

KHWARA MANGANESE (PTY) LTD

BACKGROUND INFORMATION DOCUMENT FOR THE PROSPECTING RIGHT APPLICATION IN RESPECT OF THE FARM BOERDRAAI 228, KURUMAN RD, NORTHERN CAPE PROVINCE

NOVEMBER 2019

INTRODUCTION

Khwara Manganese (Pty) Ltd ("Khwara") proposes to conduct prospecting activities for Iron Ore and Manganese in respect of the Farm Boerdraai 228 near Black Rock in the Joe Morolong Local Municipality, located in the John Taolo Gaetsewe District Municipality, Northern Cape Province. The prospecting activities will include non-invasive and invasive activities. Non-invasive activities will comprise analysing existing core, ground penetrating radar and hand held ground magnetic mapping. Invasive activities would comprise drilling of four exploration boreholes. The property is 27km North West of Hotazel. The Regional and Locality Settings are presented below as Figure 1 and Figure 2 respectively.

ENVIRONMENTAL AUTHORISATION PROCESS

Prior to the commencement of the proposed project, the following is required:

- An environmental authorisation from the Department of Mineral Resources (DMR) in terms of the National Environmental Management Act No. 107 of 1998. The Environmental Impact Assessment Regulations being followed are Government Notice Regulation (GNR) 982 of 4 December 2014, as amended. Listed activities in terms of Listing Notice 1 GNR 983 will be triggered as part of the proposed project and as such a Basic Assessment Process will be followed.
- A prospecting right from the DMR in terms of Section 16 of the Mineral, Petroleum and Resources Development Act (No. 28 of 2002).

PURPOSE OF THIS DOCUMENT

This document has been prepared by SLR to inform you about:

- The proposed prospecting project;
- The environmental assessment process being followed (Basic Assessment Process);
- Possible environmental/cultural/socio-economic impacts; and
- How you can have input into the environmental assessment process.

YOUR ROLE

You have been identified as an interested and/or affected party (I&AP) who may wish to be informed about the proposed project and have input into the environmental process and report.

You have an opportunity to review this Background Information Document (BID) and to provide your initial comments to SLR for incorporation in the environmental process.

You will also be given the opportunity to review and comment on the Basic Assessment (BA) report.

All comments received will be recorded and included in the report submitted to the DMR for decision-making.

