29 March 2021

MOKALA MANGANESE (PTY) LTD
CHANGES TO SURFACE INFRASTRUCTURE AT THE MOKALA MINE
NON-TECHNICAL SUMMARY (NTS) OF THE SCOPING REPORT

DMRE SAMRAD REFERENCE NUMBER: NC-00197-MR/102

Dear Sir/Madam

INTRODUCTION

Mokala Manganese (Pty) Ltd (Mokala) has received authorisation to establish the Mokala Mine which is located on the remaining extent and portion 1 of the farm Gloria 266, the farm Kipling 271 and the farm Umtu 281 approximately 4 km north west of the town Hotazel in the Joe Morolong Local Municipality, in the Northern Cape Province (see Figure 1 and Figure 2 for regional and local setting maps, respectively).

The Mokala Mine is open cast manganese mine which operates in accordance with; a Mining Right and an approved Environmental Management Programme (EMPr) in terms of the Mineral and Petroleum Resources Development Act No. 28 of 2002 (MPRDA). Authorisation was granted by the Department of Mineral Resources (DMR) (now the Department of Mineral Resources and Energy - DMRE), as per DMR reference no.: NC30/5/1/2/2/10090 MR); an Environmental Authorisations (EA) and an approved EMPr in terms of National Environmental Management Act No. 107 of 1998, as amended (NEMA) (DMR reference no.: NC 30/5/1/2/2/(10090) EM); a Waste Management License (WML) in terms of the National Environmental Management: Waste Act No. 59 of 2008 (NEM:WA). The WML was approved as part of the Environmental Authorisation granted by the DMR as per reference NC 30/5/1/2/2/ (10090) EM; and an Integrated Water Use License (IWUL) in terms of the National Water Act No. 36 of 1998 (NWA) (Department of Water, Human Settlement and Sanitation (DHSWS) reference no.: 08/D41K/BCGIJA/9175).

Mokala is now proposing to amend the approved mine layout to optimize their mining operations. These include infrastructure changes that have already taken place and proposed activity/infrastructure changes. The environmental authorisation process application to the project includes a Scoping and Environmental Impact Assessment (S&EIA) process in terms of the NEMA Environmental Impact Assessment Regulations, 2014 (published under Government Notice Regulation (GNR) 982 of 4 December 2014, as amended) is required. The environmental authorisation process comprises two phases: a scoping phase and an environmental impact assessment phase combined with the environmental management programme phase. The main purpose of the scoping phase is:

- to provide interested and affected parties (I&APs) with information pertaining to the proposed project;

- to outline preliminary potential biophysical, cultural and socio-economic impacts;
- to record issues and concerns raised by I&APs; and
- to set out the terms of reference for the Environmental Impact Assessment (EIA) and Environmental Management Programme (EMPr) that will enable the meaningful assessment of all relevant environmental and social issues.

SLR, an independent firm of environmental consultants, has been appointed by Mokala to manage the S&EIA process.

As part of the S&EIA process, a Scoping Report has been produced. This document presents a summary of the Scoping Report finding for the project.

ATTACHED DOCUMENTS

The following sections have been extracted from the Scoping Report for your review:

- Appendix A: Executive Summary of the Scoping Report for the Project; and
- Appendix B: Terms of reference for further investigations and plan of study for EIA phase (Section 9 of the Scoping Report).

To date no comments and concerns have been raised by I&APs.

REVIEW OF SCOPING REPORT

The Scoping Report for the project is now available for comment and review for a period of 30 days (**29 March 2021 until 04 May 2021**).

Electronic copies of the full report are available on:

- The SLR website (at https://slrconsulting.com/public-documents); and
- The SLR data free website (http://slrpublicdocs.datafree.co/publicdocuments).

Electronic copies (compact disk) of the report are available on request from SLR, at the contact details provided below.

SLR Consulting (South Africa) (Pty) Ltd

Attention: Mavisha Nariansamy or Gugu Dhlamini

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All comments received during the review process will be included and addressed in the final EIA which will be made available to the Department of Mineral Resources and Energy (DMRE) for decision making purposes.

