an appropriate waste facility.
			Contamination of soils as a result of the ingress of hydrocarbons	3	5	4	1	1,0	4,0	2,5	2,5	Moderate	• Implement and maintain soil management programme to minimise erosion and sedimentation. • Actively rehabilitate, re-slope, and re-vegetate disturbed areas immediately after construction. • Implement and maintain alien vegetation management programme. • Limit construction activity footprint to what is essential to minimise impacts as a result of vegetation clearing and compaction of soils. • Remedy erosion in the construction footprint immediately, as part of ongoing rehabilitation.

Unit	Activity	Aspect	Impact	Significance rating before mitigation measures									Mitigation measures
				I	F	D	E	P	S	C	IS	Significance	
													• All delineated watercourses and their associated 100 m zones of regulation in terms of GN704 should be designated as "No-Go" areas and be off-limits to all unauthorised vehicles and personnel, with the exception of approved construction and operational areas unless authorised as part of the IWUL. • No unnecessary crossing of watercourses. Use existing infrastructure if possible. • Install suitable culverts under road crossings where watercourses may be crossed. • The number of culverts installed should be suitable for the gradient, width and flow profiles of the watercourses being crossed to avoid upstream inundation, erosion and incision, and alterations to the natural channel.

Unit	Activity	Aspect	Impact	Significance rating before mitigation measures									Mitigation measures
				I	F	D	E	P	S	C	IS	Significance	
													• Crossings should use existing roads where possible and use/be constructed downgradient of barriers associated with impoundments on affected systems. • No material may be dumped or stockpiled in delineated watercourses. • No vehicles or heavy machinery may drive indiscriminately in delineated watercourses. All vehicles must remain on demarcated roads and in the construction footprint. • All vehicles must be regularly inspected for leaks. • Re-fuel on a sealed surface away from wetlands to prevent ingress of hydrocarbons into topsoil. • Immediately treat and clean all spills.
			Loss of catchment yields and surface water recharge, potential loss	3	5	4	3	0,6	4,0	3,5	2,1	Moderate	• Place all infrastructure outside delineated watercourse and their

Unit	Activity	Aspect	Impact	Significance rating before mitigation measures									Mitigation measures
				I	F	D	E	P	S	C	IS	Significance	
			of biodiversity, impaired water quality, potential loss of instream integrity, potential impacts to freshwater resources further downstream of this point.										associated zones of regulation (as far as possible). • Ensure that sound environmental management is in place during planning. • Design infrastructure to be environmentally and structurally sound and take all possible precautions to prevent spillage and/or seepage to the surface and groundwater. • Ensure that the design and construction of all infrastructure prevents failure.

13 ASSESSMENT OF EACH IDENTIFIED POTENTIALLY SIGNIFICANT IMPACT AND RISK

Table 12: Potential impacts and risk.

Activity	Potential impact	Aspects affected	Phase	Significance	Mitigation type	Significance
Desktop study	None Identified	N/A	Planning	N/A	No mitigation proposed	N/A
Identification and adherence to legislative requirements	Non-compliance with legislation resulting in the non-/delayed commencement of proposed project	Policy and legal Requirements	Planning	High (-ve)	The applicant must ensure that all relevant legislation and regulations have been adhered to before project commencement.	Low (-ve)
Site establishment and drilling equipment set-up	Clearing of vegetation	Flora and fauna	Site establishment	Low (-ve)	Already cleared areas should be preferred over heavily dense areas.	Low (-ve)
Set-up of drilling equipment	Theft	Socio-economic	Site establishment	Low (-ve)	Secured site camp and control access to site.	Low (-ve)

Activity	Potential impact	Aspects affected	Phase	Significance	Mitigation type	Significance
Preparation of drilling sites and access roads	Loss of indigenous vegetation	Flora and fauna	Site establishment	High (-ve)	Use exiting access roads leading to the proposed site.	Medium (-ve)
Drilling activities	Ground and surface water contamination	Hydrology	Drilling	Medium (-ve)	• Maintain drill bits in good condition to prevent oil leaks when underground. • Apply aquifer detection methods before drilling.	Low (-ve)
	Mortality and displacement of fauna	Fauna	Drilling	Medium(-ve)	Undertake a search and rescue mission for species on drilling site	Low(-ve)
	Waste generation	Waste	Drilling	High (-ve)	Mud generated from drilling must be contained, and contaminated mud must be handled separately, treated or disposed of at an appropriate landfill. Skips and marked bins must be provided at the site for waste separation.	Medium (-ve)
Drilling activities		Soil and geology	Drilling	Medium (-ve)	All substances required for vehicle maintenance and repair must be stored in sealed containers.	Low (-ve)

Activity	Potential impact	Aspects affected	Phase	Significance	Mitigation type	Significance
	Spillages of hazardous chemicals	Hydrology		Medium (-ve)	Can be disposed of/removed from site. All drill holes must be capped and closed off with cement.	Low (-ve)
				Medium (-ve)	Transport hazardous substances/materials in sealed containers or bags.	Low (-ve)
				Medium (-ve)	Attend to spills as soon as they occur. Depending on the nature and extent of the spill, contaminated soil must be excavated or treated on-site.	Low (-ve)
	Destruction of heritage resources	Cultural and heritage social	Drilling	Medium (-ve)	Should any paleontological or cultural artefacts be discovered, work at the point of discovery must stop, the location clearly demarcated and SAHRA contacted. Work at the discovery site may only restart on instruction from SAHRA.	Low (-ve)
Decommissioning of site camp	Waste generation	Waste management	Decommissioning	Medium (-ve)	Use uncontaminated stockpiled materials for backfilling.	Low (-ve)

Activity	Potential impact	Aspects affected	Phase	Significance	Mitigation type	Significance
Decommissioning of site camp	Contamination of the soil and water	Soil and hydrology	Decommissioning	Medium (-ve)	• Store hazardous substances onsite in marked containers. • Ship all equipment off site. • Loosen compacted soils and spread topsoil above it. Spread seeds of indigenous species to ensure regrowth.	Low (-ve)

14 SUMMARY OF STUDIES

(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):

Table 13: Summary of studies.

Studies undertaken	Specialist report recommendations	Specialist recommendations included in the EIA report Mark with an X where applicable	Section of report where specialist recommendations have been included
Baseline hydrogeological study	N/A	X	Part B (Appendix 5)
Baseline hydrological study	➢ Once drilling, the team will rehabilitate the area and ensure the core is out of site. ➢ Drilling within 500 meters of water resources will be avoided ➢ Stormwater will be prioritised, and the management to prevent surface water contamination. ➢ Clearing of vast amount of vegetation will be avoided, this is to preserve infiltration. ➢ Stormwater measures which include the identified rivers, Dams and wetlands, will not be disrupted as they manage surface run off in an area, Buffer zone will be adhered to. ➢ The drilling activity will also take into consideration the fractured aquifers in the region. ➢ No washing of vehicles on site should be allowed ➢ The identified locations for sampling will be made available to the prospecting team. ➢ During raining periods, drilling process will be paused, to avoid possible contamination of water leading to surface water bodies.	X	Part B (Appendix 5)

Studies undertaken	Specialist report recommendations	Specialist recommendations included in the EIA report Mark with an X where applicable	Section of report where specialist recommendations have been included
Baseline soil study	➢ Pathways will be stripped when the soil is dry (as far as practical possible), as to reduce compaction; and ➢ The pathways will be stripped according to the stripping guideline and management plan, and further recommendations contained within the rehabilitation plan. ➢ The period of exposure of soil disturbances will be minimized through a planning schedule. ➢ Absorbent kits will be made available near the drill rigs during drilling activities to prevent oil spills from contaminating the surrounding soil. ➢ Drilling on steep slopes will be avoided, to prevent soil erosion. ➢ The exploration geologist will be advised to drill and sample more than 100m away from the waterbody on site. ➢ The proposed prospecting land should be returned to its origin as before prospecting activities and the rehabilitation performance assessment in the proposed land must be done progressively (annually) during the operational phase by a soil specialist. ➢ Dust suppression should be conducted regularly.	X	Part B (Appendix 5)
	➢ **Compliance with Closure Plan** The closure objectives can only be achieved by fore filling the responsibilities as set out in the rehabilitation plan. Closure objectives cannot be achieved if the actions of the rehabilitation plan are not complied with resulting in an unsuccessful closure plan.		

Studies undertaken	Specialist report recommendations	Specialist recommendations included in the EIA report Mark with an X where applicable	Section of report where specialist recommendations have been included
	➢ **Annual update requirements of the plan** The closure plan must be reviewed annually and updated as and when major changes are affected to the Prospecting Works Programme. ➢ **On-site documents** The closure plan must be available onsite as per the requirements of Regulation 26 (h) of NEMA EIA Regulations of 2014.		

15 ENVIRONMENTAL IMPACT STATEMENT

Prospecting will have very low environmental and social impacts. Usually, such impacts can be reversed or rehabilitated. The expected invasive impacts are the drilling of the 6 exploration holes that amount to 0.36 ha, which makes up less than 1% of the area being applied for.

The proposed prospecting operation may affect existing alternative land uses on adjacent and non-adjacent properties, as the area predominantly breeds wildlife and is surrounded by game farms. The following actions are subject to the proposed mitigation measures and require monitoring:

- Vegetation clearing
- Hydrocarbon-based material storage on site
- On-site waste management
- Road/track construction
- Soil and groundwater contamination
- Traffic in the area
- Vehicles and equipment used for drilling
- Noise generation
- Species which are of ecological importance
- Fire outbreaks

The site geologist must monitor the required on-site mitigation measures daily. An independent EAP must conduct annual monitoring audits.

16 FINAL SITE MAP

17 POSITIVE AND NEGATIVE IMPACTS AND RISKS OF THE PROPOSED ACTIVITY AND IDENTIFIED ALTERNATIVES

Positive and negative impacts associated with the proposed prospecting activities include:

Positive

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

Negative

- Destruction/loss of indigenous natural vegetation and plants of ecological importance due to site establishment
- Disturbance of animal species in and around the proposed site
- Potential spread of declared weeds and alien invader plants
- Potential groundwater contamination due to fuel, lubricant and chemical spills
- Nuisance stemming from vehicle emissions
- Nuisance to surrounding landowners caused by moving vehicles and drill rigs
- Disturbance of wildlife in surrounding game farms
- Potential soil erosion during site clearance and drilling. Potential soil contamination due to spills.
- Visual disturbance (vegetation clearance and temporary infrastructures including equipment on site)
- Potential impact on heritage and archaeological resources
- Generation of solid and other waste from ablution facilities
- Increase of traffic in the area as vehicles access sites
- Potential friction with I&Aps and landowners due to disturbance of local businesses
- Physical removal of rock material for logging and sampling purposes during drilling

The proposed activities have low significance impacts since these are short-term activities. Socio-economic impacts like employment have medium significance, due to impacts on the surrounding community. Generally, prospecting activities have low impact on the environment. Since the planned activities' negative impacts can be controlled, avoided, or reduced, the layout does not require revision. Mitigation measures will be used to control, avoid and/or minimise all identified potential impacts.

18 PROPOSED IMPACT MANAGEMENT OBJECTIVES AND OUTCOMES FOR INCLUSION IN THE EMPR

The EMPr seeks to achieve a required end state and describe how activities that could adversely impact the environment will be mitigated, controlled, and monitored. The EMPr will address the environmental impacts during site establishment, drilling, and decommissioning of the proposed project. Due regard will be given to environmental protection during the entire project. A number of environmental recommendations will be made to protect the environment. The environmental and social objectives will be set to allow prospecting in an environmentally and socially responsible manner while ensuring that sustainable closure can be achieved. To achieve closure, the correct decisions need to be taken during project planning.

The overall goal for environmental management for the proposed project is to prepare the site and operate the project in a manner that:

- Minimises the ecological footprint of the project on the local environment.
- Facilitates harmonious co-existence between the project and other land uses in the area.
- Contributes to the environmental baseline and understanding of environmental impacts of prospecting in a South African context.

The following environmental management objectives are recommended for the proposed mineral prospecting development and associated infrastructure:

- Monitor soils to avoid unnecessary erosion and implement erosion control measures to preserve the quality of the topsoil for rehabilitation.
- Restrict the area of impact to designated areas only.
- Monitor and prevent contamination and undertake appropriate remedial actions.
- Limit the visual and noise impact on receptors.
- Avoid impact on possible heritage and archaeological resources.
- Promote health and safety of workers.
- Limit dust and other emissions to allowable limits

19 ASPECTS FOR INCLUSION AS CONDITIONS OF AUTHORISATION

Legacy Box Holdings must comply with all environmental legislation. Specific environmental legislation to be adhered to include the NEMA and the MPRDA. The following conditions of authorisation apply to the proposed project:

- Notice must be given to landowners and surrounding landowners one month prior to prospecting activities commencing.
- Landowners and land occupiers should be engaged (re-consulted) at least one month prior to any site activities being undertaken once drill sites are known.
- A map detailing the drilling locations should be provided to the landowners and the DMRE prior to prospecting commencement.
- A record must be kept of the implementation of the EMPr measures and monitoring of the efficiency of the implemented measures.
- A buffer of 100 m from any water course should be established during site establishment and drilling.

20 DESCRIPTION OF ANY ASSUMPTIONS, UNCERTAINTIES AND GAPS IN KNOWLEDGE

- The EAP does not accept any responsibility in the event that additional information comes to light at a later stage of the process.
- All information provided by the EAP was correct at the time provided.
- The scope of this investigation is limited to accessing the potential environmental impacts associated with the proposed project.