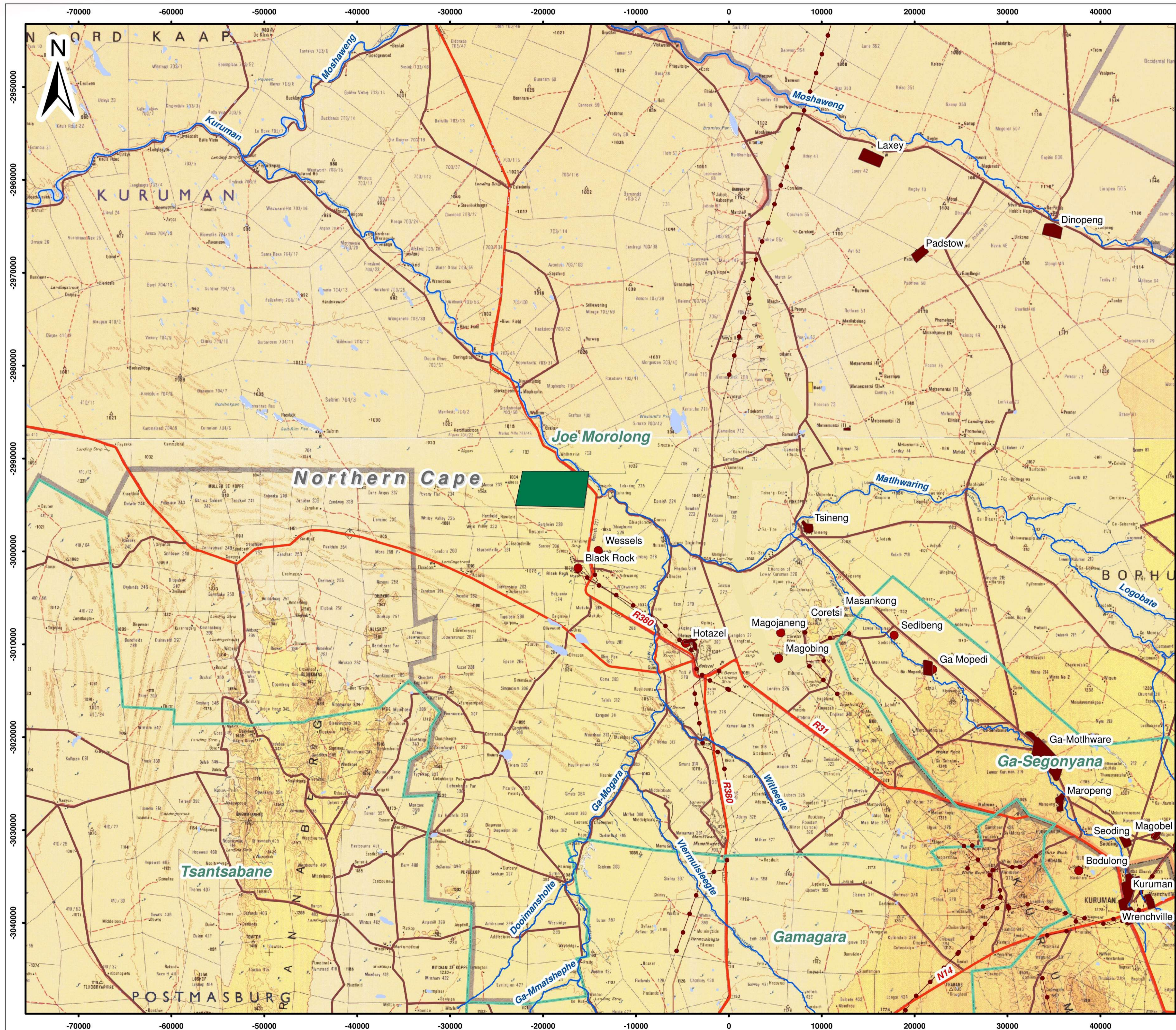
HOW TO RESPOND

Responses to this document can be submitted by means of the attached comments sheet and/or through communication with the person listed below.

WHO TO CONTACT

Clive Phashe
(011) 467 0945 (Tel) or
(011) 467 0978 (Fax) or
cphashe@slrconsulting.com

SLR Consulting (South Africa) (Pty) Ltd (SLR), an independent firm of environmental consultants, has been appointed by Khwara Manganese (Pty) Ltd to manage the environmental assessment process.



Legend

- Boerdraai 288
- Urban Areas
- Local Municipalities 2011
- Main Roads
- Secondary Roads
- Power Line
- Rivers and Streams
- 20m Contour Lines
- Wetlands

