

28 April 2021

Dear Sir/Madam,

UNITED MANGANESE OF KALAHARI (PTY) LTD**SUMMARY OF THE SCOPING REPORT FOR THE AMENDMENT OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME AND RELATED ENVIRONMENTAL AUTHORISATIONS****SCOPING REPORT AVAILABLE FOR PUBLIC REVIEW****1. INTRODUCTION**

The United Manganese of Kalahari (Pty) Ltd (UMK) manganese mine (the UMK Mine) is an opencast manganese mine located on farm Botha 313, the remaining extent (RE) of the farm Smartt 314, and portion 1 and RE of farm Rissik 330 near Hotazel in the Northern Cape Province. The UMK Mine lies directly adjacent and to the west of the R380 provincial road.

UMK currently holds the following authorisations:

- A mining right (30/5/1/2/3/2/1(113) MR) issued by the Department of Mineral Resources and Energy (DMRE);
- An Environmental Management Programme report (EMPr) approved by DMRE (previously DMR);
- Environmental Authorisations (NC/KGA/HOT7/15/2006 & NC 30/5/1/2/2/113 MR) issued by the Department of Environment and Nature Conservation (DENC) and the DMRE respectively; and
- An Integrated Water Use License (IWUL) (10/D41K/ABEGJ/2814) issued by the Department of Water and Sanitation (DWS) now known as the Department of Human Settlements, Water and Sanitation (DHSWS).

UMK is proposing to change the approved surface layout for the mine to optimize their mining operations. 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 (EIA) 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 EIA 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 EIA and EMPr that will enable the meaningful assessment of all relevant environmental and social issues.



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SLR Consulting (South Africa) (Pty) Ltd (SLR), an independent firm of environmental assessment practitioners has been appointed by UMK 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.

In this regard, the following sections have been extracted from the Scoping Report for your review:

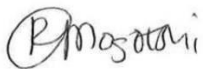
- Appendix A: Executive Summary of the Scoping Report for the Project; and
- Appendix B: Terms of reference for further investigations and plan of study for EIA phase (Section 9 of the Scoping Report).

2. REVIEW OF THE SCOPING REPORT

The Scoping Report will be distributed for a 30-day period from **29 April to 31 May 2021** in order to provide I&APs with an opportunity to comment on any aspect of the proposed project. Copies of the full report are available on the SLR website (at <https://slrconsulting.com/public-documents>) and the SLR data free website (at <https://slrpublicdocs.datafree.co>).

If you have any questions, please contact the undersigned.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Reinett Mogotshi'.

Reinett Mogotshi

APPENDIX A: EXECUTIVE SUMMARY OF THE SCOPING REPORT FOR THE AMENDMENT OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME AND RELATED ENVIRONMENTAL AUTHORISATIONS

INTRODUCTION

This Executive Summary provides a summary of the Scoping Report compiled and distributed for review and comment as part of the S&EIA process that is being undertaken for the UMK Mine.

The UMK Mine is an opencast manganese mine located on farm Botha 313, the remaining extent (RE) of the farm Smartt 314, and portion 1 and RE of farm Rissik 330 near Hotazel in the Northern Cape Province. The UMK Mine lies directly adjacent and to the west of the R380 provincial road.

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SLR Consulting (Africa) (Pty) Ltd (SLR), an independent firm of environmental assessment practitioners has been appointed by UMK to manage the S&EIA process required to inform the integrated Environmental Authorisation and EMPr amendment applications to authorise the changes detailed below.

PROJECT BACKGROUND

United Manganese of Kalahari (Pty) Ltd (UMK) is applying for an Environmental Authorisation for new listed activities on the farm Botha 313, the RE of the farm Smartt 314, and portions 1, 2 and 3 (a portion of the RE) of the farm Rissik 330. The UMK Mine is an opencast manganese mine located approximately 13 km to the south of the town of Hotazel in the Joe Morolong Local Municipality and the John Taolo Gaetsewe District Municipality in the Northern Cape Province.

The manganese mine lies directly adjacent and to the west of the R380 provincial road. Refer to Figure 1 and Figure 2 for the regional and local settings respectively.