If you have any questions, please contact the undersigned.

Kind regards

Mavisha

APPENDIX A: EXECUTIVE SUMMARY OF THE SCOPING REPORT FOR THE PROJECT

INTRODUCTION

This section provides a summary of the Scoping Report compiled as part of the S&EIA process for the proposed surface layout changes at Mokala Mine. In this regard, an integrated Environmental Authorisation process in terms of the NEMA EIA Regulations, 2014 (published under GNR 982 of 4 December 2014, as amended) (hereafter referred to as NEMA EIA Regulations, (GNR 982 of 2014 as amended)), and the Mineral and Petroleum Resources Development Act, Regulations, 2004 (as amended by GNR No. 420 of 27 March 2020), will be undertaken. SLR, an independent firm of Environmental Assessment Practitioners, has been appointed to manage this process.

PROJECT BACKGROUND

Mokala has received authorisation to establish the Mokala Mine which is located on the remaining extent and portion 1 of the farm Gloria 266, the farm Kipling 271 and the farm Umtu 281, approximately 4 km north west of the town Hotazel in the Joe Morolong Local Municipality, in the Northern Cape Province.

The Mokala Mine is an open cast manganese mine with approved infrastructure components comprising of a dry crushing and screening plant; Waste Rock Dumps (WRDs), Run of Mine (RoM) stockpiles; topsoil stockpiles; water storage facilities; stormwater management infrastructure and mine-related support facilities such as workshops, stores, and offices. Additional approved activities include:

- the realignment of the R380 road on the farm Kipling 271 and across the remaining extent of the farm of Gloria 266;
- upgrading of the intersection to the mine on portion 1 of the farm Gloria 266 also serving the existing Gloria Mine;
- the realignment of a section of the Ga-Mogara drainage channel within the existing river channel. This realignment extends onto the farm Umtu 281.

The Mokala Mine is currently in the construction and operational phase of the project. In this regard, temporary infrastructure in support of the construction phase is currently on site. Construction facilities will either be removed at the end of the construction phase or incorporated into the layout of the operational mine. The mine has also begun with their open cast strip mining activities.

Mokala is now proposing to amend the approved mine layout to optimize their mining operations. Changes to the approved infrastructure layout that have already taken place include:

- the reconfiguration of plant area, RoM and high-grade product stockpiles to accommodate the expansion of the open pit;
- the relocation of the low-grade product stockpile;
- the relocation of support infrastructure (water storage facilities (potable and process water), workshops and washbay, change houses, sewage treatment plant, water treatment plant, fuel storage, Administrative block (offices, kitchen, canteen, training centre, mustering centre, clinic), stores and waste storage);
- relocation of transportation related facilities/infrastructure (internal haul road, weighbridges, parking areas, truck loading and staging facility);
- the relocation of the approved WRD to accommodate the expansion of the open pit; and
- the relocation of the approved topsoil stockpiles.

Proposed activity/infrastructure changes to the approved surface layout include:

- the proposed expansion of the open pit;
- the proposed increase in the capacity of the approved Waste Rock Dump (WRD) and the establishment of an additional WRD;
- the proposed establishment of addition topsoil stockpiles;
- the proposed relocation of stormwater management infrastructure;
- the proposed increase in the capacity of product stockpiles (RoM, Low Grade and High Grade); and
- the proposed mining of the barrier pillar between the Kgalagadi Mine and Mokala Mine.

No changes are anticipated to the realignment of the R380, the realignment of the Ga-Mogara drainage channel and the intersection to the entrance of the mine.