0 4 8 12 Kilometers

Scale: 1 : 400 000 @ A3

Projection: Transverse Mercator
Datum: Hartbeeshoek, Lo23

KWHARA MANGANESE (PTY) LTD

Figure 1

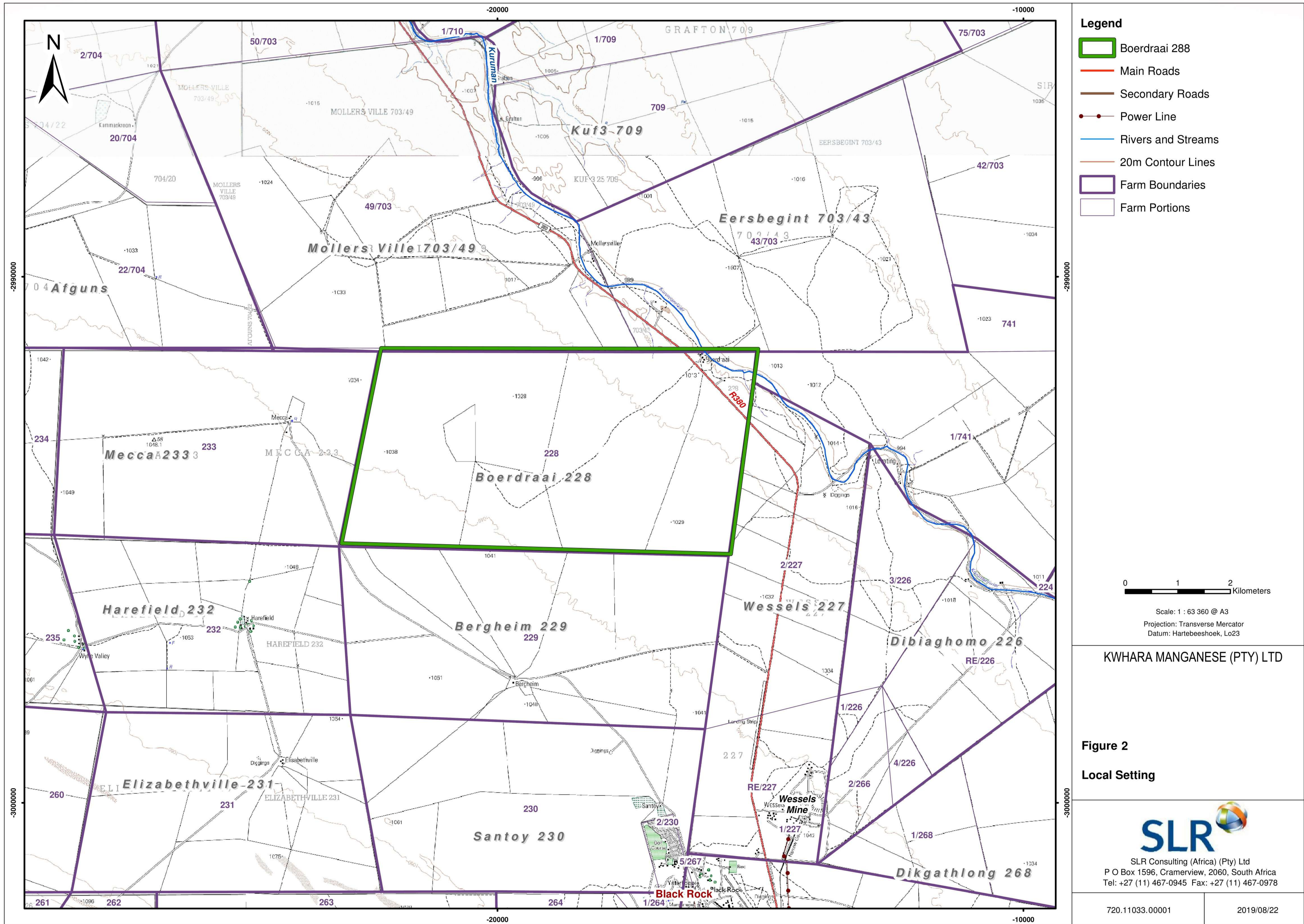
Regional Setting



SLR Consulting (Africa) (Pty) Ltd
P O Box 1596, Cramerview, 2060, South Africa
Tel: +27 (11) 467-0945 Fax: +27 (11) 467-0978

720.11033.00001

2019/08/22



PROJECT OVERVIEW

OVERVIEW

The project will include invasive and non-invasive activities. Non-invasive activities comprise usage of ground penetrating radar to provide some detail of the geological structures. Once the non-invasive activities have been completed, the location of the prospecting boreholes (invasive activities) can be sited. The following facilities and activities are required at each of the prospecting borehole sites:

- Temporary ablution facilities for contractors;
- The establishment of a temporary access track;
- Plastic lined sumps;
- Temporary storage of hazardous and non-hazardous waste;
- HDPE sheet lined area and dill rig; and
- The demarcation of the prospecting site

At this stage it is envisaged that a total of four prospecting boreholes will be drilled over a period of two years using diamond core drilling methods.

For each drill site, once drilling is complete, the site will be decommissioned. Decommissioning will cater for the following: capping and sealing of boreholes; removal of any drilling equipment, chemicals, and waste; removal and filling of sumps; and ripping of compacted soils (at drill sites and access tracks) to allow for re-vegetation of the site.

PROJECT ALTERNATIVES

The locations of the prospecting activities are dictated by the location of the ore body. It follows that no alternatives are being considered as prospecting activities will be limited to the farm Boerdraai 228.

PROJECT MOTIVATION

Unemployment is a challenge in the Joe Morolong Local Municipality. The prospecting activities will extend several direct employment opportunities and will have a positive impact on both indirect businesses and employment. A large percentage of these employment opportunities will benefit the surrounding communities. A portion of the unskilled and semi-skilled labour is likely to be sourced locally.

STATUS OF ENVIRONMENT

This section provides a basic description of the existing status of the proposed project area.

Geology: The proposed project site is located in the Kalahari Basin which is a manganese hotazel iron formation. The Kalahari basin is approximately 56 km long and has a width varying between 5 and 20 km.