UMK currently holds the following authorisations:

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- An EMPr approved by DMRE (previously DMR);
- Environmental Authorisations (NC/KGA/HOT7/15/2006 & NC 30/5/1/2/2/113 MR) issued by the Department of Environment and Nature Conservation (DENC) and the DMRE respectively; and
- A Water Use License (IWUL) (10/D41K/ABEGJ/2814) issued by the DHSWS (previously DWS).

The mine consists of open pit mining sections, crushing, and screening operations, run of mine, stockpiles, waste rock and product stockpile dumps, and associated support and administrative infrastructure.

UMK is proposing to change the approved surface layout for the mine to optimize their mining operations. The proposed changes to the approved layout are discussed in detail below:

New Infrastructure to be established on site in support of the current mining operations.

- New parking area (0.52 Ha);
- Solar equipped boreholes and associated storage tanks;
- Tyre fitting bay, workshop/ tyre centre and oil storage (7 Ha);
- Waste rock and sand stockpiles:
 - Central West Waste Rock Dump (WRD) (84 Ha)
 - Central West Sand Stockpile (40.9 Ha)
 - J Block West WRD (133 Ha)
 - J Block West Sand Stockpile (46.5 Ha)
 - J Block East WRD (63.5 Ha)
 - J Block East Sand Stockpile (16.5 Ha)
 - Powerline West WRD (196 ha)
 - Powerline West Sand Stockpile (35.9 Ha)
 - A Block West WRD (145 Ha)
- Product stockpile area within the approved sinter plant area (21.4 Ha);
- Truck staging area (20.4 ha);
- Hard park areas (Phase 1 and 3) (14.3 Ha);
- Barlow's Store (1 Ha);
- Explosive depo and associated service road (13.1 Ha); and
- Engineering salvage yard (temporal and permanent) (2.43 Ha).

Upgrade of existing approved infrastructure:

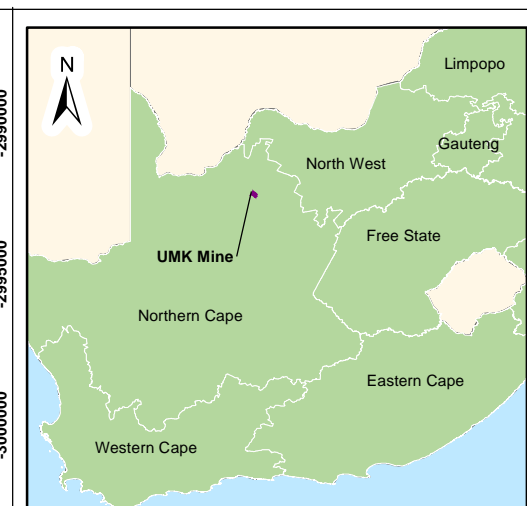
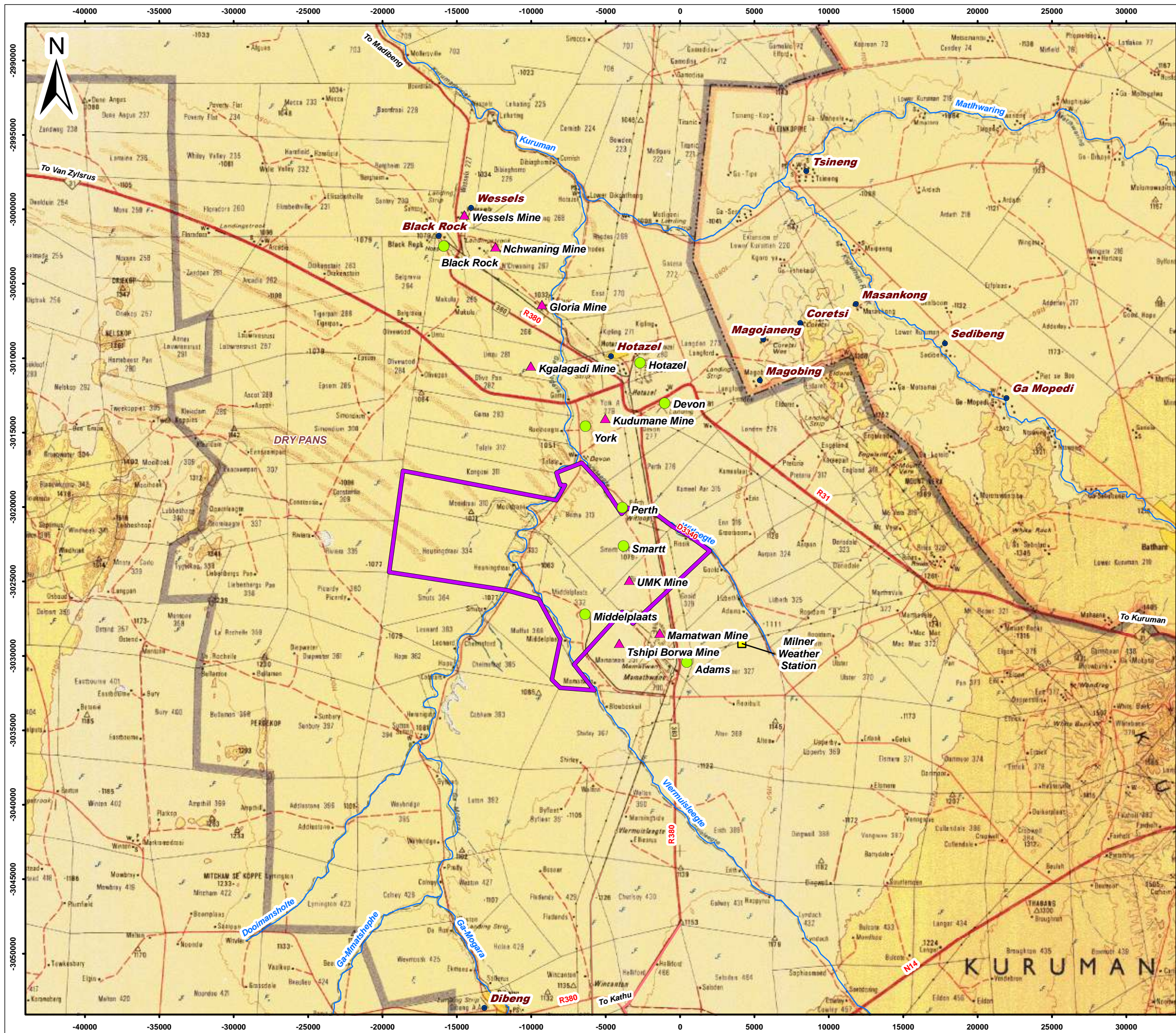
- Prentec Sewage Plant;
- Existing weigh bridge and associated access road.

Expansion of existing approved infrastructure

- Product stockpile (53.6 Ha);
- Modular crushing plant (34.6 Ha);
- Fuel storage farm (0.45 Ha);
- EME workshop for major repair and maintenance (3.6 Ha);
- Road truck staging area (1.6 Ha); and
- Offices (19.1 Ha).

Relocation of the following surface infrastructure at the mine:

- Approved dirty water dams/pollution control ponds;
- 132 KV powerline from current location to its old location



- Legend**
- ▲ Operating Manganese Mines
 - Closed/Dormant Mines
 - Main Roads
 - Power Line
 - Rivers and Streams
 - 20m Contour Lines
 - ◻ UMK Mining Right Area