EXISTING AUTHORISATIONS

The mine currently operates in accordance with the following approved environmental authorisations:

- a Mining Right and an approved EMPr in terms of the MPRDA. Authorisation was granted by the DMR (now the DMRE) on the 19 September 2017 as per reference NC30/5/1/2/2/10090 MR;
- an EA and an approved EMPr in terms of NEMA. Authorisation was granted by the DMR (now the DMRE) on the 15 August 2016 as per reference NC 30/5/1/2/2/(10090) EM;
- a WML from the DMR (now the DMRE) in terms of NEM:WA. The WML was approved as part of the EA granted by the DMR on the 15 August 2016 as per reference NC 30/5/1/2/2/ (10090) EM; and
- an IWUL in terms of the NWA issued by the DHSWS on 14 August 2020 (as per reference number 08/D41K/BCGIJA/9175).

SUMMARY OF AUTHORISATION REQUIREMENTS

The proposed project includes activities listed under the of NEMA and waste management activities listed under the NEM:WA. Under both NEMA and NEM:WA, activities are prohibited from commencing until written authorisation is obtained from the competent authority, which in this case is the Northern Cape Province office of the DMRE. In terms of the Section 102 of the MPRDA, an EMPr may not be amended or varied without the written consent of the Minister of Mineral Resources.

The MPRDA, NEMA and NEM:WA requires that an applicant submit the relevant environmental reports required in terms of NEMA. The as NEMA EIA Regulations, (GNR 982 of 2014 as amended), promulgated in terms of NEMA sets out the assessment process and reporting requirements where authorisation is required.

The project requires an integrated environmental authorisation process and will be undertaken to meet the requirements of:

- Regulation 31 (substantive amendment process) to cater for changes to the approved EMPr in terms of the NEMA EIA Regulations (GNR 982 of 2014, as amended); and
- Regulation 21 and 23 (S& EIA process) to cater for listed activities in terms of the NEMA EIA Regulations (GNR 982 of 2014, as amended).

An amendment to the existing IWUL for water uses listed under Section 21 of NWA is also required from the competent authority, which in this case is the Northern Cape Province office of the DHSWS.

PLAN OF STUDY FOR THE EIA PHASE

The Plan of Study describes the nature and extent of the assessment to be conducted and sets out the proposed approach to the EIA phase. In this regard, upon acceptance of the Scoping Report by the DMRE, the EIA phase of the project may commence, and the following key steps will be undertaken:

- I&APs will be informed of the DMRE's decision of the Scoping Report;
- I&APs will be provided with an opportunity to comment on any aspect of the project and the findings the EIA and EMPr;
- An assessment of the potential biophysical, cultural and socio-economic impacts of the project will be undertaken. The assessment will be informed by specialist and project team input and comments and concerns received from I&APs during the authorisation process. Mitigation and management measures to reduce potential negative impacts, and enhance positive impacts will be included as part of the findings of the EIA and EMPr;
- The EIA and EMPr will be made available for public and authority during a review period comprising 30 calendar days;
- The EIA and EMPr will be updated with any comments raised during the review period and will be made available to the DMRE for decision making purposes; and
- I&APs will be informed of the DMRE's decision.

APPENDIX B: TERMS OF REFERENCE FOR FURTHER INVESTIGATIONS AND PLAN OF STUDY FOR THE EIA PHASE (SECTION 9 OF SCOPING REPORT)

ASPECTS TO BE ASSESSED BY SPECIALISTS

This section describes the nature and extent of further investigations required to support the EIA Process and outlines the specialist investigations which may be required. It is important to note that where relevant, the specialist studies cater for requirements to support the water use license application and the waste management license application. At a high-level each specialist study will undertake the following steps:

- define the baseline environment through review of available information from past studies and additional field studies, where required;
- define relevant laws and regulations that apply to the specific specialist study;
- identify specific issues of concern through an understanding of the project and the sensitivity of the affected environment as well as review of all issues raised by I&APs;
- interact with other specialists, where required, to ensure the integration of issues of concern and appropriate assessment;
- assess the direct, indirect, and cumulative impacts;
- provide mitigation measures to reduce impacts to an acceptable level i.e. residual impact. Where necessary provide recommendations to address residual impacts i.e. biodiversity offsets; and
- where required, provide detailed monitoring plans.