21 REASONED OPINION AS TO WHETHER THE PROPOSED ACTIVITY SHOULD OR SHOULD NOT BE AUTHORISED

Based on the site investigations and analysis of the EAP, it is suggested that the proposed activity be authorised, since the following applies:

- The site geologist will monitor implementation of the required mitigation measures on site daily.
- An independent EAP will conduct annual monitoring audits and compile the required annual environmental compliance report required by the DMRE.
- The environmental impacts associated with the limited drilling activities are minimal, provided that the proposed mitigation measures are implemented.
- The desktop studies prove that the site is located on a mineralized zone. Prospecting activities must be undertaken to confirm ore reserves.
- The no-go option will result in a significant loss of valuable information regarding the status of the ore bodies present on the properties in question.
- Should economical reserves be present, and the applicant does not have the opportunity to prospect, the opportunity to use these reserves for future phases will be lost as well.
- The spatial extent of the physical impact is 0.36 ha and 500 m^2 of an access road to be constructed. The actual area to be permanently disturbed is minimal in comparison to the total site area, thus only 0.008% of the total farm area will be impacted.
- With appropriate care and consideration, the impacts resulting from drilling can be avoided, minimised or mitigated.
- The mining sector is the pillar of the South African economy and employs many.
- A buffer of 100 m from any water courses should be established during the operational phase.

22 CONDITIONS THAT MUST BE INCLUDED IN THE AUTHORISATION

- Maintain a minimum 100 m buffer from any infrastructure or dwelling (schools, churches, homes).
- Engage with landowners and land occupiers (re-consult) at least one month prior to any site activities being undertaken once drill sites are known.
- A map detailing the drilling locations should be provided to landowners and the DMRE prior to commencement of prospecting.
- Record the implementation of EMPr measures and monitor the efficiency thereof.
- Establish a buffer of 100 m from wetlands and water courses during planning.
- Submit a suitable closure plan to show sufficient providence for the avoidance, management and mitigation of environmental impacts associated with the decommissioning of the proposed activities.

23 PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

The PR has been applied for a period of five years. The EA should therefore allow for five years of prospecting and one year for decommissioning and rehabilitation.

24 FINANCIAL PROVISION

CALCULATION OF THE QUANTUM

Applicant: **Legacy Box Holdings (Pty) Ltd** — **Ref No.: NC 30/5/1/1/2/12658 PR**
Evaluator: **Singo Consulting (Pty) Ltd** — **Date: 19/10/2022**

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0
3	Rehabilitation of access roads	m2	1249,75	49	0,5	1	30618,875
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha		284292	1	1	0
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha		189528	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha		685612	1	1	0
9	Rehabilitation of subsided areas	ha	0	158701	1	1	0
10	General surface rehabilitation	ha		150138	1	1	0
11	River diversions	ha	0	150138	1	1	0
12	Fencing	m	0	171	1	1	0
13	Water management	ha		57087	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	19980	1	1	0
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		30618,875

1	Preliminary and General	3674,265	weighting factor 2 1	3674,265
2	Contingencies		3061,8875	3061,8875
			Subtotal 2	37355,03
			VAT (15%)	5603,25
			Grand Total	42958

Figure 39: Financial provision.

24.1 Amount required to manage and rehabilitate the environment

A financial provision of approximately R 2,750,000.00 has been budgeted for the prospecting activities. In addition, R42 958.00 will be made available by Legacy Box Holdings for rehabilitation.

24.2 Explain how the aforesaid amount was derived

This information has been provided in the Prospecting Work Programme that was submitted to the DMRE. The drilling contractor will be responsible for rehabilitating the drill pad once the drilling activities have been completed at each exploration hole. The financial guarantee was calculated using the DMRE official financial quantum calculator. In relation to the Government Notice 24 in Government Gazette 42956 dated 17 January 2020

24.3 Confirm that this amount can be provided for from operating expenditure

Should an EA be granted to Legacy Box Holdings, provision will be made for the estimated closure cost by means of a Bank Guarantee or any other means available and accepted by the Competent Authority.

24.4 Specific information required by the competent authority

Compliance with the provisions of sections 24(4) (a) and (b) read with section 24 (3) (a) and (7) of the NEMA. The EIA report must include the following.

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

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

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

Mitigation measures proposed in this report include that no drill site will be located within 100 m of any identified heritage site (which may occur during the prospecting programme) based on the desktop work undertaken. Should any paleontological or cultural artefacts be discovered work at the point of discovery must stop, the location be clearly demarcated

and SAHRA contacted immediately. Work at the discovery site may only be recommenced on instruction from SAHRA.

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

This BAR and EMPr were compiled in accordance with the NEMA, EIA Regulations (2014, amended April 2017) and MPRDA. The EAP managing the application confirms that the BAR and EMPr is being submitted for EA in terms of the NEMA in respect of listed activities that have been triggered by application in terms of MPRDA. Should the DMRE require any additional information, it will be provided upon request. No reasonable or feasible alternatives exist for this Prospecting Right application and as such, motivation for no alternatives has been provided in the relevant sections above.

PART B

ENVIRONMENTAL MANAGEMENT REPORT

1 ENVIRONMENTAL MANAGEMENT PROGRAMME

1.1 Details of 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).

Herewith, it is confirmed that the requirement for the provision of the details and expertise of the EAP are already included in PART A, Section 1(a) of this report.

1.2 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).

Herewith, it is confirmed 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 (2) herein as required.

1.3 Description of impact management objectives including management statements

Determination of closure objectives:

- Rehabilitation of areas disturbed as a consequence of prospecting to a land capability that will support and sustain a predetermined post-closure land use.
- Removal of all infrastructure/equipment that cannot be beneficially re-used, as per agreements established, and returning the associated disturbed land to the planned final land use.
- Removal of existing contaminated material from affected areas.
- Establishment of final landforms that are stable and safe in the long run.
- Establishment and implementation of measures that meet specific closure performance objectives.

Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must consider the effects of decisions on all

aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.

1.4 Volumes and rate of water use required for the operation

After careful consideration of the scale of operation it has been deduced that approximately 500 L will be used as potable water. It is anticipated that water will be purchased from a private water filter dealer, like Oasis, and brought to the site.

1.4.1 Has a water use licence has been applied for?

No This application does not require a water use permit. Water for drilling operations will be obtained from a legal source in the area or transported in via a mobile water tanker. Appropriate dust extraction/suppression equipment will be imposed on the drill contractor for drill rigs as a condition.

2 IMPACTS TO BE MITIGATED IN THEIR RESPECTIVE PHASES, IMPACT MANAGEMENT OUTCOMES AND ACTIONS

Table 14: Impacts to be mitigated.

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
Site-establishment phase					
Site-establishment: Access roads to prospecting sites, establishment of the campsite, physical surveying of the site and pegging of drilling boreholes (0,9 ha)					
Potential soil erosion during site clearance and potential soil contamination due to spillages (oil, fuel and other chemicals)	Soil	• Site establishment on areas with sensitive soils, steep slopes, etc. must be avoided as far as possible. • Topsoil must be stockpiled immediately after clearing vegetation to prevent erosion of soil through surface runoff and wind. • Where applicable, construct berms to prevent erosion and donga formation. • Monitor all cleared areas daily for erosion and remediate with immediate effect where necessary. • Service vehicles and machinery used on site before entering the site. Site manager to monitor potential leaks daily. Spill kits must be available on site and used immediately after any spills. If spills are excessive, the site	• Rehabilitation in terms of MPRDA and NEMA principles. • Applicable guidelines from NEM:BA, DAFF and CARA regarding species removal • Mining and biodiversity guidelines	Avoid and control	Avoid soil erosion and contamination, and control potential occurrences

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		manager must compile an incident report and report the incident. • No topsoil or fertile soil (dark soil) may be stored within 32 m of a drainage line, watercourse or wetland.			
Destruction/loss of indigenous vegetation and plants of ecological importance Potential spread alien of invader plants/seeds	Flora	• Prior to project commencement, a qualified person should identify, demarcate and keep a register of plants that are of ecological importance, so they remain protected. The site manager should monitor vegetation clearance and potential spread of alien plant species. • Alien plants and areas with sparse vegetation should be prioritised when clearing vegetation. • Avoid damage to large, protected tree species on site. • Avoid unnecessary driving on site and use designated routes at all times. • Site manager responsibilities should include, but not be limited to, ensuring adherence to EMPr guidelines, guiding activities, planning, and reporting to authorities. • An annual activity and site audit must be completed by an external environmental practitioner and the report submitted to the DMRE.	• Rehabilitation in terms of MPRDA and NEMA principles. • Adherence to CARA for removal of species in terms of NEM:BA mining and biodiversity guidelines. • Identification of potentially threatened and or endangered species in terms of NEM:BA.	1	To protect plant species of ecological importance in the area and prevent the spread of alien species/seeds

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		• Areas that have been extensively cleared and are not required for prospecting activities should be re-seeded with locally-sourced seed of suitable species. Bare areas can be packed with brush removed from other parts of the site to encourage natural vegetation regeneration and limit erosion.			
Disturbance of animal and bird species in the proposed site	Fauna	• Carry out establishment activities during the day, (07h00–17h00) and prospecting project must be carried in phases to avoid bombarding the area with activity. • To avoid habitat loss, alien plants and areas with minimal vegetation should be prioritised when clearing vegetation.	General implementation of activities taking Biodiversity Act and its guidelines into account.	Avoid and control	Avoid and control impact on fauna
Disturbance of wildlife on neighbouring game farms		• No animal or bird, on the site and surrounding farms, may be hunted, trapped, snared or captured for any purpose. • The establishment site should be searched for raptor nests and avoided as far as possible. • Establishment activities should follow the operational plan and be kept to a minimum so that mammals can roam undisturbed in the farm area			

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		and around the areas being used for prospecting.			
Potential groundwater contamination due to spillages of fuels, lubricants and other chemicals	Groundwater	• Groundwater monitoring network (quality and quantity) should be established. • Vehicles and machinery used on site must be serviced before entering the site. The site manager must monitor potential leaks daily. • Spill kits must be available on site and used immediately after any spills. If spills are excessive, the site manager must compile an incident report and report it to the relevant authority.	Water management measures in compliance with NWA, 1998 and DWS guidelines.	Avoid and minimise	Avoid groundwater contamination and minimise the waste of water
Nuisance stemming from vehicle and machine emissions	Air quality	All equipment and vehicles must be serviced and kept in good condition to reduce emissions.	Standards set out in the NEM:AQA	Minimise impact	Minimize smoke emissions in and around the site
Noise generated from prospecting operations activities may add to the current noise levels. This may have impacts on surrounding property owners and wildlife.	Noise and dust nuisance	• Limit the maximum speed to 30 km/h or less on unpaved roads. • Equip vehicles and machinery with engine silencers and keep equipment in good working condition to avoid excessive noise generation. • To avoid excessive dust generation, prospecting activities must be carried out in phases.	National Noise Control Regulations, SANS10103:200 guidelines.	Minimise impacts	To minimise excessive dust and noise generation.

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
Visual disturbances due to all the machinery vehicles, signs and drilling rigs.	Visual	• Due to undulating topography, visibility (for the most part) will probably be restricted to short distances. The prospecting area will be enclosed to minimise visual disruption if necessary. • Inform surrounding landowners of the type of machinery and equipment to be used at the prospecting site, and activities that will occur during each phase. • To minimise visual impact to the surrounding landowners, the activity should be carried out in phases.	Measures will be undertaken to ensure that the visual aspects from the site comply with the relevant visual standards and objectives including municipal by laws.	Minimise impact	Minimise visual impact to surrounding landowners
Potential friction with local business individuals who are running tourist attractions Temporary employment opportunities Potential decline in local business due to prospecting activities. Potential increase in theft and poaching	Socio-economic	• Extensive public consultations must be conducted to increase public awareness and to reduce potential friction. • Record and address comments, concerns, and questions prior to commencement of the activity. Farm labourers will not be employed unless agreed to with farm owners. • Ensure that all labourers are trained and adhere to all health and safety standards. • Prior to project commencement, Legacy Box Holdings must notify the adjacent landowners of the	• Measures taken will be in line with the company's recruitment policies. • Follow public participation legislation according to NEMA. • Follow anti- poaching legislation NEMBA and CARA	Control and avoid	Control relations between stakeholder and avoid poaching and theft.

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		employees that will be working on site to avoid conflict. • Prospecting should be conducted following best practice to minimise negative economic impacts on local business. • Prospecting should be conducted in the time frame provided in the plans to avoid prolonged disturbances to surrounding businesses. • Prior to activity commencement, environmental awareness training must be provided to all employees to avoid poaching. • All employees must be registered as labourers and access to the site must be monitored. • A daily register of people visiting and working on the farm during prospecting must be kept on site.			
Generation of solid waste and waste from ablution facilities that can have an impact on environmental aspects.	Waste	• Minimise littering on site and ensure that labourers are trained in environmental awareness. • Bins (sufficient number and capacity) to store general and hazardous waste produced daily will be provided at each drilling site. • Waste bins must be sealed to prevent leakage of leachate material and be	Align all operations with the NEM: WA	Avoid	Avoid the excessive generation of general waste.