0 4 8 Kilometers

Scale: 1:20 000 000 @ A3

Projection: Transverse Mercator
Datum: Hartbeeshoek, Lo 23

UNITED MANGANESE OF KALAHARI

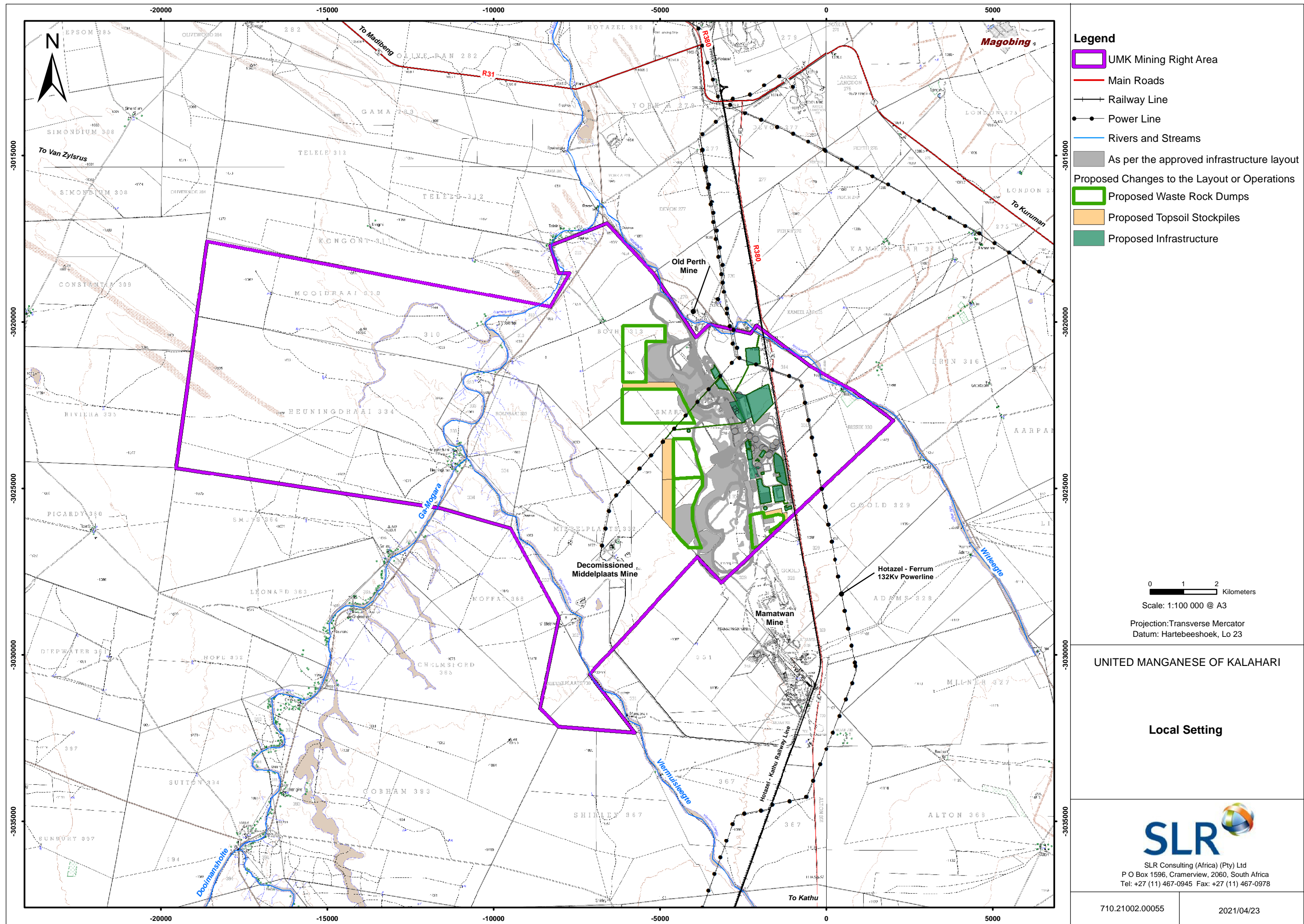
Regional Setting



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2021/04/23



SUMMARY OF AUTHORISATION REQUIREMENTS

The proposed project will require an amendment of UMK's EMPr. In terms of the Mineral and Petroleum Resources Development Act, 2002 (No. 8 of 2002, as amended) (MPRDA), an EMPr may not be amended or varied without the written consent of the Minister of Minerals and Energy.