The aspects to be assessed by the identified specialists is tabulated in Table 1 below. All specialist studies will be aligned with Appendix 6 (content of specialist studies) of NEMA EIA Regulations (GNR 982 of 2014, as amended) or the DEFF protocols, whichever is relevant.

Table 1: PLAN OF STUDY FOR ASPECTS TO BE ASSESSED BY SPECIALISTS

Specialist Study		Plan of Study
Biophysical environment	Soil, Land Use, Land Capability and Land Potential Study	The Soils, Land and Land Capability Study and will include the following: • results of a desktop review of existing soil and land capability databases, to establish broad baseline conditions and to identify areas of environmental sensitivity and sensitive agricultural areas; • results of a field survey where soil samples will be collected within the project area and to classify the dominant soil types according to the South African Soil Classification System (Soil Classification Working Group, 2018); • illustrations of the spatial distribution of various soil types and land capability within the project area based on the results of the desktop review and the field survey; • an identification and assessment of potential impacts on the receiving environment as a result of the project activities; and • mitigation measures identified to manage the potential impacts.

Biophysical environment	Biodiversity – Terrestrial Study	The Terrestrial Study will include the following:
		• results of a desktop review against all relevant biodiversity databases. This desktop review will:
		  ○ provide faunal and floral inventories of species as encountered on site;
		  ○ determine and describe habitats, communities and ecological state of the project area based on conservation importance and ecological sensitivity;
		  ○ identify the likelihood of Red Data Listed (RDL) species as well as Species of Conversation Concern (SCC) to occur within the project area; and
		  ○ identify and consider all sensitive landscapes and any other ecologically important features, if present.
		• results of a field survey that documents the floral and faunal species observed;
		• illustrations of the spatial distribution of various habitat types and ecological sensitivity within the project area based on the results of the desktop review and the field survey;

Specialist Study		Plan of Study
		• an identification and assessment of potential impacts on the receiving environment as a result of the project activities; and • mitigation measures and monitoring programme identified to manage the potential impacts.
	Biodiversity – Freshwater Ecological Study (Riparian and riverine zones)	The Freshwater Ecological Study will provide a site verification and expert opinion on aquatic resources associated with the project area, which will include a wetland and risk assessment. The study will also provide additional mitigation requirements. The Freshwater Ecological Study will also support the IWUL application and will include the preparation of: • watercourse stability planning (this is a new requirement from the DHSWS which is particularly to understand the risks associated with geomorphological stability given the realignment of the Ga-Magara drainage channel); • update of the Landscaping and plant species plan; and • update of the Rehabilitation and maintenance plan.

	Surface Water Study	The Surface Water Study will include the following:
		• results of a baseline and situational analysis that will provide information pertaining to:
		  ○ rainfall, evaporation data and design storm intensities;
		  ○ the baseline hydrology of the site; and
		  ○ results of topographical conditions.
		• a conceptual stormwater management plan, including:
		  ○ clean and dirty water classification, catchment delineation and stormwater routing;
		  ○ hydraulic calculations through peak flow estimation for conveyance infrastructure and storage infrastructure; and
		  ○ conceptual stormwater management plan.
		• a Dynamic Water Balance through a daily time step water balance model for the major water components of the mine;
		• an identification and assessment of potential impacts on the receiving environment as a result of the project activities; and
		• mitigation measures and monitoring programme identified to manage the potential impacts.

	Groundwater Study	The Groundwater Study will include the following:
		• results of a baseline and situational analysis of all hydrogeological data.
		• updated hydrosensus to determine:
		  ○ GPS co-ordinates and elevation of existing boreholes, hand-dug wells and springs;
		  ○ water levels of the boreholes, where accessible;
		  ○ water strikes, where available; and
		  ○ any other information regarding the water reliability or quality.
		• A conceptual and numerical groundwater flow and transport model update. The main objective will be the updating of the existing steady state and transient model for the Mokala Mine that can be used for scenario modelling such as:
		  ○ groundwater inflow rate into open pit
		  ○ groundwater dewatering and impact on groundwater levels (incl. surrounding receptors)
		  ○ groundwater contamination risk posed by WRD. Consideration will also be given to the presence of the dyke located within the new WRD.
		  ○ post-closure groundwater scenarios – groundwater level rebound and post-closure contaminant migration
		• development of a groundwater impact assessment and water management plan.
		• an identification and assessment of potential impacts on the receiving environment as a result of the project activities; and
		• mitigation measures and monitoring programme identified to manage the potential impacts.