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		waterproof so that rain water cannot enter. • Bins will be emptied weekly. • An integrated waste management approach will be used, based on the principles of waste minimisation, reduction, re-use and recycling. • Temporary ablution facilities on site will be emptied regularly.			
Increase of traffic in the area as vehicles access and exit the site	Traffic	• Vehicles and machinery must move in and out of the site during off peak hours, to avoid congestion. • Vehicles accessing and exiting the site must use designated routes, and only during off peak hours. The speed limit must be 30 km/h on unpaved roads. • Only authorised vehicles should be allowed to access the site.	• National Traffic Act 93 of 1996 • EMPr guidelines in relation to traffic and speed limit	Minimise	Minimise impact of traffic
Health and safety of all employees and neighbouring occupants	Health and safety	• Neighbouring occupants should be warned about any disruptions prior to commencement of prospecting, and the potential impacts it may have on their health. • Ensure that health and safety measures are implemented to protect employees and neighbouring occupants	Occupational Health and Safety Act	Avoid	Avoid health risks and injury incidents

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		• Environmental awareness training must be provided to all employees to avoid injuries by natural factors (e.g. snake bites). • A first aid kit and administrator must be present on site throughout the project. • Provide employees with adequate personal protective Equipment (PPE).			
Potential impact on heritage resources and archaeological resources	Cultural/Heritage, historical resources	Should any paleontological or cultural artefacts be discovered, work at the point of discovery must stop, the location clearly demarcated and LIHRA contacted. Work at the discovery site may only be recommenced on instruction from LIHRA	Adherence to the National Heritage Resource Act, and its accompanying regulations Limpopo Heritage Resource Agency	Avoid	Avoid disturbance and destruction of Heritage, Cultural and or historical resources
Potential fire outbreaks during the winter fire season	Veld Fires	Measures will be implemented during prospecting to avoid and mitigate potential fire outbreaks. These measures include: • Prohibition of starting fires on site • Compulsory firefighting training for all employees on site • Ensuring that all fire extinguishers are present, maintained and strategically placed on site and prospecting machinery	National Veld and Fire act (No 11 of 1998	Avoid	Avoid man caused fires in the farm

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		• The National Veld and Fire Act (no 11 of 1998) must be adhered, to avoid the potential spread of veld fires to neighbouring farms. • Liaise with the landowner in terms of creating a fire break before prospecting commences.			
Drilling phase					
The drilling of prospecting boreholes on the proposed site (0.2 ha)					
Potential soil erosion during drilling phases	Soil	• Avoid drilling in areas with sensitive soils, steep slopes, etc. • Stockpile topsoil immediately after clearing vegetation to prevent erosion through surface runoff and wind. • Where applicable, construct berms to prevent erosion and donga formation.	Rehabilitation in terms of MPRDA and NEMA principles.	Control and avoid	Control soil erosion and avoid contamination
Potential soil contamination due to spills		• Monitor cleared areas for erosion daily; remediate erosion with immediate effect. • Vehicles and machinery used on site must be serviced before entering the site and potential leaks must be monitored daily by the site manager. Spill kits must be available on site and used immediately after spills occur. If spills are excessive, the site manager	• Operational control procedures (e.g. spill/leak handling) • Incident Reporting System • Environmental Inspections • Planned Maintenance System		

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		must compile an incident report and report it to the relevant authority.	• Water quantity (abstraction) monitoring • Constant communication with surrounding landowners		
Destruction/loss of indigenous vegetation and plants of ecological importance Potential spread alien of invader plants/seeds	Flora	• Avoid and register demarcated plants of ecological importance, so they remain protected. The site manager must monitor vegetation clearance and potential spread of alien plant species. • Prioritise alien plants and areas with sparse vegetation when drilling areas are selected. • Avoid damage to large, protected tree species on site. • Avoid unnecessary driving on site and use designated routes at all times. • Site manager's responsibilities will include, but not be limited to, ensuring adherence to EMPr guidelines, guiding activities, planning, and reporting to authorities. • An external EAP must compile an annual audit of the site and activities and submit it to the DMRE. • Areas that have been extensively cleared and are not required for prospecting should be re-seeded	• Rehabilitation in terms of MPRDA and NEMA principles. • Applicable guidelines from NEM:BA, the DAFF and CARA regarding removal of species • Mining and biodiversity guidelines	Avoid and control	Avoid soil erosion and contamination, and control potential occurrences

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		with locally-sourced, suitable species. Bare areas can be packed with brush removed from other parts of the site to encourage natural vegetation regeneration and prevent erosion.			
Disturbance of animal and bird species on the proposed site Disturbance of wildlife on neighbouring game farms	Fauna	• Drilling must be carried out during the day (07h00–17h00) and the prospecting project must be completed in phases to avoid bombarding the area with activity. • Prioritise alien plants and areas with minimal vegetation when allocating a drill site to avoid habitat loss. • No animal or bird, on site and on surrounding farms may be hunted, trapped, snared or captured. • The drilling site must be searched for raptor nests, which must be avoided as far as possible. • Drilling must follow the operational plan and be kept to a minimum so that mammals can roam undisturbed in the farm area and areas used for prospecting.	General implementation of activities taking mining and biodiversity guidelines into account		Control through visual monitoring and inspection
Nuisance stemming from vehicle and machine emissions	Air quality	Service vehicles and equipment before they enter the site, to avoid excessive atmospheric emissions.	National Environmental Management Air Quality Act	Control and minimise	Maintain air quality
Potential groundwater	Groundwater	• Establish a groundwater monitoring network (quality and quantity).	Water management measures in compliance	Avoid	

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
contamination due to fuel, lubricant and other chemical spills Potential occurrence of drawdown due to borehole drilling		• Service vehicles and machines used on site before they enter the site. • Site manager must monitor potential leaks daily. • Provide spill kits on site and use it immediately after any spills. If spills are excessive, the site manager must compile an incident report and report it to the relevant authority. • Observe the land owners' borehole yield during drilling. Should it be found that the operation affects groundwater quantity and quality, the affected parties must be compensated.	with the NWA and DWS guidelines		Avoid groundwater contamination as far as possible.
Dust from drilling may cause nuisance to surrounding game farms	Dust and noise	• Limit the maximum speed to 30 km/h or less, subject to risk assessment. • Equip vehicles and machinery with engine silencers and keep them in good working condition to limit noise generation. • Carry out prospecting activities in phases to avoid excessive dust generation.	National Noise Control Regulations, SANS10103:2008 guidelines.	Minimise	Minimal noise levels
Possible visual disturbance to surrounding game farms from vehicles and drill rigs	Visual	• Due to the undulating topography, visibility will mostly be restricted to short distances, however the prospecting area will be enclosed to minimise visual disruption from	Measures will be undertaken to ensure that the visual aspects from the site comply with the relevant visual	Minimise	Minimise visual impacts to surrounding landowners

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		machinery and equipment if necessary. • Inform surrounding land owners of the machinery and equipment to be used at the prospecting site, as well as the activities planned for each phase. • To minimise visual impact to surrounding landowners, carry activities out in phases.	standards and objectives including Municipal By Laws.		
Potential impact on heritage resources and archaeological resources	Cultural/heritage, historical resources	• Should any paleontological or cultural artefacts be discovered, drilling at the point of discovery must stop, the location clearly demarcated and the Northern Cape Heritage Resource Agency (NCHRA) contacted immediately. Drilling at the discovery site may only continue once approved by the NCHRA.	Adherence to the NHRA, and its accompanying regulations, as well as the NCHRA	Avoid	Avoid disturbance and destruction of heritage, cultural and/or historical resources
Health and safety of all employees and neighbouring occupants	Health and safety	• Warn neighbouring occupants of any disruptions prior to prospecting commencement, as well as the potential impact thereof on their health. • Employees to keep a safe distance from drilling machinery and vehicles to prevent injury.	Occupational Health and Safety Act	Avoid	Avoid health risks and injury incidents

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		• Implement health and safety measures to protect employees and neighbouring occupants. • Present environmental awareness training to all employees to prevent injuries by natural factors (e.g. snake bites). • A first aid kit and administrator must be present on site for the duration of the project. • Provide employees with adequate PPE.			
Increase of traffic in the area as vehicles access and exit the site	Traffic	• Vehicles and machinery to move on and off site during off peak hours, to avoid congestion. • Vehicles accessing and exiting the site must use designated routes, and only during off peak hours. The speed limit must be 30 km/h on unpaved roads. • Only grant authorised vehicles access to the site.	• National Traffic Act 93 of 1996 • EMPr guidelines in relation to traffic and speed limit	Minimise	Minimise impact of traffic
Generation of solid and other waste from ablution facilities that can impact the environment	Waste	• Minimise littering on site and train all labourers in environmental awareness. • A sufficient number of bins (with enough capacity) must be provided at each drill site to store general and hazardous waste.	Align all operations with the NEM:WA	Avoid	Avoid the excessive generation of general waste.

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		• Waste bins must be sealed to prevent leakage of leachate material and be waterproof to prevent rain from entering. • Empty bins weekly. • Use an integrated waste management approach, based on the principles of waste minimisation, reduction, re-use and recycling. • Empty temporary on-site ablution facilities regularly.			
Potential friction with local businesses who run tourist attractions and breed game Temporary employment opportunities Potential decline in local business due to prospecting Potential increase in theft and poaching	Socio-economic	• Conduct extensive public consultations to increase public awareness and reduce potential friction. • Record and address comments, concerns, and questions prior to commencement of the activity. Farm labourers will not employed unless agreed with employers. • Ensure that all labourers are trained and adhere to all health and safety standards. • Prior to commencement of activities, Legacy Box Holdings must notify adjacent landowners of the employees that will be working on site to avoid conflict. • Drilling should be conducted following best practice to minimise	• Measures taken will be in line with the company's recruitment policies. • Follow public participation legislation according to NEMA. • Follow anti-poaching legislation • NEMBA and CARA	Control and avoid	Control relations between stakeholder and avoid poaching and theft.

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		negative economic impacts on local business. • Conduct drilling in the time frame provided to avoid prolonged disturbances to surrounding businesses. • Prior to commencement of the activity, conduct environmental awareness training for employees to avoid poaching. • Register all employees as labourers and restrict site access. • Keep a daily register of people visiting and working on the farm during prospecting.			
Potential fire outbreaks during the winter fire season	Veld fires	Measures will be put in place during prospecting to mitigate potential fires, including: • Prohibition of starting fires on site • Compulsory fire fighting training for all employees on site • Providing well-maintained, strategically placed fire extinguishers on the site and prospecting machinery. Monitor sparks and flares that may occur due to friction between the drill rig and rocks to avoid accidental fires.	National Veld and Fire Act (No 11 of 1998	Avoid	Avoid man caused fires in the farm

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		Adhere to the National Veld and Fire Act (No 11 of 1998) to prevent veld fires spreading to neighbouring farms.			
Removal of rocks, debris and altering geological features and formations.	Geology	• Limit drilling to designated areas. • Where there is a geological fault, move the borehole position. • Rocky ridges are part of wildlife corridor links; avoid prospecting here. • Cap off and cement drill holes after mineral core removal. Only drill in areas that form part of the operational plan and drill no more than twenty boreholes.	EMPr guidelines	Minimise and avoid	Avoid unnecessary drilling on geological feature
Decommissioning phase					
Removal of temporary vehicles and machinery on site, rehabilitation of cleared areas (0.2562 ha)					
Rehabilitation of the prospecting site	Soil, fauna and flora, geology	• Remove temporary facilities, vehicles and machinery from site when prospecting ends. • Drill site rehabilitation will be undertaken in line with closure objectives and in consultation with landowners. • Keep all vehicles and machinery used at the rehabilitation in good working order. • Only emergency vehicle and machinery repairs may be	• Rehabilitation in terms of MPRDA and NEMA principles. • General implementation of activities taking the Biodiversity Act and its guidelines into account	Control	Ensure that adequate measures are being undertaken to rehabilitate the site

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
		conducted on-site, on protected ground. • Limit vehicle and machine movement to demarcated routes, which will be rehabilitated when no longer in use. • Ensure that the soil in the vicinity of the rehabilitation site is not detrimentally impacted. All waste from drilling activities must be collected for disposal. • Monitor areas that have not had topsoil stripped for alien plant growth and vegetation recovery. If after a year the vegetation has not recovered, hand-seed the area with indigenous grass. • Refill all drill holes with rocks and/or cement to avoid potential injury to fauna, employees and potential occupants. • Prohibit trapping and killing of fauna on-site.			
Nuisance stemming from vehicle and machine emissions	Air quality	Service all equipment and vehicles and keep it in good condition to reduce emissions.	Standards set out in the NEM:AQA	Minimise impact	Minimise smoke emissions in and around the site
Increase of traffic in the area as vehicles	Traffic	• Vehicles and machinery must move on and off-site during off-peak hours to avoid congestion. Vehicles	National Traffic Act 93 of 1996. EMPr guidelines in	Minimise	Minimise impact of traffic

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
access and exit the site		accessing the site must use designated routes. • Implement a 30 km/h speed limit on unpaved roads. • Only grant authorised vehicles access to the site.	relation to traffic and speed limit		
Health and safety of all employees and neighbouring occupants	Health and safety	• Warn neighbouring occupants of any disruptions prior to decommissioning and the potential impacts on personal health. • Implement health and safety measures to protect employees and neighbouring occupants. • Provide environmental awareness training to all employees to avoid injuries caused by natural factors (e.g. snake bites). • A first aid kit and administrator must be present on site for the project duration.	Occupational Health and Safety Act	Avoid	Avoid health risks and injury incidents
Possible visual disturbance to surrounding game farms from vehicles and drill rigs	Visual	• Remove all temporary facilities, vehicles and machinery off-site once prospecting has ended. • Inform surrounding land owners of project decommissioning and related activities.	Undertake measures to ensure that visual site aspects comply with relevant visual standards and objectives, including municipal by laws.	Minimise	Minimise visual impacts to the surrounding landowners
Dust resulting from drilling will cause	Dust and noise	• Limit speed to 30 km/h or less, subject to risk assessment.	National Noise Control Regulations,	Minimise	Ensure that rehabilitation

Potential impact	Aspects affected	Mitigation measures	Compliance with standards	Mitigation type	Standard to be achieved
nuisance to the surrounding game farms		• Equip vehicles and machines with engine silencers and keep them well-maintained to avoid excessive noise generation.	SANS10103:200 guidelines		activities minimise detrimental impacts on people

3 FINANCIAL PROVISION

3.1 Determination of the amount of financial provision

A total of 2,750,000.00 is required to manage and rehabilitate the environment. Legacy Box Holdings must update and review the quantum of the financial provision annually.