The proposed project includes activities listed under the National Environmental Management Act, 1998 (No. 107 of 1998, as amended) (NEMA) and waste management activities listed under the National Environmental Management: Waste Act (No. 59 of 2008, as amended) (NEM:WA). Prior to the commencement of the proposed project, an integrated environmental authorisation and waste management license from the Northern Cape DMRE in terms of Section 24 of NEMA and Section 45 of NEM:WA must be applied for and obtained. Listed activities are prohibited from commencing until written authorisation is obtained from the competent authority, which in this case is the Northern Cape DMRE. The activities that are triggered require a Scoping and EIA process in terms of the EIA Regulations 2014 (as amended). The EIA Regulations being followed are Government Notice Regulation (GNR) 982 of 4 December 2014, as amended. The EIA process is used to inform the environmental authorisation application. Further detail is included in Section 6.1.. In addition, the proposed project may require an amendment of the water use license from the DHSWS. for specific water uses under Section 21 of the National Water Act, 1998 (No. 36 of 1998, as amended) (NWA). This process will be initiated by UMK, as required.

This S&EIA process does not cover occupational health and safety legislation requirements.

PLAN OF STUDY FOR THE EIA PHASE

The Plan of Study for EIA 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 with regards to the Scoping Report;
- I&APs will be provided with an opportunity to comment on any aspect of the project and the findings of the EIA and EMPr;
- The EIA and EMPr will be updated with any responses to 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)

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:

- 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 stakeholders;
- Interact with other specialists, where required, to ensure the integration of issues of concern and appropriate assessment;
- Define relevant laws and regulations that apply to the specific specialist study;
- Define the baseline environment through review of available information from past studies and additional field studies, where required;
- 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 2-1: PLAN OF STUDY FOR ASPECTS TO BE ASSESSED BY SPECIALISTS

Specialist Study	Plan of Study
Soil, Land Use, Land Capability and Land Potential Assessment	<p>The study will be conducted by Terra Africa and will focus on the following:</p> <ul style="list-style-type: none"> • A desktop review of existing soil and climatic databases, to establish broad baseline conditions and areas of environmental sensitivity and sensitive agricultural areas; • Assess spatial distribution of various soil types within the focus areas; • Identify restrictive soil properties on land capability under prevailing conditions; • Compile various maps depicting the on-site conditions, soil types and land capability based on desktop review of existing data; • A soil classification survey to classify soil into soil forms within the focus areas and zones of influence; • Subsurface soil observations and sampling undertaken by means of a manual bucket hand auger; • Classify the dominant soil types according to the South African Soil Classification System (Soil Classification Working Group, 2018);



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		<ul style="list-style-type: none"> • Compile a report presenting the results of the desktop study and a description of the findings during the field assessment; and • Provide recommended mitigation measures and management practices to implement in order to comply with applicable legislations.
Biodiversity terrestrial and aquatic	– and	<p>The study will be conducted by Ecological Management Services and will focus on the following: Biodiversity assessment</p> <ul style="list-style-type: none"> • Review available information and documentation relating to the proposed development; • A comprehensive investigation will be undertaken to identify potential floral species of special concern, this includes all IUCN listed species, TOPS listed species and species listed in schedule 1 and 2 of the NCNCA. These will be identified through the SANBI POSA database as well as other available literature and confirmed on site. • A single field survey and literature review of the property to determine vegetation type and distribution. The survey will be undertaken to identify potential floral species of special concern. • A single field survey and literature review to determine what red data faunal species could potentially occur within the study site. The habitat requirements of each red data species that could potentially occur on-site will be compared with the vegetation description. No onsite trapping of faunal species will be undertaken. • Once the overall potential for occurrence of each red data species has been identified, each habitat type (based on the vegetation description and any factors identified as relevant to fauna) will be ranked in terms of conservation importance, as well as ecological sensitivity. • The sites importance in terms of regional sensitivity will also be assessed • The report and survey will comply with the NEMA Appendix 6 requirements. • Freshwater Assessment • Review available information and documentation relating to the proposed development; • A site visit and assessment of the site; • Determine the Present Ecological State (PES) & Ecological Importance and Sensitivity (EIS) of the Witleegte watercourse • Determine the impacts in terms of the characteristics of the Witleegte ecosystem affected and associated with the proposed development; • Describe and assess the significance of the proposed development on the ecosystem; <p>Recommend mitigation measures to minimize the potential negative impacts on freshwater ecosystems.</p>
Surface Assessment	Water	<ul style="list-style-type: none"> • The surface water assessment will be conducted by SLR and will focus on the following: <ul style="list-style-type: none"> ○ Undertake a baseline and situational analysis including: <ul style="list-style-type: none"> ○ Characterisation of rainfall, evaporation data and design storm intensities; ○ Characterisation of the baseline hydrology of the site; ○ Review of available water quality data; and ○ Review of topographical and geotechnical conditions, existing and future layout based on information provided by the client as well as findings from the site visit • Development of a conceptual stormwater management plan, including: <ul style="list-style-type: none"> ○ Clean and dirty water classification, catchment delineation and stormwater routing;