Specialist Study		Plan of Study
Biophysical environment	Air Quality Study	The Air Quality Study will include the following: • results of a baseline and situational analysis through the review of available literature, meteorological; • update of Emissions Inventory data and monitoring data; • update of dispersion potential based on new meteorological data; • update of dispersion model and remodelling; • an identification and assessment of potential impacts, on the receiving environment and sensitive receptors as a result of the project activities; and • mitigation measures and monitoring programme identified to manage the potential impacts.
	Noise Study	The Noise Study will include the following: • results of a baseline and situational analysis through the review of available literature; • an identification and qualitative assessment of potential impacts, on the receiving environment and sensitive receptors as a result of the project activities; and • mitigation measures and monitoring programme identified to manage the potential impacts.
Cultural environment	Heritage Study	The Heritage Study will include the following: • results of a baseline and situational analysis through the review of available literature and field survey; • an identification and assessment of potential impacts, on heritage resources (if present) as a result of the project activities; and • mitigation measures identified to manage the potential impacts.
	Palaeontology Desktop Study	The Palaeontological Desktop Study will include the results of a baseline and situational analysis through the review of available literature and databases. As per new requirements by SAHRA the provision of a fossil find procedure will be included.

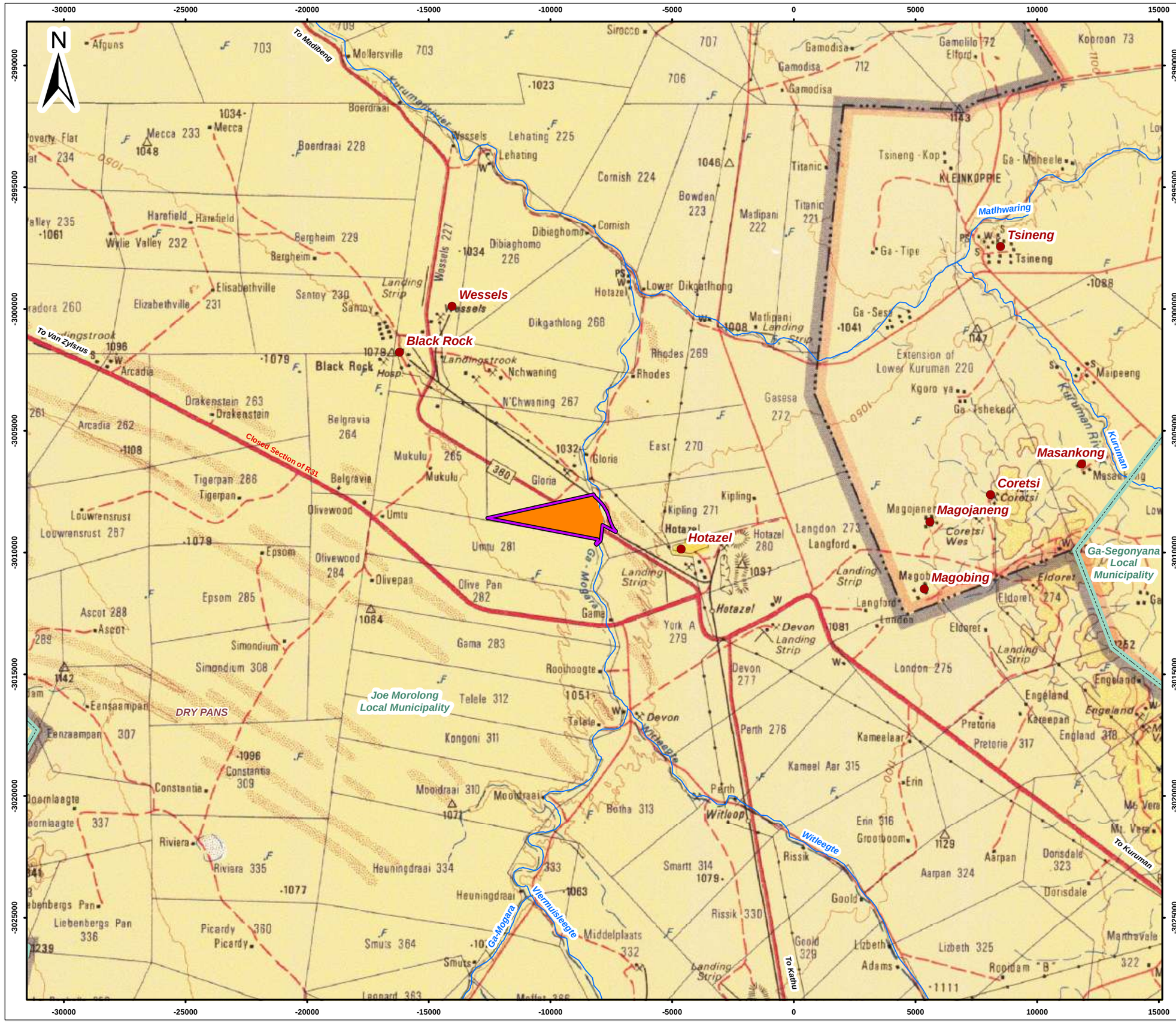
Rehabilitation	Financial Provision	The Financial Provision Study will provide the closure liabilities estimate for the project in according to the requirements of GNR 1147. The study includes the following:
		• an updated closure plan which will include:
		  ○ the closure strategy, closure objectives and mechanisms, design principals and motivations for achieving the closure objective;
		  ○ an environmental risk assessment;
		  ○ an assessment of any long-term latent impacts and mitigation strategies (to be informed by specialist input); and
		  ○ the planned closure monitoring, auditing and reporting procedures.
		• updated quantities and cost estimate associated with the closure activities as per the Financial Provisioning Regulations (GNR. 1147 of 2015) as amended; and
		• an updated preliminary annual rehabilitation plan.