3.2 Closure objectives and the extent to which they align to the baseline environment described under the regulation

For a prospecting operation like this, the primary closure and environmental objectives are to:

- Minimise the area to be disturbed and ensure that the areas disturbed during prospecting are rehabilitated and stable, as per the commitments made in this EMPr.
- Sustain pre-prospecting land use.
- Record and communicate the results of the monitoring programme during decommissioning to participating stakeholders.

3.3 Confirm that environmental objectives in relation to closure have been consulted with landowner and Interested and Affected Parties

The environmental objectives in relation to closure will be consulted with the farmers and I&APs. It will be explained that, should prospecting yield negative results, the end use for the area will revert to its pre-prospecting land use (minutes to be incorporated in the final report). The end-use of the area will not be changed by prospecting.

3.3.1 Rehabilitation plan that describes the scale and aerial extent of the main mining activities, including the anticipated mining area at the time of closure

Table 15: Rehabilitation plan.

Aspect/impact	Rehabilitation measure	Monitoring frequency and responsibility
Removal of temporary structures	• Clear and completely remove from site all prospecting equipment, storage containers, signage, temporary ablution facilities, fixtures and any other temporary works. • Ensure that all access roads used during site establishment (which are not earmarked for closure and rehabilitation) are returned (as far as possible) to their pre-prospecting state.	Once-off Legacy Box Holdings
Vegetation clearing/replanting	• Remove any emerging alien and invasive vegetation to prevent further establishment. • Suitable qualified personnel must undertake all planting work using appropriate equipment. • Transplant during the winter (between April and September). • Plant indigenous plants to minimise the spread of alien and invasive vegetation.	When re-vegetation is done and in blooming season Legacy Box Holdings or sub-contractor appointed
Topsoil replacement	• Replace and redistribute stockpiled topsoil with herbaceous vegetation, overlying grass and other fine organic matter in all disturbed areas of the prospecting site, including temporary access routes and roads. Replace topsoil to the original depth. • Prohibit the use of topsoil suspected to be contaminated with alien vegetation seed or spray the soil with specified herbicides. • Where local soil has poor drainage, broken rock (about 75 mm in diameter) must be placed to a depth of 150 mm at the bottom of the planting hole prior to planting and backfilling with approved plant medium mixture.	Once-off Legacy Box Holdings

Aspect/impact	Rehabilitation measure	Monitoring frequency and responsibility
Waste and rubble removal	Remove from site all domestic waste and dispose of it in the approved manner at a registered waste disposal site.	Once-off Legacy Box Holdings
Solid and hazardous waste	• Dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site. • Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps. • Do not hose oil or fuel spills into a storm water drain or sewer, or into the surrounding natural environment. • Dispose of all visible remains of excess cores that were drilled after the completion of tasks.	Once-off Legacy Box Holdings
Erosion protection	• Protect all areas susceptible to erosion and ensure that there is no undue soil erosion resultant from activities in and around the proposed site. • Retain shrubbery and grass species where possible. • Regularly monitor and maintain erosion control measures.	After rainfall, Legacy Box Holdings or sub-contractor appointed

3.3.2 Confirm rehabilitation plan compatibility with closure objectives

Legacy Box Holdings is required to make the prescribed financial provision for the rehabilitation or management of negative environmental impacts. If Legacy Box Holdings fails to rehabilitate or manage any negative impact on the environment, the DMRE may, upon written notice to the company, use all or part of the financial provision to rehabilitate or manage the negative environmental impact in question. Legacy Box Holdings will specify that the appointed contractor is required to comply with all the environmental measures specified in the EMPr. This will include avoiding unnecessary disturbance of natural vegetation and the rehabilitation of each drill site, immediately after drilling has been completed. All tracks to the drill sites must be rehabilitated at the end of the prospecting programme. The financial provision provides for the final checking of all sites before site clearance.

3.3.3 Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline

CALCULATION OF THE QUANTUM

Applicant: **Legacy Box Holdings (Pty) Ltd** — **Ref No.: NC 30/5/1/1/2/12658 PR**
Evaluator: **Singo Consulting (Pty) Ltd** — **Date: 19/10/2022**

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0
3	Rehabilitation of access roads	m2	1249,75	49	0,5	1	30618,875
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha		284292	1	1	0
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha		189528	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha		685612	1	1	0
9	Rehabilitation of subsided areas	ha	0	158701	1	1	0
10	General surface rehabilitation	ha		150138	1	1	0
11	River diversions	ha	0	150138	1	1	0
12	Fencing	m	0	171	1	1	0
13	Water management	ha		57087	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	19980	1	1	0
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		30618,875
1	Preliminary and General		3674,265		weighting factor 2 1		3674,265
2	Contingencies				3061,8875		3061,8875
					Subtotal 2		37355,03
					VAT (15%)		5603,25
					Grand Total		**42958**

Figure 40: Quantum of financial provision.

3.3.4 Confirm that the financial provision will be provided as determined

Legacy Box Holdings undertakes to ensure financial provision for rehabilitation plan implementation.

4 MECHANISMS FOR MONITORING COMPLIANCE WITH AND PERFORMANCE ASSESSMENT AGAINST THE ENVIRONMENTAL MANAGEMENT PROGRAMME AND REPORTING THEREON

Table 16: Mechanism for monitoring compliance.

Source activity monitoring and reporting	Impacts requiring monitoring programmes	Functional requirements for monitoring	Roles and responsibilities	Frequency and time periods for implementing impact management actions
Site establishment	• Dust • Noise • Vegetation removal • Disruption of animal life • Habitat destruction • Loss of geology	• Daily dust and noise monitoring • Daily monitoring of plant species of ecological Importance	Geologist and project manager	Daily and monthly
Traffic management	• Animal life disruption • Traffic congestion • Disruption of surrounding businesses	Monitor traffic frequency and access to the site, and notify surrounding business owners	Geologist and project manager	Monthly and when necessary
Ablution facility	• Land contamination • Water contamination • Health hazard	• Service the toilet facility • Monitor water quality	Geologist and project manager	Monthly and when necessary
Existing/access routes	• Animal life disruption • Disruption of surrounding businesses • Traffic control	• Monitor traffic frequency and access to the site, and notify surrounding business owners	Geologist and project manager	Monthly and when necessary

		• Monitor speed limits on the road		

4.1 Frequency of the submission of the performance assessment/ environmental audit report

Regular monitoring of all the environmental management procedures and mitigation measures will be carried out by Legacy Box Holdings (to ensure that the provisions of this EMPr are adhered to. Formal monitoring and performance assessments of the EMPr will be conducted monthly.

5 ENVIRONMENTAL AWARENESS PLAN

5.1 How the applicant intends to inform employees of any environmental risk which may result from their work

Environmental Awareness Training will be presented by Legacy Box Holdings to inform employees and contractors of the environmental risk their work or interaction with the sensitive environment may pose. Training will be conducted as part of the induction process for all employees (including contractors) who will perform work in terms of the proposed activities. Proof of all training provided will be kept on-site. Environmental Awareness Training will, at a minimum, cover the topics listed in Table 17.

Table 17: Environmental awareness plan.

Air quality	• Activities that impact air quality; speeding on roads, dust suppression requirements, etc. • Negative impacts on the receiving environment if mitigation measures are not implemented.
Surface and groundwater	• Risks posed to groundwater by fuel and chemical handling, and damage to riparian vegetation. • Incident report and emergency requirements. • Importance of reusing water and preventing spillages.
Cultural heritage	• Respect all cultures and beliefs. • How to report sites of heritage importance (e.g. fossil finds) identified during operations.
Fauna	• Overview of the fauna found on/around site and the uniqueness thereof. • Mitigation measures that all contractors and employees need to abide by. • No contractor or personnel allowed to catch or kill any species. • How sightings should be reported if further actions are required (e.g. catch and release).
Flora	• Overview of on-site flora diversity and determining whether it is endangered. • Measures taken by the company to protect species. • No contractor or personnel allowed to remove, harvest or destroy any flora species unless clearly instructed based on the site establishment and operational plans.
Waste management	• Measures to avoid waste generation and minimise/reduce waste.

Traffic strategies	• Stay on designated roads; do not build new roads in areas not earmarked for prospecting. • Be aware of the fauna species and avoid collisions.
Emergency preparedness and response	• Incident and emergency reporting requirements.
General rules and conduct	• Respect the sensitive environment. • Do not litter. • Respect each other and different cultures. • Adhere to safety and health requirements.

5.2 How risks will be dealt with to avoid pollution and environmental degradation

All employees must attend environmental awareness training (before prospecting) to inform them of any environmental risks which may result from their work, and it must be dealt with to avoid pollution and environmental degradation. Induction courses will be provided by a reputable trainer.

6 SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

No risks have been identified other than those noted in this document. These risks will be communicated to all contractors, who will also be provided with a copy of the approved EMPr. Environmental training needs for each section must be identified and addressed to ensure environmental management is part of daily operations. The environmental risk responsibilities guide the training requirements of each individual, Environmental training recommended for the different levels of management guide the training needs identification process. This is a minimum guideline, and any additional training can be added where section-specific issues or high-risk items require training and awareness. It is the responsibility of the line manager to ensure environmental training needs for individual staff members are identified, agreed to, facilitated and tracked.

7 UNDERTAKING

The EAP herewith confirms:

i. the correctness of the information provided in the reports
ii. the inclusion of comments and inputs from stakeholders and I&APs;
iii. the inclusion of inputs and recommendations from the specialist reports where relevant; and
iv. that the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected. parties are correctly reflected herein.

Signature of the Environmental Assessment Practitioner

Singo Consulting (Pty) Ltd

Name of company

October 2022

Date

-END-

Appendix 1: Project maps.

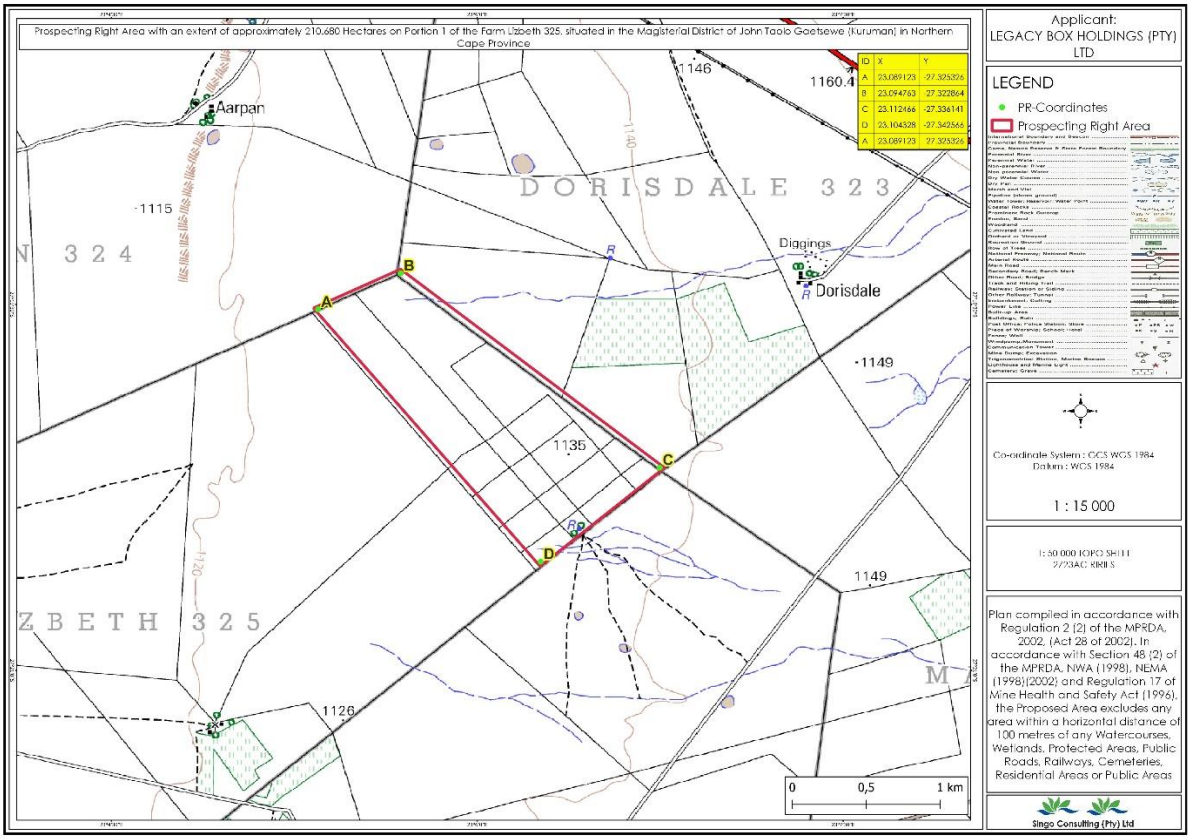


Figure 41: Regulation 2(2) map.