	<ul style="list-style-type: none"> ○ Hydraulic calculations through peak flow estimation for conveyance infrastructure and hydraulic sizing of the channels, kerbs, culverts, and silt traps; ○ Sizing of Pollution Control Dams (PCDs) based on a daily time step model; and ○ Conceptual designs for stormwater infrastructure including channels, culverts, kerbing, silt traps, PCDs, spillways etc. ● Recommendations for further work to develop the detailed designs for the stormwater infrastructure. ● Development of a Dynamic Water Balance through a daily time step water balance model for the major water components of the mine. ● Development of a daily salt balance model for the major water components of the mine. ● Present a qualitative assessment of the significance of the impact of the project on the baseline surface water environment, a range of mitigation measures to minimise said impacts, and recommendations on monitoring. ● Compile a specialist report, including management and mitigation measures.
Groundwater	<p>The groundwater specialist study will be conducted by SLR and will focus on the following:</p> <ul style="list-style-type: none"> ● Review all existing hydrogeological data: <ul style="list-style-type: none"> ○ this includes monitoring data and baseline hydrogeology (water levels and water quality); ○ review previous studies that were undertaken for the UMK Mine, including the groundwater model report and all groundwater monitoring data; ○ examine new infrastructure map and determine possible source term sites; ○ extract all pertinent data and compile the Conceptual Hydrogeological Model. ● Groundwater numerical modelling: <ul style="list-style-type: none"> ○ Based on the source term derived from the geochemical study, the existing groundwater numerical model will be updated; ○ Model results will inform the EIA and WULA regarding whether or not there is any potential of groundwater contamination. ● The groundwater study will include a geochemical and waste assessment to inform the contamination potential of any residues/discards generated by the project. The waste assessment will be undertaken in terms of the National Norms and Standards (Regulation 635 and 656 of 2013). ● Identification of mitigation/management measures and updates to the existing monitoring programme (where required). ● Compile a specialist hydrogeological report.
Heritage and Palaeontology	<p>The heritage impact assessment will be conducted by HCAC Heritage Consultants and will focus on the following:</p> <ul style="list-style-type: none"> ● Assessment of the proposed development footprint to understand the heritage character of the project area through a brief desktop study and a field survey ● Determination of the impact of the proposed project on non-renewable heritage resources and ● Compile a specialist report, including management and mitigation measures.
Closure study and Financial Provision	<p>The Closure and Financial Provision Study will be conducted by SLR and will focus on the following:</p>

	<ul style="list-style-type: none"> • Update of the closure plan: <ul style="list-style-type: none"> ○ Update the closure strategy, closure objectives and mechanisms, design principals and motivations for achieving the closure objective. ○ Update environmental risk assessment to incorporate risks. ○ Assess any long-term latent impacts and mitigation strategies (to be informed by specialist input). ○ Update future monitoring, auditing, and reporting procedures. • Update of the closure liability calculations: <ul style="list-style-type: none"> ○ Updates quantities and cost estimate associated with the closure activities (based on latest mine plan) as per the Financial Provisioning Regulations (GNR1147 of 2015) as amended. ○ Identify any knowledge gaps (to be followed up by future closure plan and closure liability revisions). • Update of preliminary annual rehabilitation plan: <ul style="list-style-type: none"> ○ Updating the preliminary annual rehabilitation plan as part of the requirements of the anticipated Financial Provisioning Regulations.
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