Climate: The project area falls within the Northern Steppe climatic zone, which is a semi-arid region characterised by erratic rainfall, high evaporation levels, hot summers and cold winters. The annual rainfall is less than 400mm per annum.

Topography: The proposed project area is located in a relatively flat area with gentle slopes. The elevation on site varies from 1 009 and 1 013 m above mean sea level (mamsl).

Soils and land capability and land use: The proposed project area is comprised of structureless, deep (>1 200 mm), sandy, red and yellow soils of the Hutton and Clovelly forms. Soils at the proposed project site have a low cultivation potential due to the high infiltration rates associated with sandy soils. Due to the fine sandy nature of the soil forms and the low clay content and limited organic matter, the soils are highly erodible, particularly where vegetation is removed. Land uses surrounding the mine include a combination of livestock grazing, game farming, mining and associated and sparsely situated residences. The R380 transverses the north eastern section of the proposed project site.

Plant and animal life (terrestrial): The proposed project area falls within the Kathu Bushveld and the Southern Kalahari Mekgacha. The Kathu Bushveld is characterised by open savannah with *Vachellia erioloba* (Camel Thorn) and *Boscia albitrunca* (Shepherd's Tree) as the prominent trees. Tall *Vachellia erioloba* trees can form a dominant belt along a river. *Vachellia erioloba* are protected in terms of the National Forests Act of 1998. Very little evidence of wild faunal populations is associated with the proposed project area due to the presence of mining, prospecting and farming activities within and surrounding the proposed project site. Red data bird species that are likely to occur within the proposed project area include the Martial Eagle, Secretary Bird and the African Whitebacked Vulture. Red data mammal species likely to occur include the Honey Badger and the South African Hedgehog.

Aquatic environment: The Kuruman River is a National Freshwater Ecosystem Priority Area, Category B river (Largely natural with few modifications) and is an important groundwater recharge area. The riparian vegetation community is dominated by *Grewia flava*, *Vachellia karroo*, *Tragus racemosus*, *Schmidtia kalahariensis* and *Eragrostis* sp. and is clearly distinguished from the terrestrial community. Surface water flow was last documented within the Kuruman River in 1974. Only sub surface flow with isolated depressions with surface water has been documented. This is sufficient to support faunal aquatic communities after heavy rainfall events.

Surface water: The proposed project is located in quaternary catchment D41M which has a gross total catchment area of 13 780 km². The Kuruman River is located along the north eastern boundary of the proposed project site. Due to the ephemeral nature of the river there is no third party reliance of surface water resources.

Groundwater: The project area is underlain by a shallow unconfined Kalahari Aquifer and the deeper fractured Hotazel Aquifer. The average ground water level at the proposed project site ranges from 9m to 58m below ground level. Groundwater quality is generally poor due to elevated concentrations of chloride, sodium and magnesium. The dominant groundwater flow is in a north-western direction towards the Kuruman River. The majority of boreholes surrounding the proposed project area are used for domestic use and livestock watering purposes.

Air quality: The surrounding ambient air quality has been influenced by neighbouring mines, household fuel combustion and vehicle tailpipe emissions.

Noise: The greater area is generally defined by rural features and is not subjected to elevated noise levels. Noise levels in the project area are mainly as a result of surrounding farming activities, localised traffic and mining operations.

Visual: The proposed project site is located within the flat open plains of the Kalahari. The site is rural in nature however the existing surrounding mining operations located to the south of the proposed project site have already affected the sense of place and natural visual character of the area.

Heritage/cultural and palaeontological resources: Heritage resources in the general area include cemeteries and graves, historical farmsteads and structures, and sites dating back to Middle and Later

Stone Age concentrated around the riverine edges. The palaeontological sensitivity of the site is low, although there is a possibility of Stromatolites being present in the project area.

Socio-economic: The town of Black Rock is located approximately 2.5km south of the proposed project area. The educational levels in the area are relatively low with a high level of unemployment and a dependency on subsistence agriculture, the public sector, seasonal workers and employment in the mining sector. Water provision and sanitation remains a challenge, mostly in the rural areas. There has been an increase in the number of households that were provided with electricity as a source of energy in the area. Mining and government services are the main economic sectors.

POTENTIAL ENVIRONMENTAL/CULTURAL/SOCIO-ECONOMIC IMPACTS

The following preliminary list of **potential** impacts has been identified. This list is based on SLR's experience with similar prospecting type projects. Due to the small scale and temporary nature of the proposed prospecting activities, it is expected that the impacts associated with the project will be minimal.