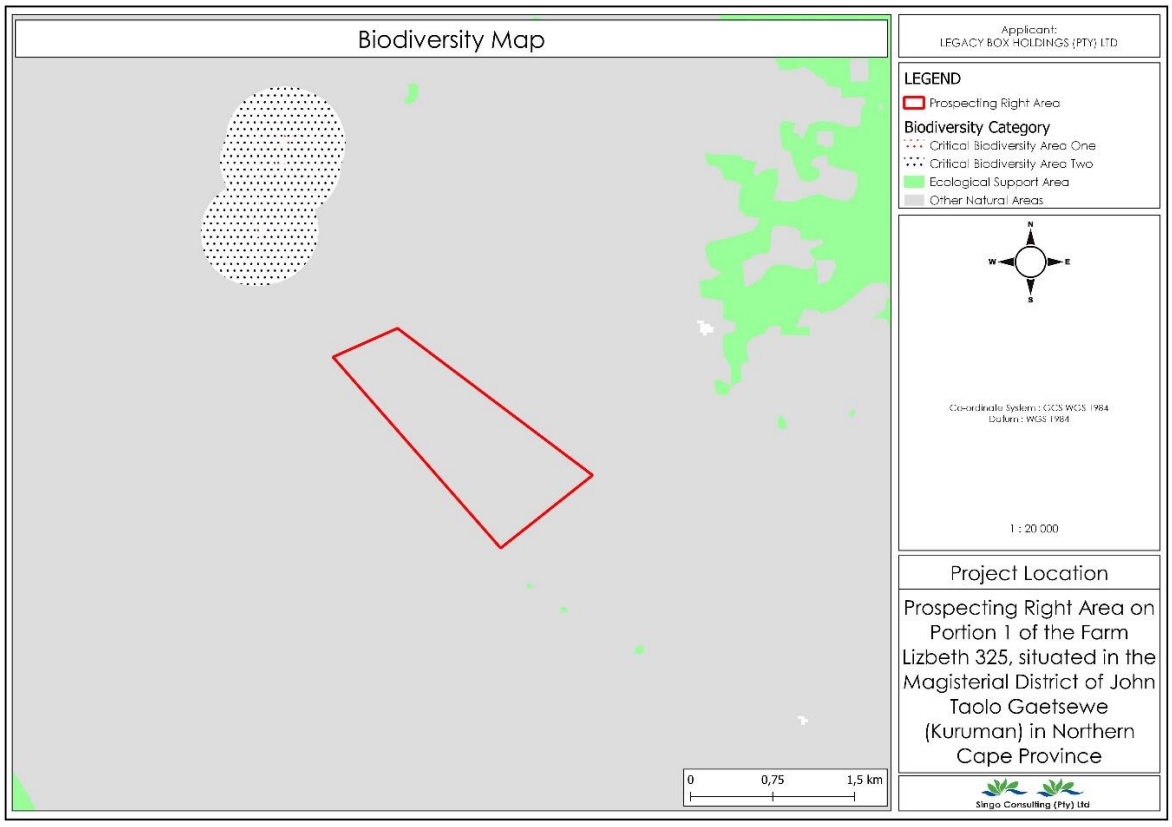


Figure 42: Biodiversity in the proposed project area.

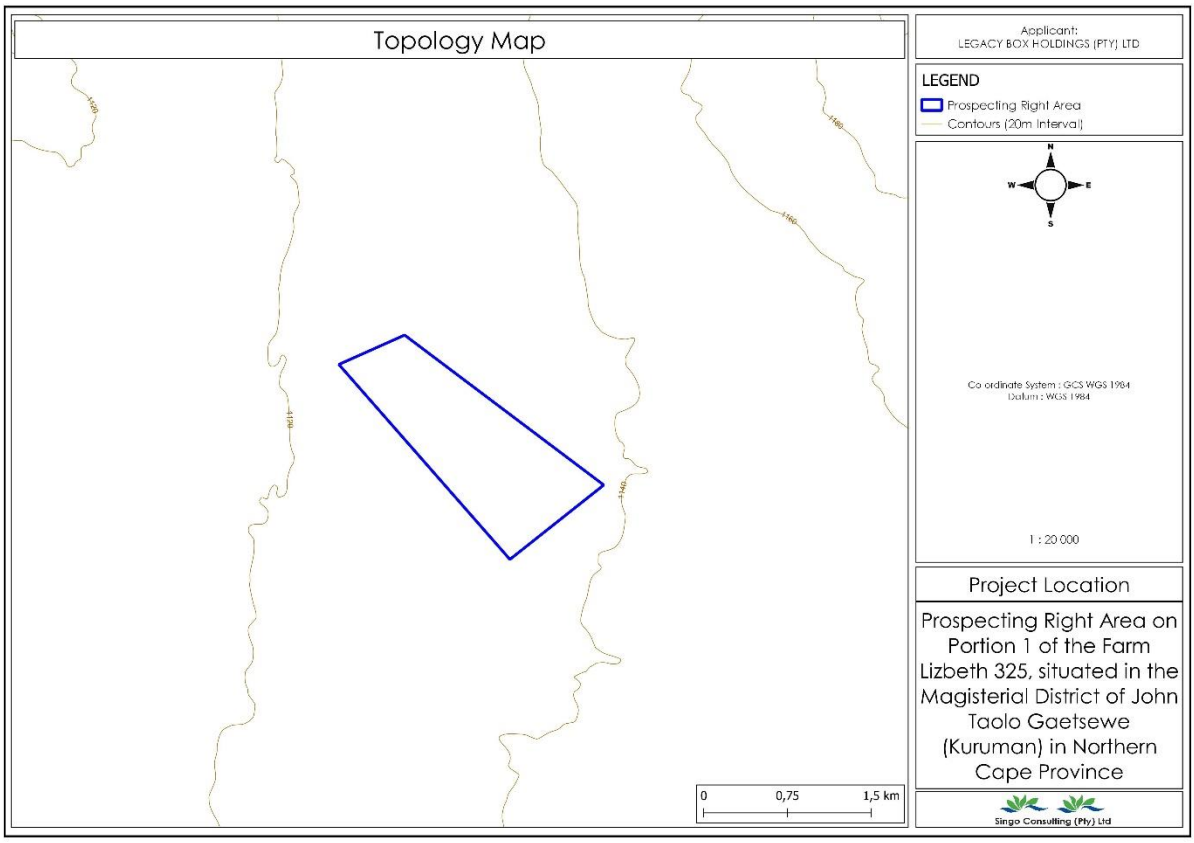


Figure 43: Topology of the proposed project area.

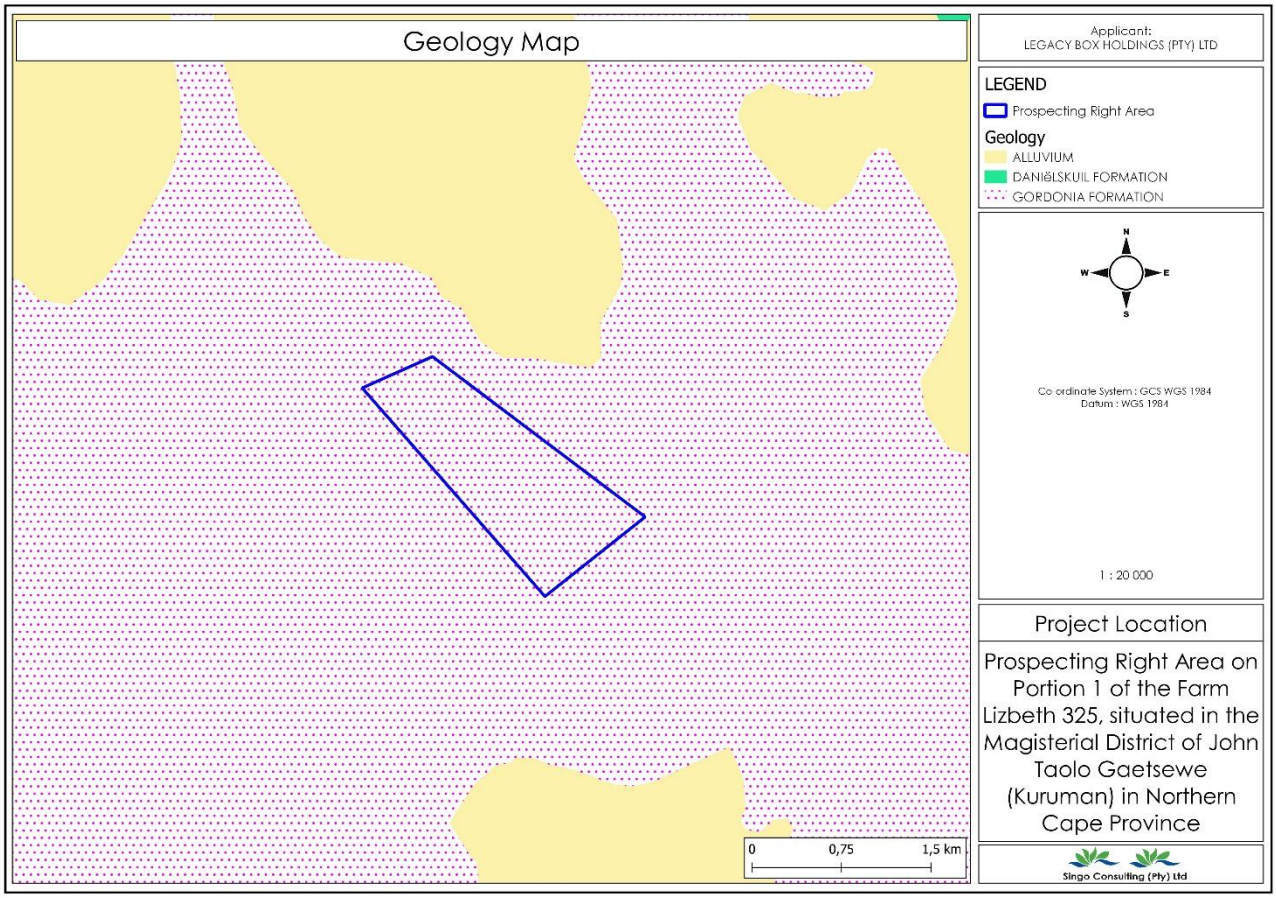


Figure 44: Geology of the proposed area.

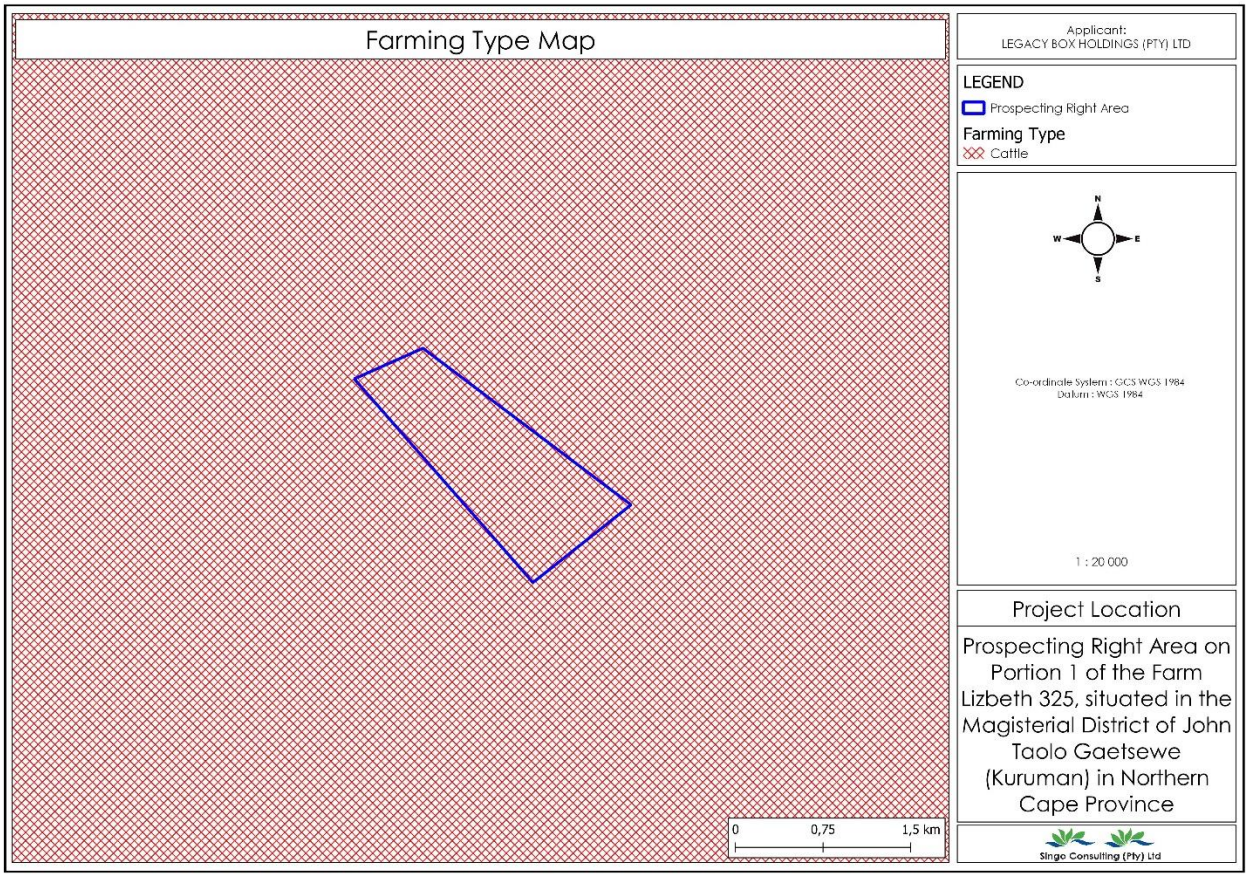


Figure 45: Types of farming in the proposed project area.