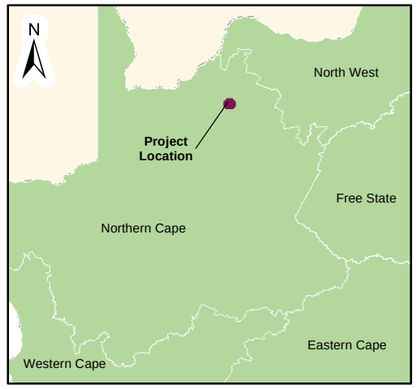
ASPECTS TO BE ASSESSED QUALITATIVELY

This section lists the environmental aspects that will be considered and qualitatively assessed by SLR in the EIA phase. These are as follows:

- Geology;
- Topography;
- Climate;
- Traffic;
- Noise (The DEFF screening tool indicates that a compliance statement is required by a noise specialist, which will be assessed qualitatively by a noise specialist);
- Social;
- Visual; and
- Land use.

The assessment of these aspects, and the determination of detailed management and mitigation measures will be undertaken by SLR and provided in the EIA report.





Legend

- Project Area
- Mining Right Area
- Towns
- Local Municipalities
- Main Roads
- Rivers and Streams

0 2 4 Kilometers

Scale: 1:150 000 @ A3

Projection:Transverse Mercator
Datum: Hartebeeshoek, Lo 23

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Figure 1

Regional Setting

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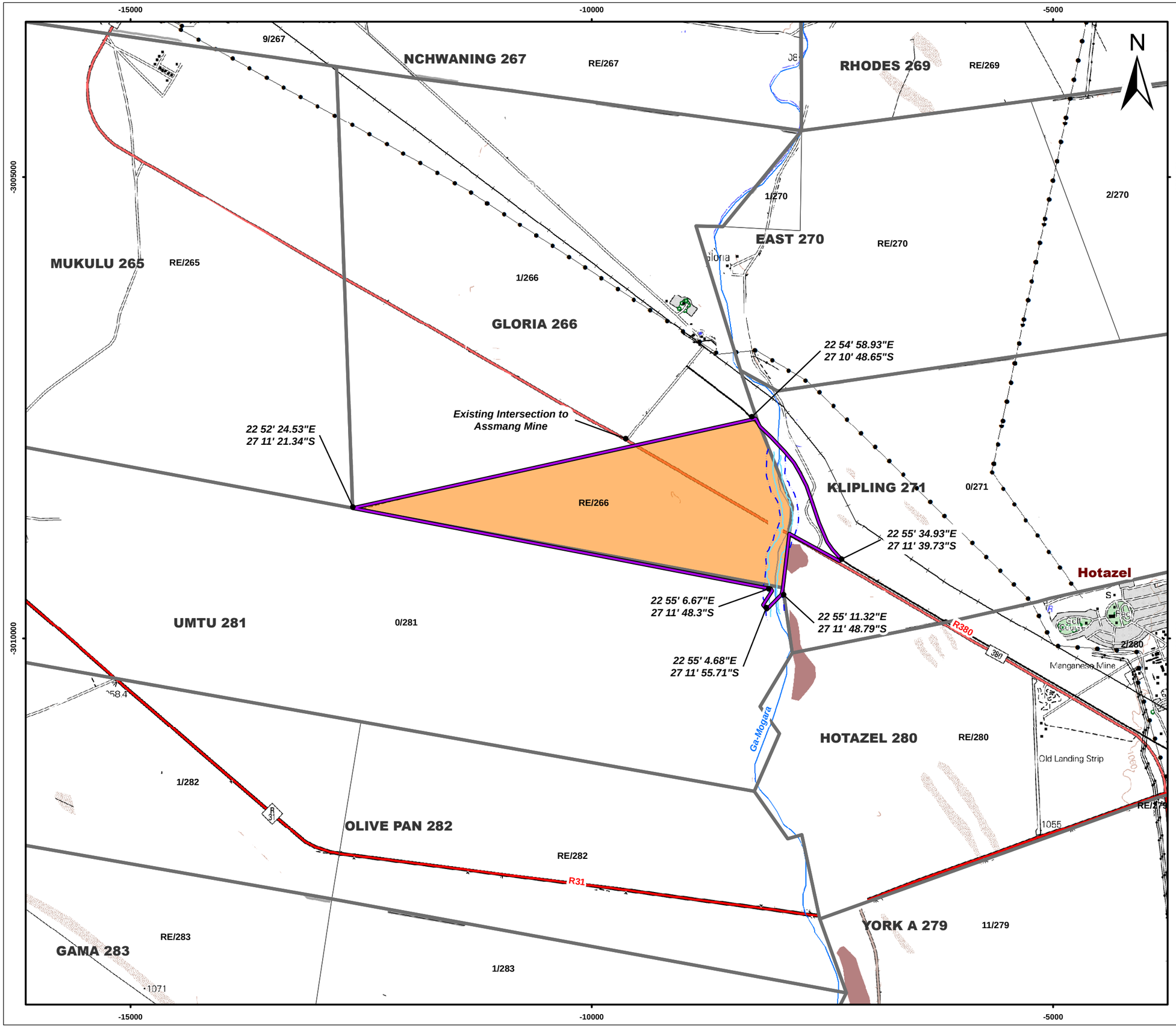

Legend

- Project Area
- Mining Right Area
- Rivers
- 100m River Buffer
- 100yr Floodlines
- Powerlines
- Railway Line
- Farm Boundaries
- Farm portions
- Historical Borrow Pits

0 400 800 Meters

Scale: 1:40 000 @ A3

Projection:Transverse Mercator
Datum: Hartebeeshoek, Lo 23

MOKALA MANGANESE (PTY) LTD

Figure 2

Local Setting

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