Potential impacts include:

- Safety risks posed by infrastructure and excavations
- Soil erosion and/or pollution
- Loss of plant and animal species at the drill sites
- Pollution of surface water resources
- Contamination of groundwater resources
- Generation of dust
- Increase in noise pollution
- Loss of heritage resources (including graves) if present on site
- Loss of land use and capability
- Socio-economic benefits through the extension of existing employment contracts.

ENVIRONMENTAL AUTHORISATION PROCESS

The environmental assessment process provides:

- Information on the project and environment in which it is being undertaken
- Identifies, through engagements with I&APs the potential negative as well as positive environmental/cultural/socio-economic impacts
- Reports on management measures required to mitigate impacts and incorporates requirements for monitoring programmes (where required).

The likely process steps and timeframes are provided below.

PHASE I – APPLICATION PHASE (November 2019)

- Preparation of the NEMA application; and
- Submission of NEMA application to DMR.

PHASE II – BAR phase (November 2019-January 2020)

- Notify commenting authorities and I&APs of proposed project and environmental assessment process (via newspaper adverts, site notices and the BID);
- Compile BAR and summary, distribute to I&APs and commenting authorities for 30 day review (November 2019); and
- Update the BAR with comments received during the public review period.

PHASE III – Competent authority review phase (January 2020 – April 2020)

- Submit BAR (inclusive of comments raised during the review period) to the DMR for decision making (107 days legislated decision making period); and
- Circulate DMR decision to I&APs on project database.

PARTIES INVOLVED IN THE ENVIRONMENTAL ASSESSMENT PROCESS

DECISION MAKING AUTHORITIES

- Northern Cape Department of Mineral Resources (DMR)

IAPs

- Landowners and land users within/ adjacent to the prospecting right area
- Communities within/ adjacent to the Prospecting Right area
- Parastatals

COMPETENT AND COMMENTING AUTHORITIES

- Northern Cape Department of Environment & Nature Conservation (DENC)
- Northern Cape Department of Water and Sanitation (DWS)
- Northern Cape Department of Rural Development and Land Reform (DRDLR)
- South Africa Heritage Resource Agency (SAHRA) and/or Provincial Heritage Resource Authority (PHRA)
- Northern Cape Department of Agriculture, Forestry and Fisheries (DAFF)
- Northern Cape Department of Roads and Transport

LOCAL AUTHORITY

- Joe Morolong Local Municipality (incl. ward councillor)
- John Taolo Gaetsewe District Municipality

Please let us know if there are any additional parties that should be involved.

KHWARA MANGANESE (PTY) LTD

BACKGROUND INFORMATION DOCUMENT FOR THE PROSPECTING RIGHT APPLICATION IN RESPECT OF THE FARM BOERDRAAI 228, KURUMAN RD, NORTHERN CAPE PROVINCE

DATE		TIME			
PARTICULARS OF THE INTERESTED AND AFFECTED PARTY					
NAME					
INTEREST IN THE PROPOSED PROJECT					
POSTAL / STREET ADDRESS					
		POSTAL CODE			
WORK/ DAY TELEPHONE NUMBER		WORK/ DAY FAX NUMBER			
CELL PHONE NUMBER		E-MAIL ADDRESS			
PLEASE REGISTER ME AS AN INTERESTED & AFFECTED PARTY (I&AP) SO THAT I MAY RECEIVE FURTHER INFORMATION AND NOTIFICATIONS DURING THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS			<table><tr><td>YES</td><td>NO</td></tr></table>	YES	NO
YES	NO				
HOW WOULD YOU LIKE TO RECEIVE YOUR NOTIFICATIONS?			E-MAIL		
			REGISTERED MAIL (POST)		
			FAX		

PLEASE WRITE YOUR COMMENTS AND QUESTIONS HERE (please use separate sheets if you wish)

--

PLEASE INCLUDE THE FOLLOWING OF MY COLLEAGUES/FRIENDS/NEIGHBOURS AS I&APS FOR THIS PROJECT:

Please return completed forms to:

Clive Phashe
SLR Consulting (South Africa) (Pty) Ltd
(011) 467 0945 (Tel) and/or (011) 467 0978 (Fax)
cphashe@slrconsulting.com

THANK YOU FOR YOUR CONTRIBUTION!!!