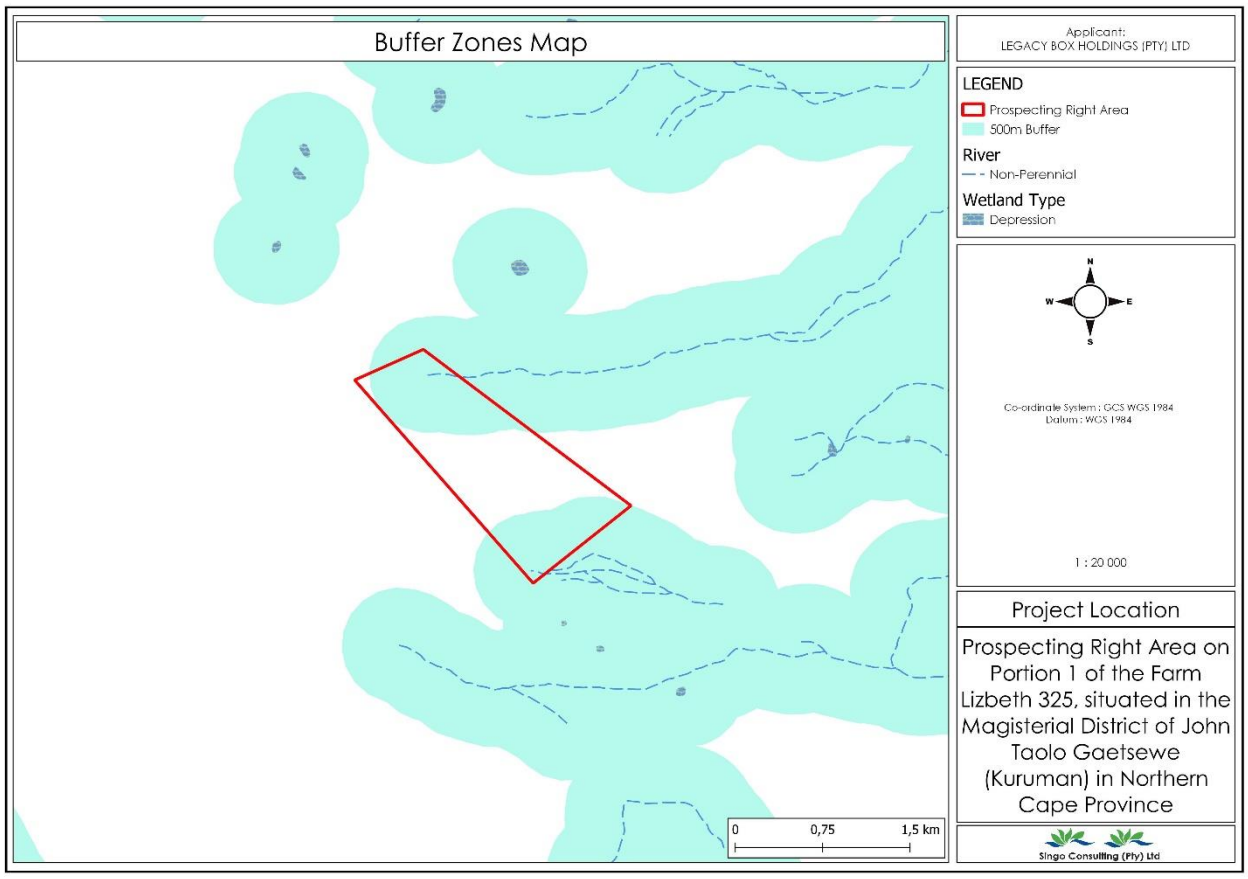


Figure 46: Buffers in the proposed project area.

Appendix 2:Background Information Document

BACKGROUND INFORMATION DOCUMENT

2022

PROSPECTING RIGHT APPLICATION FOR THE PURPOSE OF PROSPECTING MANGANESE ORE ON PORTION 1 OF THE FARM LIZBETH 325 SITUATED IN THE MAGISTERIAL DISTRICT OF JOHN TAOLO GAETSEWE (KURUMAN) IN NORTHERN CAPE PROVINCE.

DMRE REF: NC 30/5/1/1/2/12658 PR

PREPARED BY:

Singo Consulting (Pty) Ltd

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PREPARED ON BEHALF OF:

Legacy Box Holdings (Pty) Ltd

Tunbar Building,
38 Osborn Road, Wadeville,
Germiston,
1428.
Fax: 086 515 3178
Cell: +27 82 899 1473/+27 63 952 4033
Email: mulalo@gundoagroup.co.za

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INTRODUCTION AND THE PURPOSE OF THIS DOCUMENT

Singo Consulting (Pty) Ltd has been appointed as an independent Environmental Consultant by **Legacy Box Holdings (Pty) Ltd** to conduct Environmental Impact Assessment (EIA), compile a Basic Assessment Report and Environmental Management Programme Report (EMPr) and undertake Public Participation Process (PPP). This is done for processes of acquiring Environmental Authorization for the proposed prospecting for **Manganese Ore** on **portion 1** of the **Farm Lizbeth 325**, situated In the Magisterial District of **John Taolo Gaetsewe (Kuruman)** in Northern Cape Province.

The Purpose of this Background Information Document (BID) is to provide a perfunctory description of the project and outline EIA processes to be followed and contributions from Interested and Affected Parties (I&APs) on the issues related to the project in question, allowing comments and concerns to be raised.

Results of the EIA through BAR & EMPr, both negative and positive will be submitted and made available to the relevant Departments such as the Department of Mineral Resources and Energy and if requested, Environmental Affairs. Water and Sanitation, Landowners, and other interested stakeholders.

This BID therefore requests and invites I&APs to comment on the environmental, physical, social, and economic impacts associated with the proposed Prospecting Activity. Be assured that your comments are of great value as they ensure that relevant issues are taken into consideration. Attached at the end of this document is a registration from, kindly complete it and send it back to **Mr. Ayanda Vilakazi** through given means of communication also attached there.

PROJECT DESCRIPTION

Prospecting Right Application has been submitted for the prospecting of **Manganese Ore** on the property mentioned above. This Prospecting Area, as seen in figure 1 and 2 below, is situated approximately **35.23 Km Northwest of Ga-Segonyana**.

Prospecting activities will be undertaken over a period of five (5) years and are designed in phases, each phase conditional on the success of the previous phase. Both invasive and non-invasive methods will be implemented. Desktop study of the area has commenced, and this incorporates desktop geographical and geological mapping. This will be followed by geochemical and geotechnical surveys. In turn, this is followed by detailed geophysical studies and later, a detailed drilling, sampling, assaying and mineralogical study. Percussion drilling and Diamond drilling methods will be utilized to prospect **Manganese Ore**. To ensure or minimize impacts on the receiving environment, all the drilling activities will be guided by the project's EMPr.

REGULATORY FRAMEWORK

The proposed prospecting activity is involved with some sort of physical alteration to accommodate for example drill rigs and site offices. Therefore, EIA process to be undertaken will be conducted in accordance with the National Environmental Management Act (Act 107 of 1998) and Environmental Impact Assessment regulations as amended (April 2017).

The activity is to prospect the existence and occurrence of **Manganese Ore** therefore this will be conducted in accordance with Mineral and Petroleum Resources Development Act, (Act 28 of 2002). Other regulatory guidelines to be followed include National Water Act, 1998 (Act 36 of 1998), National Air Quality Standards (GN 1210: 2009) and National Dust Control Regulations (GN 827: 2013) as amended.

These all will accurately be followed to ensure that identified impacts are assessed and mitigated according to their significance so that the protection of the receiving environment and populations is met.

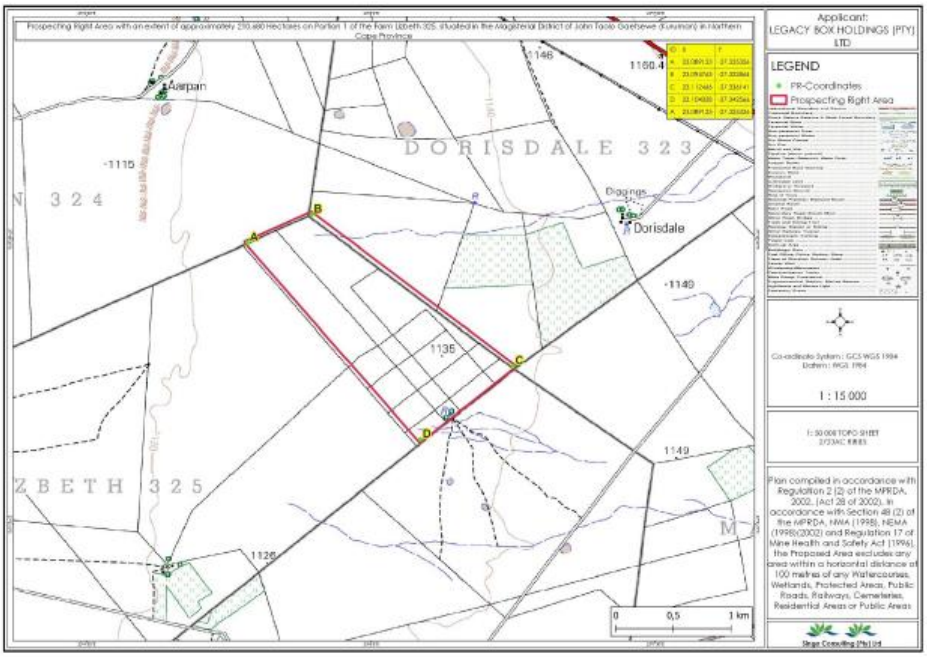

Figure 1: Regulation 2(2) map of the proposed area. (A: -27.325326,23.089123)

4

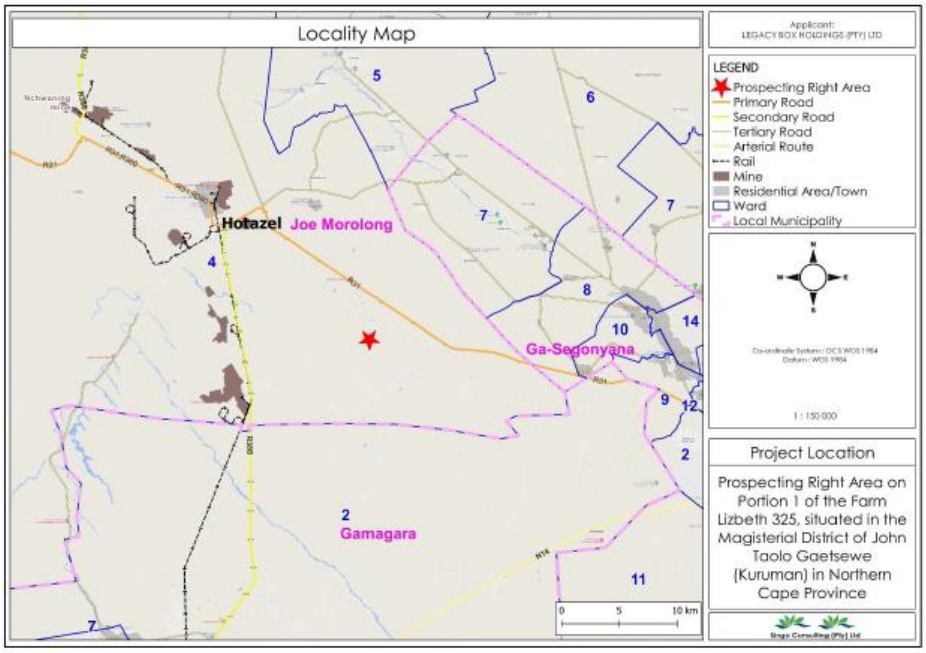

Figure 2: Locality Map of the proposed project

5

BASIC AND ENVIRONMENTAL IMPACT ASSESSMENT PROCESSES

These are planning and decision-making tools used in identifying potential environmental, economic, and social consequences of a proposed activity prior the commencement of the activity.

These together with the public issues and concerns are to be identified sufficiently early so that they can be assessed and incorporated into the final reports when/if necessary.

These tools are regarded crucial because they are utilized in order to demonstrate to the relevant stakeholders about the potential impacts, which in turn leads to the prospecting application process being a success or declined.

PUBLIC PARTICIPATION PROCESS (PPP)

Public Participation remains a cornerstone of the Environmental Impact Assessment process. It ensures provision of relevant and enough information with openness and transparency. Public Participation process presents to I&APs, an opportunity to understand what the project is about, and affords them an opportunity to make valuable contributions towards the EIA process.

I&APs can be any person, group of persons or organization interested in or affected by the proposed activity, and any organ of state that may have jurisdiction over any aspect of the activity.

For this specific proposed project, I&APs will be given a period of 30 days to comment and raise issues/concerns with regards to the BAR and EMPr which will be available at the **Joe Morolong Local Municipality** (D320 Cardington Rd, Churchill, Mothibistad, 8474) and via email upon request.

- Kindly note the following dates:
- Announcement of the Prospecting Right Application: **Friday the 23rd of September 2022**
- Stakeholder engagement and consultation: **Ongoing.**
- Review of Draft BAR & EMPr: **Monday the 24th of October 2022 to Tuesday the 22nd of November 2022**

Singo Consulting (Pty) Ltd

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REGISTRATION & COMMENT SHEET

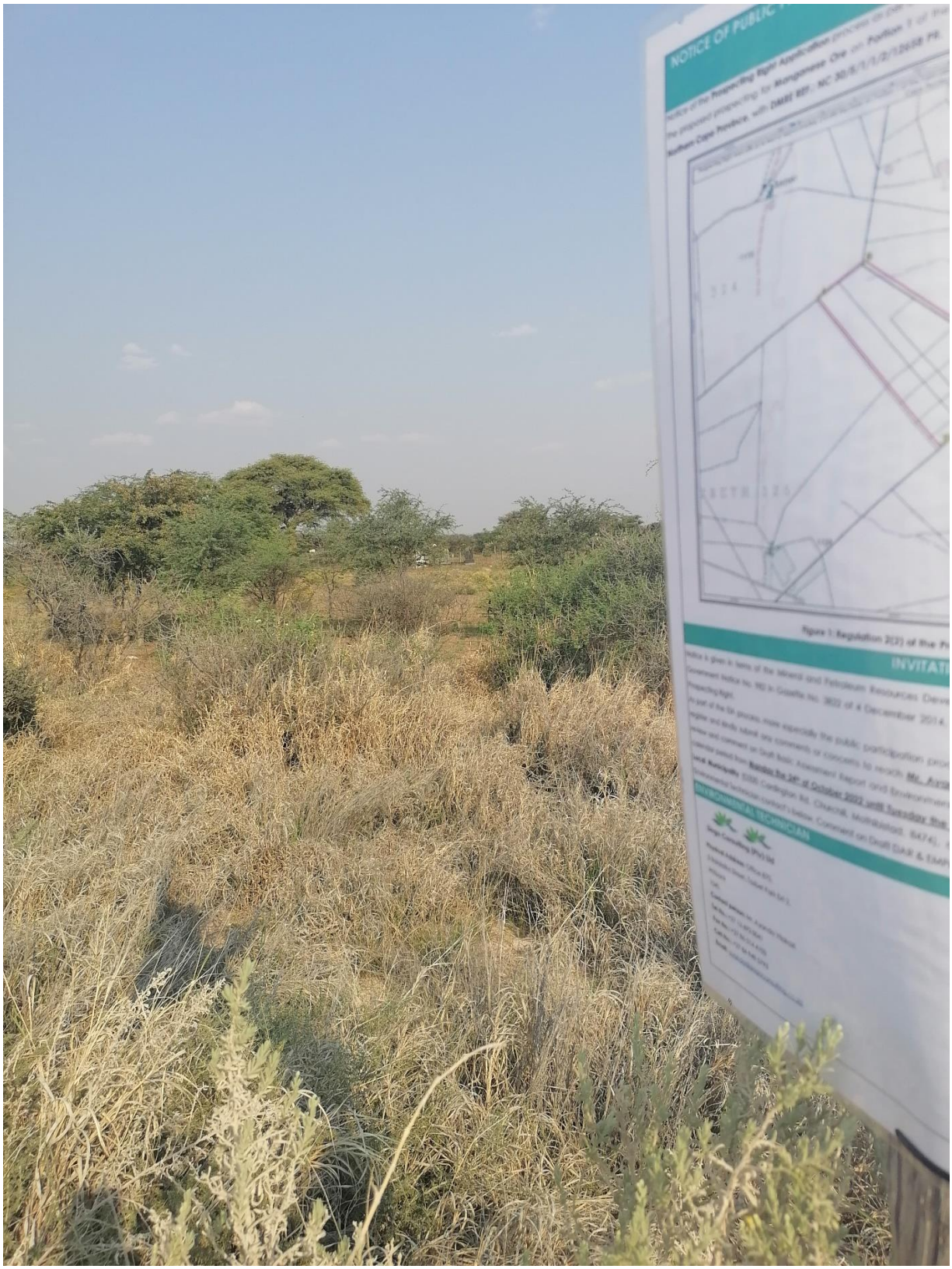
PROSPECTING RIGHT APPLICATION FOR THE PURPOSE OF PROSPECTING MANGANESE ORE ON PORTION 1 OF THE FARM LIZBETH 325, SITUATED IN THE MAGISTERIAL DISTRICT OF JOHN TAOLO GAETSEWE (KURUMAN) IN NORTHERN CAPE PROVINCE WITH DMRE REF: NC 30/5/1/1/2/12658 PR.

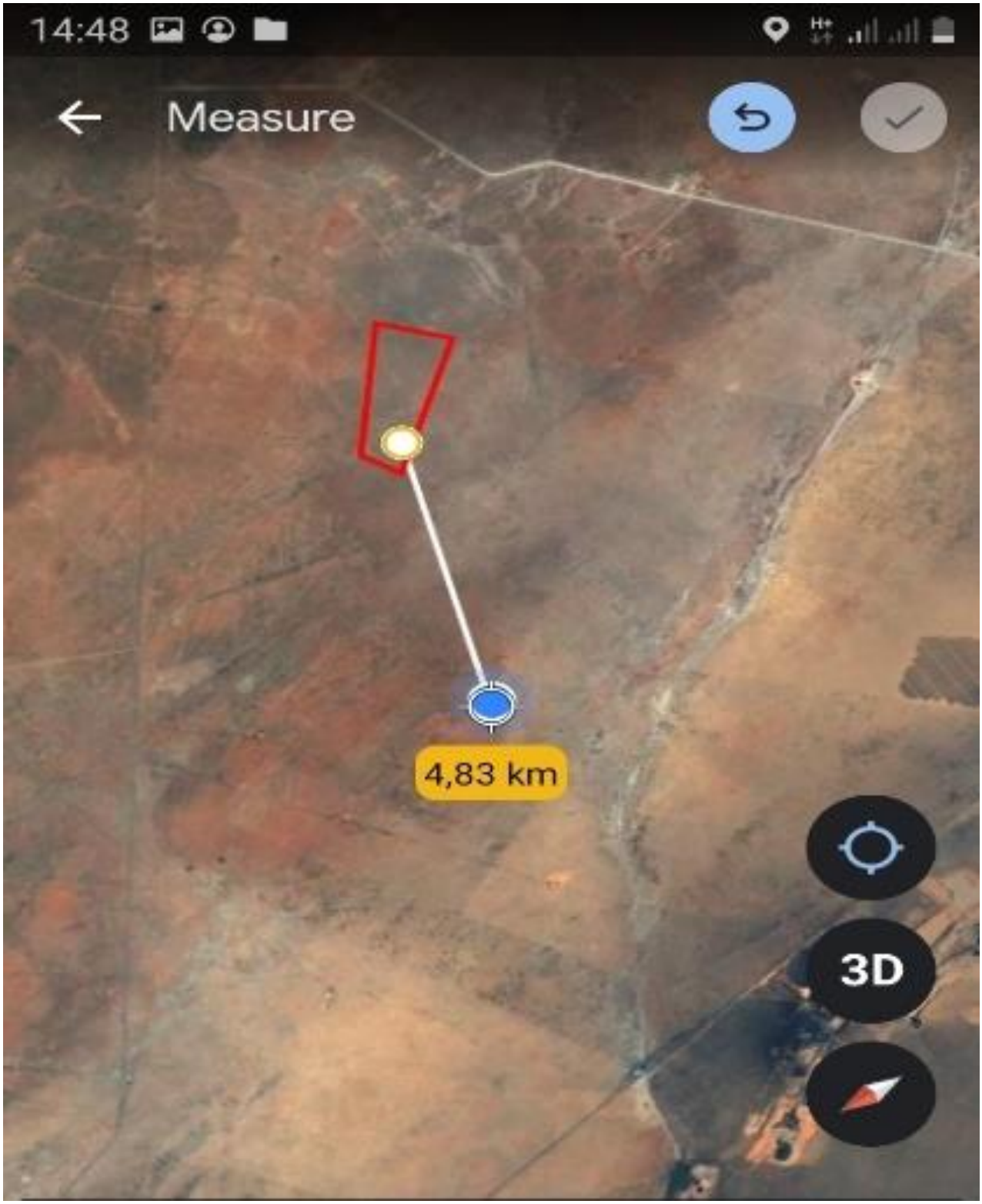
Attention: **Ayanda Vilakazi** Email: ayanda@singoconsulting.co.za

Date				
Title		Name	Surname	
Company				
Designation				
Address				
Tel No.			Fax No.	
E-mail			Cell No.	
I would like to receive my notifications be (mark with "X"):	Post ☐	E-mail: ☐ Fax:		
Please indicate why you would have an interest in the above-mentioned project.				
Please provide your comments and questions here:				
Please feel free to attach a separate document				
Please add any person you think may be interested and affected parties:				
Full name			Company	
Address				
E-mail			Contact No.	

7

Appendix 3:Site Pictures (Captured within 15km radius)


NOTICE OF PUBLIC
INVITATI
ENVIRONMENTAL TECHNICIAN


14:48
Measure
4,83 km
3D

Appendix 4: Mitigation measures.

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
Planning and project management	EMPr	Project management	Planning	The final EMPr must address all authorisation conditions stipulated by the DEA (and other commenting authorities). EMPr must encompass all environmental impact mitigation measures identified in the final BAR.	MPRDA & NEMA
	Appointment of Environmental Officer	Project management	Planning	The Legacy Box Holdings environmental geologist will serve as the environmental officer during construction and will be responsible for monitoring employee compliance with the EMPr.	MPRDA & NEMA
	Permits and permissions		Planning	Joe Morolong Local Municipality must ensure that all licensing, permits or	MPRDA & NEMA

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				certificates required for the project are obtained and in place before construction commences.	
	Emergency response planning	Safety and health personnel on site	Planning	Plan all emergency responses, including: • Response procedures to fires, explosions, or any accidents that will require rapid medical responses. • Responses to community and stakeholder concerns and communication procedures with potential I&APs.	MPRDA & NEMA
	Project schedule	Undertaking the project timeously	Planning	Plan and develop a construction sequence to alleviate noise generation during construction.	N/A

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
	Method statement	Project management	Planning	Ensure that a method statement has been compiled and submitted to the site/construction manager.	N/A
	Grievances	Project management	Planning	Develop grievance mechanisms for the recording and management of complaints and grievances specifically including (but not limited to) grievances from those living in the area.	N/A
	Records and administration	Project management	Planning	Ensure the following are up to date and available on site: • A complaint registers • An approved method statements • Copies of the EMPr • Environmental permits and authorisations	

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				• Copies of weekly checklists, and compliance, incidence and corrective action reports • Photographs of areas of concern (photos of non-compliance, and corrective action) • Attendance registers of environmental awareness training	
	Recruitment of labour	Project management	Planning	• Where possible, the contractor must use local labour in support of the local economy. • Advertise employment opportunities adequately, so as not to limit application opportunities.	Basic Conditions of Employment Act, No. 75 of 1997 (as amended)

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				• Implement a transparent process of recruiting construction staff, following pre-established and accepted criteria.	
Pre-drilling and exploration					
	Site establishment	Project management	Planning	• The contractor must, in agreement with the construction manager, decide on the construction camp location. The construction camp should be properly demarcated and fenced, and be adequately sized, with enough space for site offices, construction vehicles, equipment, material and waste storage areas. • The construction camp must be located in an area where it will cause	

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				minimal environmental damage or disturbance. • Establish no-go areas where no construction personnel, equipment, machinery or vehicles are permitted. Any identified Environmentally Sensitive or important areas should be designated no-go areas.	
	Site housekeeping	Project management	Planning	The construction camp should always be kept clean and orderly.	
	Ablution facilities	Project management	Planning	• Enough ablution facilities should be provided near the construction camp. They must be properly covered and ventilated and contain hand washing facilities.	

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				• Properly secure portable toilets to the grounds to avoid toppling in the event of a wind or storm. • Ensure that toilets function properly and are hygienic. Clean and empty toilets regularly. • Ensure that there are no spills when toilets are cleaned and emptied. • Prohibit urination on site.	
Site establishment activities (-ve): • Vegetation clearance • Topsoil stripping and stockpiling • Drill pad compaction	Cultural and heritage	Destruction/loss of cultural and heritage resources (cultural/heritage artefacts have been identified on site)	Construction/set-up	• Environmental permits and authorisations. • Copies of weekly checklists, compliance, incidence and corrective action reports.	Heritage Act

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
• Erection of office, toilets, fuel storage (if not by road tanker), water tanker, core storage • Vehicle movements • Waste management	Noise	Noise generation	Construction/set-up	Photographs of areas of concern (photos of non-compliance areas as well corrective action).	SANS 10103
	Visual	Visual intrusion	Construction/set-up	Attendance registers of environmental awareness training.	N/A
	Traffic	Increase in traffic volumes near the drilling site	Construction/set-up	• Traffic signs to be erected around the site to notify motorist of the activities. • Construction vehicles to make trips on/off site only when necessary. • Construction vehicles to adhere to local speed limits when driving in and around site.	National Traffic Act Regulations
	Signage	Traffic volumes, safety	Construction/set-up	• Construction management must communicate commencement and	National Traffic Act Regulations

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				duration of construction activities to the community. • Erect clear signage to make community aware of construction activities to prevent hazardous occurrences. • Provide adequate safety warnings on roads.	
	Dust fall	Dust fall and nuisance from activities	Construction/set-up	• Apply wet suppression to prevent visible dust is raised by prospecting operations. • Separation of at least 500 m to be maintained between drill sites and dwellings. • Low vehicle speeds to be enforced on unpaved roads.	GN R. 827 (NEM:AQA

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
	Soil and vegetation	Potential impact of proposed prospecting on vegetation will occur at proposed drill sites and the access routes used to get to these sites.	Construction/set-up	• Soil disturbance and vegetation clearance at drill pads will be limited as far as possible. • No clear scraping (dozing) to be carried out unless necessary to establish a level drill pad. • Clear surface vegetation to make way for the drill rig, leaving the roots intact so that vegetation can coppice and regrow. • Disturbed areas will be re-vegetated with indigenous species as soon as possible.	NEMBA
	Animal life	Animal life will be affected in the immediate vicinity of	Construction/set-up	• Environmental awareness training sessions should be part of worker induction and site workshops.	NEMBA

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
		the drill rig. It is anticipated that the noise and activity will keep animal life away from the site during prospecting.		• If any animals are encountered, they must not be killed or injured, but removed or chased away from the site with the assistance of an animal specialist.	
	Social	Friction between local residents/landowners and construction personnel	Construction/set-up	• All operations will be carried out under the guidance of a strong, experienced manager with proven skills in public consultation and conflict resolution. • All prospecting personnel will be made aware of conditions and sensitivities in the prospecting area and the fact that some residents may not welcome prospecting.	NEMA

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				• There will always be a strict requirement to treat residents with respect and courtesy.	
	Job creation	Employment will be created for land clearing and establishing the drill site	Construction/set-up	No mitigation measures required.	NEMA
	Waste storage and disposal	Safety and aesthetic/visual aspects of the property, as well as waste disposal practices	Construction/set-up	• Waste generated by construction workers must be collected in clearly labelled containers and disposed of weekly at registered disposal sites. • Enough weather and vermin-proof bins should be placed on site for solid waste disposal. Prohibit littering and on-site waste burning.	National Waste Act

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				• All waste generated from construction activities (building rubble, solid and liquid waste, etc.), should be disposed of frequently at an appropriately licensed refuse facility. • Minimise waste generation, e.g. by providing re-usable items and refillable containers (e.g. for drinking water) and adopt a cradle-to-grave approach to waste. • Comply with legal requirements for waste management and pollution control. • Implement good housekeeping and monitoring practices.	

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
	Hazardous waste	Safety and aesthetic/visual aspects of the property, as well as waste disposal practices.	Construction/set-up	• Any hazardous waste that may be generated should be separated from general waste and stored in clearly marked and properly sealed secondary containers. • Any hazardous waste generated should be disposed of in accordance with the Hazardous Chemical Substances Regulations, 1995 (Regulation 15).	National Waste Act
	Spills and leaks	Safety and aesthetic/visual aspects of the property, as well as waste disposal practices.	Construction/set-up and operation	• Any leaking equipment should be temporarily decommissioned and removed from the construction site to a surface with an impermeable surface and waste water collection system.	National Waste Act

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				• Spill response kits must be readily available and accessible to all personnel on site.	
	PPE			Ensure that all persons on site use PPE, including safety boots, safety vests and protective masks.	Employment Act
	Illegal fires			Ensure that no fires are ignited on site unless for construction purposes, in which case the EC should designate areas for it. Designated areas should be as far as possible from vegetation.	NEMA
	Erosion	The properties of the receiving environment and ensuring that the ground is not	Construction/set-up and operation	• Ensure that erosion management and sediment controls are strictly implemented from the beginning of site clearing activities.	NEMA

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
		susceptible to erosion beyond that which can be rehabilitated.		• All topsoil stockpiles (if any) must be protected against wind, erosion and seeds, i.e. by use of shade cloth or netting. • Topsoil stockpiles should not exceed 2 m in height.	
Exploration drilling • Drilling • Drill maintenance and refuelling • Core sample collection and storage • Vehicle movements • Waste generation and management	Noise	Noise generation	Operations	• Construction/setup, operational and decommissioning activities will be limited to daylight hours, Mondays-Saturdays, from 08h00–17h00. No activities on Sundays and public holidays. • Maintain a minimum distance of 500 m (preferably 1 000 m) between drill sites and dwellings. • Noise abatement equipment, like mufflers on diesel engines, will be	Heritage Act

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				maintained and kept in good condition. • If intrusive noise levels are experienced by any person at any point, the noise source will be moved if practical, or placed in an acoustic enclosure, or an acoustic barrier will be erected between the source and the recipient.	
	Visual	Visual intrusions	Operations	• The drill rig and other visually prominent items on site will be erected in consultation with the landowner. • Use existing vegetation as far as possible to screen the prospecting operations from view.	SANS 10103

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				• If necessary, operations can be screened from view by erecting a shade cloth barrier.	
	Traffic	Increase in traffic volumes near the drilling site	Operations	• Erect traffic signs around the site to notify motorists of activities. • Construction vehicles to make trips on/off site only when necessary. • Construction vehicles to adhere to local speed limits when driving in and around site.	N/A
	Dust fall	Dust fall and nuisance from activities	Operations	• Apply wet suppression to ensure that no visible dust is raised by prospecting operations. • Maintain a minimum distance of 500 m (preferably 1 000 m) between drill sites and dwellings.	National Traffic Act Regulations

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				• Enforce low vehicle speeds on unpaved roads.	
	Soil and vegetation	Soil and vegetation disturbance from drill pad preparation	Operations	• Soil disturbance and vegetation clearance at drill pad areas will be limited to the minimum. • No clear scraping (dozing) be carried out unless necessary to establish a level drill pad. • Clear surface vegetation to make way for the drill rig, leaving the roots intact so that vegetation can coppice and regrow. • Disturbed areas will be re vegetated with locally indigenous species as soon as possible.	GNR 517 (NEM:AQA)

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
	Animal life	Animal life will be affected in the immediate vicinity of the drill rig. It is anticipated that the noise and activity will keep animal life away from the site during prospecting.	Operations	Measures implemented during site establishment should apply in this phase as well.	NEMBA
	Social	Friction between residents/land owners and construction personnel	Operations	• All operations will be carried out under the guidance of a strong, experienced manager with proven skills in public consultation and conflict resolution. • All prospecting personnel will be made aware of local conditions and sensitivities in the prospecting area	NEMBA

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				and the fact that some residents may not welcome prospecting. • There will always be a strict requirement to treat residents with respect and courtesy.	
	Job creation	Employment will be created for land clearing and establishing the drill site.	Operations	No mitigation measures required.	Basic Conditions of Employment Act, No. 75 of 1997 (as amended)
Decommissioning and rehabilitation					
Rehabilitation of the drill sites and surroundings	Removal of construction structures	Ensure the receiving environment is not impacted further, by dismantling machinery and	Rehabilitation	• Clear and remove from site all construction plant equipment, storage containers, signage, temporary fencing, temporary services, fixtures and any other temporary works.	NEMA

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
		equipment appropriately.		• Ensure that all access roads used during construction (which are not earmarked for closure and rehabilitation) are returned (as far as possible) to their pre-construction state.	
	Waste and rubble removal	Visual aspects by preventing any further pollution.	Rehabilitation	• Clear the site of all inert waste and rubble, including surplus rock, foundations and batching plant aggregates. • Load and haul excess spoil and inert rubble to fill in borrow pits/dongas or to dump sites indicated/approved by an environmental control specialist. • Remove from site all domestic waste and dispose of it in the approved	National Waste Act

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				manner at a registered waste disposal site.	
	Solid and hazardous waste			• Store hazardous waste as indicated in the approved EMPr. • Dispose of all hazardous waste not earmarked for reuse, recycling or resale at a registered hazardous waste disposal site. • Remove from site all temporary fuel stores, hazardous substance stores, hazardous waste stores and pollution control sumps. • Do not hose oil/fuel spills into a storm water drain, sewer, or the natural environment.	National Waste Act

Activity Whether listed or not, e.g. excavations, blasting stockpiles, discard dumps/dams, loading, hauling, transport, water supply dams/boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control berms, roads, pipelines, power lines and conveyors.	**Potential impact** Including potential for cumulative impacts, e.g. dust, noise, drainage surface disturbance, fly rock, surface and ground water contamination and pollution.	**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. E.g. modify through alternative method. Control through noise control. Control through management and monitoring through rehabilitation.	**Standard to be achieved** Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
				• Dispose of all visible remains of excess material when exiting the site.	
	Erosion protection		Rehabilitation	• Protect areas susceptible to erosion and ensure that there is no undue soil erosion due to activities in/around the construction site. • Retain shrubbery and grass species where possible. • Regularly monitor and maintain erosion control measures.	NEMA

Appendix 5:Baseline Studies

Baseline studies complied for this project are Upon Request

Curriculum Vitae of the EAP

Due to the POPIA ACT the Curriculum Vitae will be made available to DMRE only.

Appendix 6: Financial Provision

CALCULATION OF THE QUANTUM

Applicant: **Legacy Box Holdings (Pty) Ltd**
Evaluator: **Singo Consulting (Pty) Ltd**

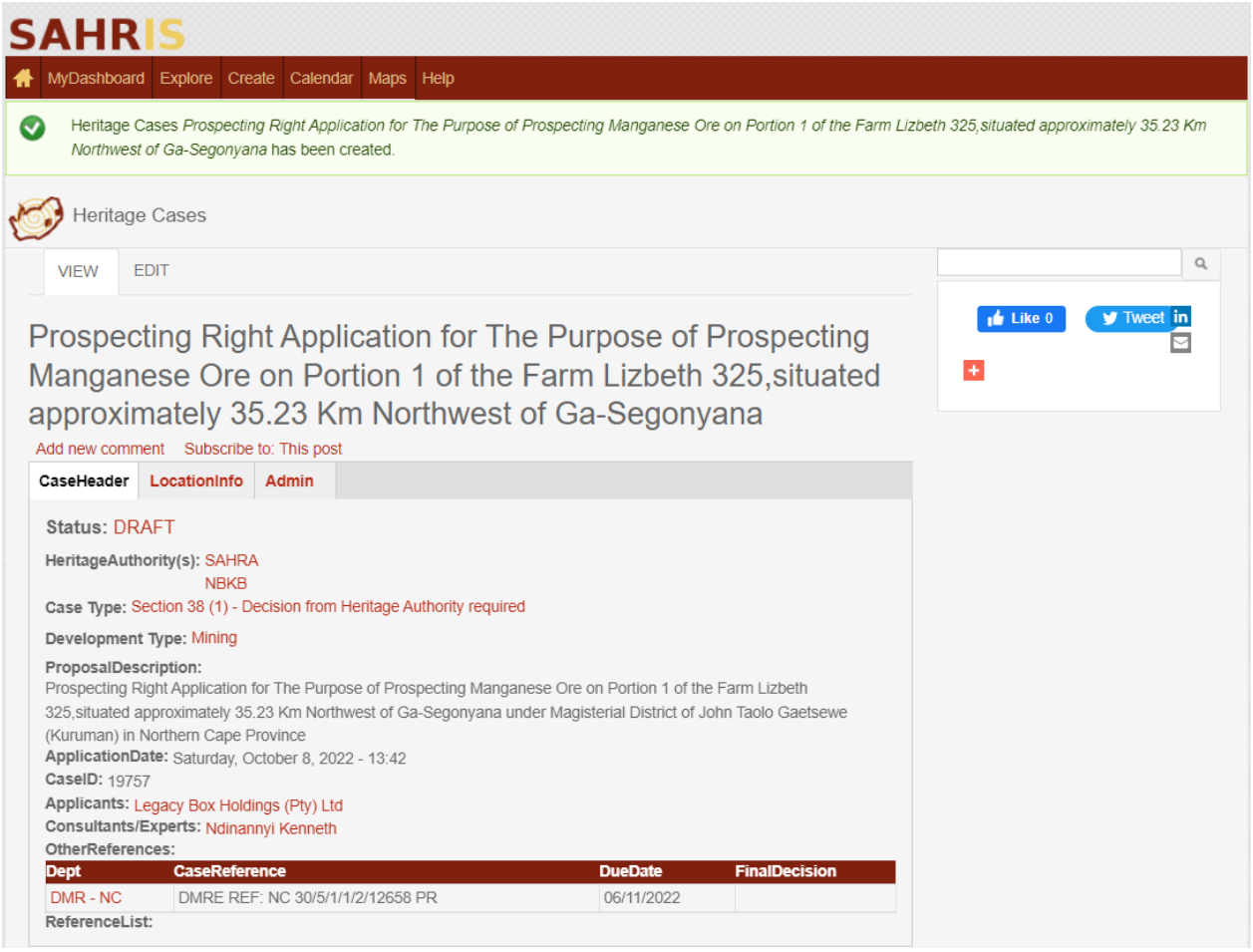
Ref No.: NC 30/5/1/1/2/12658 PR
Date: 19/10/2022

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	19	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	271	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	400	1	1	0
3	Rehabilitation of access roads	m2	1249,75	49	0,5	1	30618,875
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	471	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	257	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	542	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha		284292	1	1	0
7	Sealing of shafts adits and inclines	m3	0	146	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha		189528	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	236054	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha		685612	1	1	0
9	Rehabilitation of subsided areas	ha	0	158701	1	1	0
10	General surface rehabilitation	ha		150138	1	1	0
11	River diversions	ha	0	150138	1	1	0
12	Fencing	m	0	171	1	1	0
13	Water management	ha		57087	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0	19980	1	1	0
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		30618,875

1	Preliminary and General	3674,265	weighting factor 2 1	3674,265
2	Contingencies		3061,8875	3061,8875
			Subtotal 2	37355,03
			VAT (15%)	5603,25
			Grand Total	**42958**

Appendix 7: Screening Report

Appendix 8: SARHA Consultation



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Heritage Cases *Prospecting Right Application for The Purpose of Prospecting Manganese Ore on Portion 1 of the Farm Lizbeth 325,situated approximately 35.23 Km Northwest of Ga-Segonyana* has been created.

Heritage Cases

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Prospecting Right Application for The Purpose of Prospecting Manganese Ore on Portion 1 of the Farm Lizbeth 325,situated approximately 35.23 Km Northwest of Ga-Segonyana

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CaseHeader | LocationInfo | Admin

Status: DRAFT

HeritageAuthority(s): SAHRA
NBKB

Case Type: Section 38 (1) - Decision from Heritage Authority required

Development Type: Mining

ProposalDescription:
Prospecting Right Application for The Purpose of Prospecting Manganese Ore on Portion 1 of the Farm Lizbeth 325,situated approximately 35.23 Km Northwest of Ga-Segonyana under Magisterial District of John Taolo Gaetsewe (Kuruman) in Northern Cape Province

ApplicationDate: Saturday, October 8, 2022 - 13:42

CaseID: 19757

Applicants: Legacy Box Holdings (Pty) Ltd

Consultants/Experts: Ndinannyi Kenneth

OtherReferences:

Dept	CaseReference	DueDate	FinalDecision
DMR - NC	DMRE REF: NC 30/5/1/1/2/12658 PR	06/11/2022	

ReferenceList: