

# PROPOSED EXTENSION OF THE RAILWAY INFRASTRUCTURE AT THE WESSELS MINE, NORTHERN CAPE – REVISED BASIC ASSESSMENT REPORT

Prepared for: Hotazel Manganese Mines (Pty) Ltd

Authority References:

DMRE Ref: NC-00212-MR/102



SLR Project No.: 720.19136.00010  
Report No.: 2  
Revision No.: 0  
October 2021

## DOCUMENT INFORMATION

Title	Proposed Extension of the Railway Infrastructure at the Wessels Mine, Northern Cape – <u>Revised</u> Basic Assessment Report
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Keywords	South32, Hotazel Manganese Mine, <u>Revised</u> BAR, Northern Cape, Railway Infrastructure
Status	Final issued for DMRE Decision-Making
Report No.	2
SLR Company	SLR Consulting (South Africa) (Pty) Ltd
DMRE Ref:	NC-00212-MR/102

## DOCUMENT REVISION RECORD

Rev No.	Issue Date	Description	Issued By
<u>0</u>	<u>October 2021</u>	<u>Final issued for DMRE Decision-Making</u>	<u>R. Baker</u>

## REPORT SIGN OFF AND APPROVALS



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## EXECUTIVE SUMMARY

### PROJECT BACKGROUND

Hotazel Manganese Mines (Pty) Ltd (HMM), a subsidiary of South32 Limited (South32), owns and operates the underground Wessels Manganese Mine (Wessels Mine) located approximately 15 km north of the town of Hotazel, in the John Taolo Gaetsewe District Municipality (JTGDM) and the Joe Morolong Local Municipality (JMLM), Northern Cape province.

HMM holds and operates in accordance with the following authorisations (attached as Appendix A):

- A Converted Old Mining Right (MR) issued in terms of the Mineral and Petroleum Resources Development Act, 28 of 2002 (MPRDA) (Department of Mineral Resources and Energy (DMRE) [previously the Department of Minerals and Energy (DME) Ref: 03/2006(MR)] issued on 16 January 2006; and
- An approved amended Environmental Management Programme (EMPR) issued in terms of the MPRDA [DMRE (previously the Department of Mineral Resources (DMR) Ref: NC30/5/1/2/3/2/1(253) MR] dated 16 March 2018.

The Wessels Mine is located on the farms Dibiaghomo 226, Wessels 227 and Dikgatlong 268 and comprises vertical and incline shafts for access to underground areas, waste rock dump (WRD) and stockpile areas, along with support services and infrastructure. As part of its on-going mine planning, HMM has identified the need to upgrade the existing railway infrastructure at the Wessels Mine. In this regard, HMM is proposing to design a new rail balloon and upgrade the existing railway infrastructure (the proposed project).

### SUMMARY OF AUTHORISATION REQUIREMENTS

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

- An amended EMPR in terms of Section 102 the MPRDA from the DMRE; and
- An Environmental Authorisation (EA) in terms of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), promulgated under the National Environmental Management Act, 107 of 1998 (NEMA) from the DMRE.

SLR Consulting (South Africa) (Pty) Ltd (SLR), an independent firm of Environmental Assessment Practitioners (EAPs), has been appointed by HMM to manage the amended EMPR and EA processes.

### OPPORTUNITY FOR COMMENT

The Basic Assessment Report (BAR) was distributed for a 30-day comment period from 10 September to 11 October 2021 in order to provide Interested and Affected Parties (I&APs) with an opportunity to comment on any aspect of the Basic Assessment (BA) process and the proposed project. Copies of the full report were made available on the SLR website ([www.slrconsulting.com](http://www.slrconsulting.com)) and the SLR data-free website (<https://slrpublicdocs.datafree.co/public-documents>). All comments received during the comment period have been included in this revised BAR, which has been submitted to the DMRE for consideration and decision-making. It should be noted that all significant changes to the BAR are underlined and in a different font (Times New Roman) to the rest of the text, for ease of reference and understanding.

## SUMMARY OF IDENTIFIED IMPACTS AND SIGNIFICANCE

The potential impacts associated with the project activities and infrastructure can be categorised into those that have very low, low, medium, high, very high or insignificant significance in the unmitigated scenario. A summary of the identified impacts is provided in the table below.

Aspect	Potential Impact	Cumulative impact significance of the impact	
		Unmitigated	Mitigated
Geology	Loss and sterilisation of mineral resources	<b>INSIGNIFICANT</b>	
Topography	Altering topography	<b>INSIGNIFICANT</b>	
	Hazardous excavations and infrastructure resulting in safety risks to third parties and animals	<b>Medium</b>	<b>INSIGNIFICANT</b>
Soil and land capability	Soil erosion	<b>High</b>	<b>MEDIUM</b>
	Disturbance of original soil profiles	<b>Medium</b>	<b>VERY LOW</b>
	Chemical pollution of soils	<b>Medium</b>	<b>VERY LOW</b>
Biodiversity	Physical destruction and disturbance of floral species	<b>Medium</b>	<b>LOW</b>
	Physical destruction and disturbance of faunal species	<b>Medium</b>	<b>LOW</b>
Surface water resources	Alteration of natural drainage patterns	<b>INSIGNIFICANT</b>	
	Contamination of surface water resources	<b>INSIGNIFICANT</b>	
Groundwater	Contamination of groundwater resources	<b>INSIGNIFICANT</b>	
Air quality	Air pollution	<b>INSIGNIFICANT</b>	
Noise	Increase in disturbing noise levels	<b>INSIGNIFICANT</b>	
Visual	Negative visual views	<b>INSIGNIFICANT</b>	
Traffic	Road disturbance and traffic safety	<b>INSIGNIFICANT</b>	
Cultural/heritage and palaeontological resources	Loss of cultural/heritage and palaeontological resources	<b>INSIGNIFICANT</b>	
Socio-economic	Inward migration and economic impact	<b>INSIGNIFICANT</b>	
	Change in land use	<b>INSIGNIFICANT</b>	

## ENVIRONMENTAL STATEMENT

The assessment of the proposed project presents the potential for negative impacts to occur (in an unmitigated scenario) on the biophysical environments both on the project footprint and in the surrounding area. With the implementation of management actions, these potential impacts can be prevented or reduced to acceptable levels. It follows that provided the EMPR is effectively implemented, there is no reason from a biophysical, cultural/heritage or socio-economic standpoint why the proposed project should not proceed.

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## ACRONYMS AND ABBREVIATIONS

Acronym / Abbreviation	Definition
AEL	Atmospheric Emissions Licence
<u>APM</u>	<u>Archaeology, Palaeontology and Meteorites</u>
AQSR	Air Quality Sensitive Receptors
Assmang	Assmang (Pty) Ltd
BA	Basic Assessment
BAR	Basic Assessment Report
<u>BBG</u>	<u>Burial Grounds and Graves</u>
BID	Background Information Document
BIF	Banded Ironstone Formation
CBA	Critical Biodiversity Area
DEA	Department of Environmental Affairs
DFFE	Department of Forestry, Fisheries and Environment
DME	Department of Minerals and Energy
DMR	Department of Mineral Resources
DMRE	Department of Mineral Resources and Energy
DRDLR	Department of Rural Development and Land Reform
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EAPASA	Environmental Assessment Practitioners Association of South Africa
ESDD	Environmental and Social Due Diligence
ESIA	Environmental and Social Impact Assessment
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
EMPR	Environmental Management Programme
GHT	GHT Consulting
GIS	Geographic Information System
GN	Government Notice
GNR	Government Notice Regulation
H&S	Health and Safety
ha	Hectares
HC	Hydrocarbon
HIA	Heritage Impact Assessment

Acronym / Abbreviation	Definition
HMM	Hotazel Manganese Mines (Pty) Ltd
I&APs	Interested and Affected Parties
IAIAsa	International Association for Impact Assessment South Africa
IBA	Important Bird Area
IDP	Integrated Development Plan
IEM	Integrated Environmental Management
JMLM	Joe Morolong Local Municipality
JTGDM	John Taolo Gaetsewe District Municipality
KMF	Kalahari Manganese Field
KP	Knight Piésold (Pty) Ltd
LB	Lower Body
m	Meter
mm	Millimetre
mamsl	Metres Above Mean Sea Level
MAP	Mean Annual Precipitation
MAR	Mean Annual Run-Off
mbgl	Metres Below Ground Level
MMT	Mamatwan Manganese Mine
MPRDA	Mineral and Petroleum Resources Development Act, 28 of 2002
MR	Mining Right
NBA	National Biodiversity Assessment
NCNCA	Northern Cape Nature Conservation Act, 9 of 2009
NDCR	National Dust Control Regulations
NDP	National Development Plan
NEM: AQA	National Environmental Management: Air Quality Act, 39 of 2004
NEM: BA	National Environmental Management: Biodiversity Act, 10 of 2004
NEM: WA	National Environmental Management: Waste Act, 59 of 2008
NEMA	National Environmental Management Act, 107 of 1998
NFA	National Forest Act, 84 of 1998
NFEPA	National Freshwater Ecosystem Priority Areas
NHRA	National Heritage Resources Act, 25 of 1999
NPAES	National Protected Areas Expansion Strategy
NTS	Non-Technical Summary
P&G's	Preliminary and Generals
PAH	Polycyclic Aromatic Hydrocarbon
<u>PIA</u>	<u>Palaeontological Impact Assessment</u>

Acronym / Abbreviation	Definition
PPP	Public Participation Process
RDL	Red-Data List
SACAD	South African Conservation Areas Database
SACNASP	South African Council for Natural Scientific Professions
SAHRA	South African Heritage Resources Agency
SAHRIS	South African Heritage Resources Information System
SANS	South African National Standards
SAPAD	South African Protected Area Database
SAWB	South African Weather Bureau
SAWS	South African Weather Service
SCC	Species of Conservation Concern
SLP	Social and Labour Plan
SLR	SLR Consulting (South Africa) (Pty) Ltd
South32	South32 Limited
SSVR	Site Sensitivity Verification Report
StatsSA	Statistics South Africa
STS	Scientific Terrestrial Services cc
SWSA	Strategic Water Source Area
TFR	Transnet Freight Rail
TSF	Tailings Storage Facility
UMK	United Manganese of Kalahari
US EPA	United States Environmental Protection Agency
VOC	Volatile Organic Compounds
Wessels Mines	Wessels Manganese Mine
WMA	Water Management Area
WRD	Waste Rock Dump
WUL	Water Use Licence

# Proposed Extension of the Railway Infrastructure at the Wessels Mine, Northern Cape - Basic Assessment Report

## INTRODUCTION

This chapter provides a brief description of the proposed project background, describes the purpose of the report, summarises the legislative authorisation requirements and outlines the opportunity for stakeholders to comment.

## PROJECT BACKGROUND

Hotazel Manganese Mines (Pty) Ltd (HMM), a subsidiary of South32 Limited (South32), owns and operates the underground Wessels Manganese Mine (Wessels Mine) located approximately 15 km north of the town of Hotazel, in the John Taolo Gaetsewe District Municipality (JTGDM) and the Joe Morolong Local Municipality (JMLM), Northern Cape province. Regional and local setting maps are provided in Figure 1-1 and Figure 1-2, respectively.

HMM holds and operates in accordance with the following authorisations (attached as Appendix A):

- A Converted Old Mining Right (MR) issued in terms of the Mineral and Petroleum Resources Development Act, 28 of 2002 (MPRDA) [Department of Mineral Resources and Energy (DMRE) (previously the Department of Minerals and Energy (DME) Ref: 03/2006(MR)] issued on 16 January 2006; and
- An approved amended Environmental Management Programme (EMPR) issued in terms of the MPRDA [DMRE (previously the Department of Mineral Resources (DMR)) Ref: NC30/5/1/2/3/2/1(253) MR] dated 16 March 2018.

The Wessels Mine is located on the farms Dibiaghomo 226, Wessels 227 and Dikgatlong 268 and comprises vertical and incline shafts for access to underground areas, waste rock dump (WRD) and stockpile areas, along with support services and infrastructure. As part of its on-going mine planning, HMM has identified the need to upgrade the existing railway infrastructure at the Wessels Mine. In this regard, HMM is proposing to design a new rail balloon and upgrade the existing railway infrastructure (proposed project).

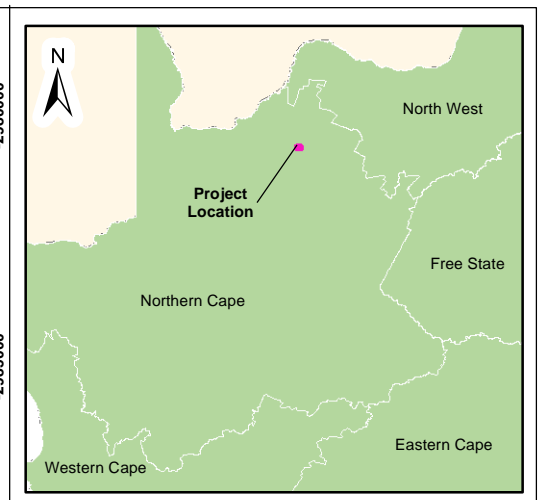
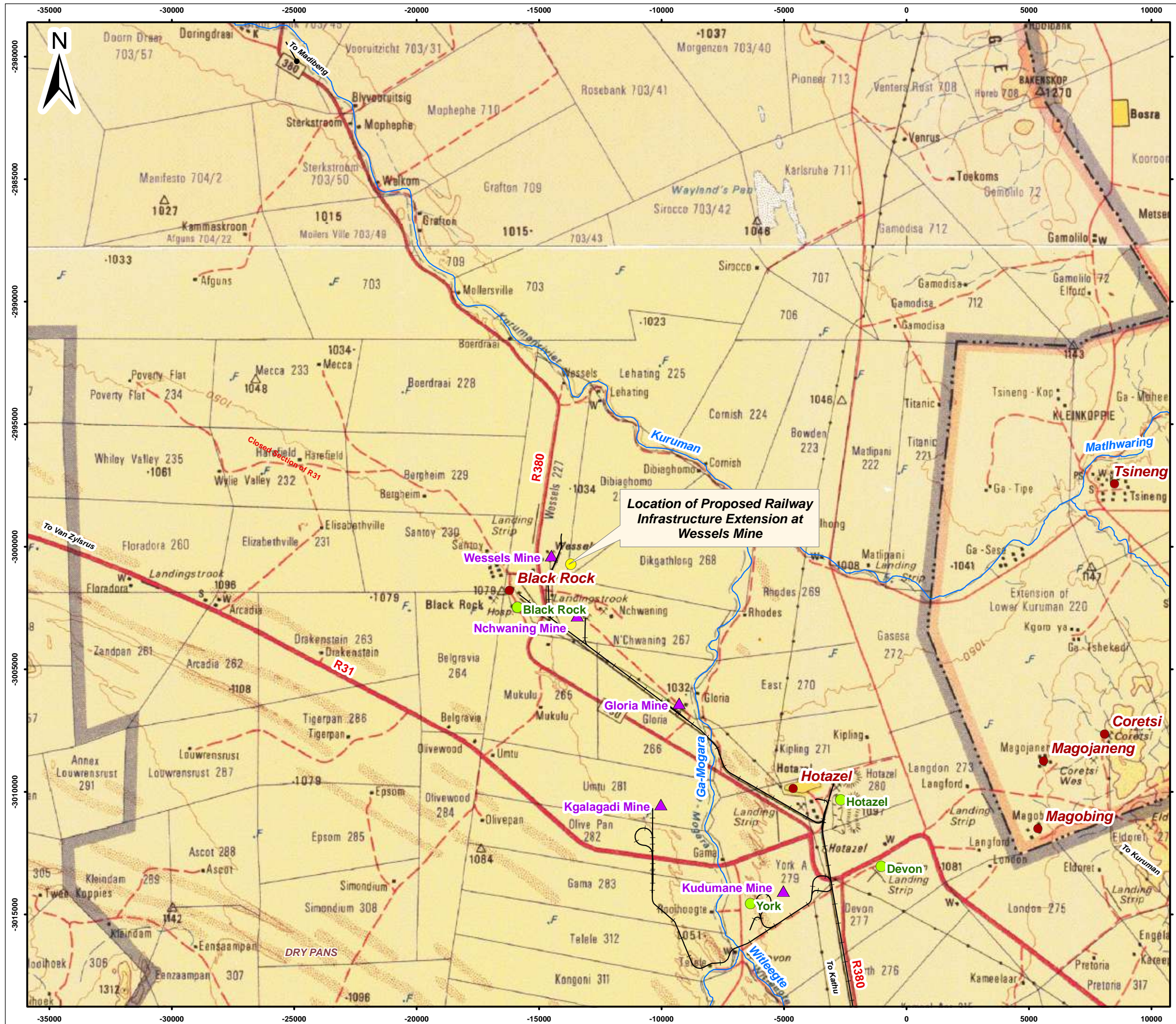
## SUMMARY OF AUTHORISATION REQUIREMENTS

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

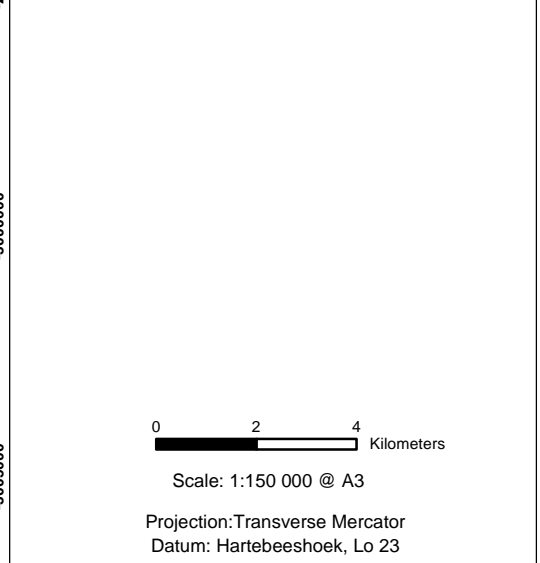
- An amended EMPR in terms of Section 102 the MPRDA from the DMRE; and
- An Environmental Authorisation (EA) in terms of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), promulgated under the National Environmental Management Act, 107 of 1998 (NEMA) from the DMRE.

SLR Consulting (South Africa) (Pty) Ltd (SLR), an independent firm of Environmental Assessment Practitioners (EAPs), has been appointed by HMM to manage the amended EMPR and EA processes.





- Legend**
- Towns
  - Main Roads
  - +— Railway
  - Rivers
  - ▲ Operating Manganese Mines
  - Closed / Dormant Mines
  - Location of Proposed Railway Extension

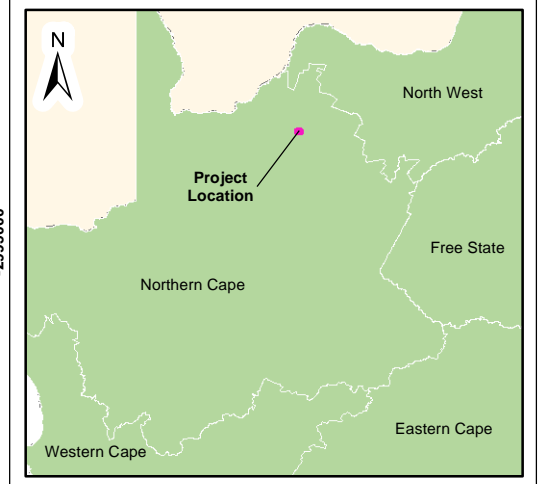
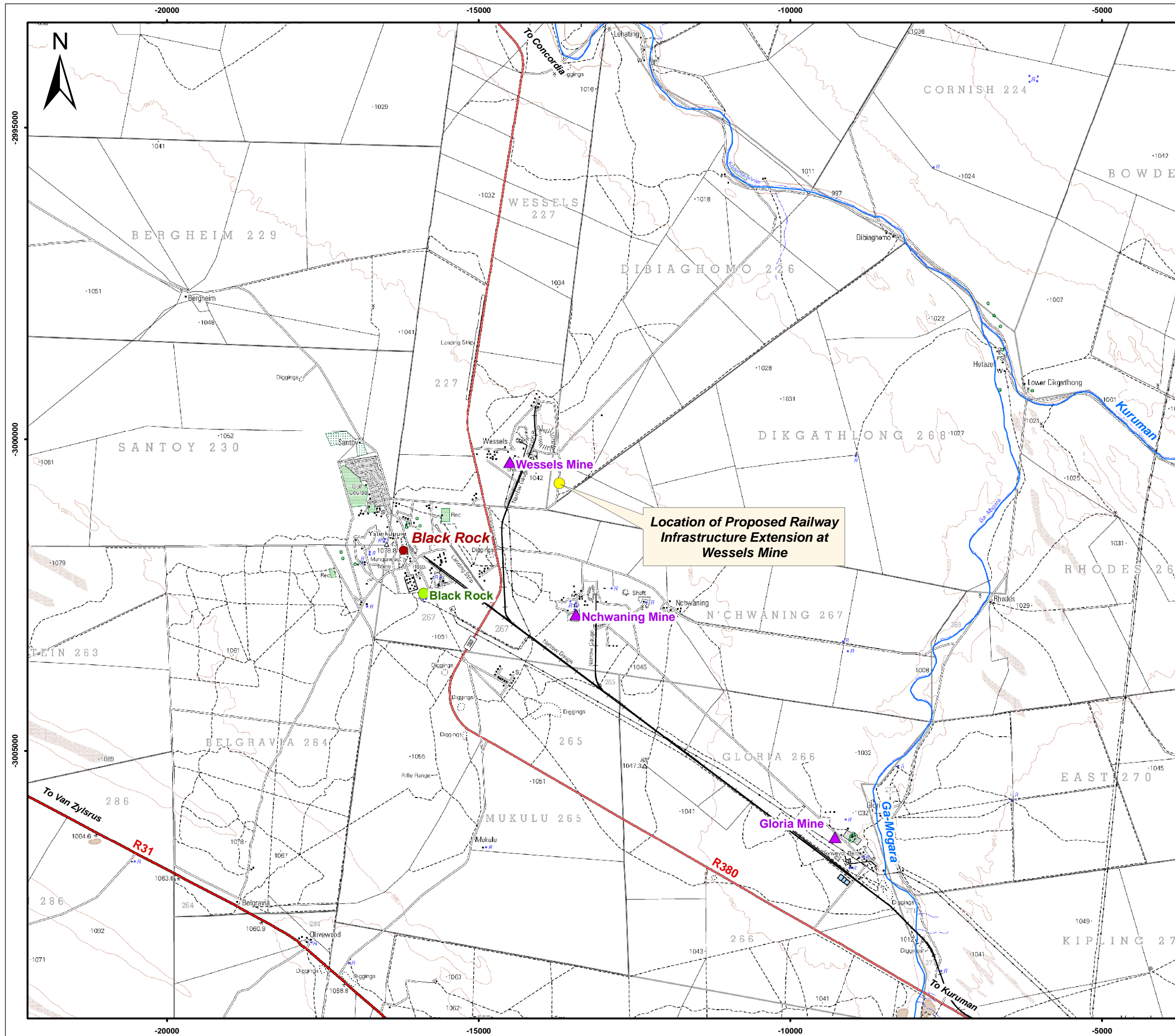


South32 Limited

Figure 1-1  
 Regional Setting

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





- Legend**
- Towns
  - Main Roads
  - +— Railway
  - Rivers
  - ▲ Operating Manganese Mines
  - Closed / Dormant Mines
  - Location of Proposed Railway Extension

0 1 2 Kilometers  
 Scale: 1:63 000 @ A3  
 Projection: Transverse Mercator  
 Datum: Hartbeeshoek, Lo 23

South32 Limited

**Figure 1-2**  
**Local Setting**

**SLR**  
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## PURPOSE OF THIS REPORT

The Basic Assessment Report (BAR) is compiled in accordance with Appendix 1 of the EIA Regulations, 2014 (as amended) and was distributed for review and comment as part of a Basic Assessment (BA) process undertaken for the proposed project.

The BAR provides a description of the proposed project and the affected environment, summarises the BA process undertaken to date, identifies and assesses the key impacts resulting from the proposed project and presents management and mitigation measures that are recommended to enhance benefits and limit negative impacts. The specialist findings and other relevant information are integrated into the BAR, which includes an EMPR.

The purpose of the report is to present the afore-mentioned information in a clear and accessible format that is suitable for easy understanding by Interested and Affected Parties (I&APs) and provided an opportunity for I&APs to comment on all aspects of the proposed project, as well as findings of the impact assessment. All comments received during the comment period have been included in this revised BAR, which has been submitted to the DMRE for consideration and decision-making. It should be noted that all significant changes to the BAR are underlined and in a different font (Times New Roman) to the rest of the text, for ease of reference and understanding

Furthermore, the proposed project requires an amendment to the existing EMPR in terms of the MPRDA: *“A reconnaissance permission, prospecting right, mining right, mining permit, retention permit, technical corporation permit, reconnaissance permit, exploration right, production right, prospecting work programme, exploration work programme, production work programme, mining work programme environmental management programme or an environmental authorisation issued in terms of the National Environmental Management Act, 1998, as the case may be, may not be amended or varied (including by extension of the area covered by it or by the additional of minerals or a shares or seams, mineralised bodies or strata, which are not at the time the subject thereof) without the written consent of the Minister.”*

In this regard, the BAR aims to address the requirements of both the MPRDA Section 102, as well as NEMA requirements to facilitate informed decision making by the competent authority. Due to the localised nature of the activity, a stand-alone EMPR has been compiled for ease of management of the activity. The stand-alone EMPR will be appended to the broader mining EMPR.

## TERMS OF REFERENCE

The terms of reference for these amended EMPR and EA processes are to:

- Apply for an EA for the Listed Activities triggered by the proposed project in terms of the EIA Regulations promulgated under NEMA;
- Submit a Section 102 application to amend the consolidated EMPR in terms of the MPRDA;
- Ensure that a BA process for the proposed project is undertaken in an open, participatory manner that ensures all potential issues of concern and their associated impacts are identified;
- Undertake a formal public participation process (PPP), which includes the distribution of information to I&APs and provide an opportunity for I&APs to raise any issues/concerns arising

from the proposed project, as well as an opportunity to comment on all documentation arising from the BA process; and

- Integrate all information into a BAR to allow for an informed decision to be taken on the proposed project by the relevant authorities.

## OBJECTIVES OF THE BASIC ASSESSMENT PROCESS

In accordance with Appendix 1 of the EIA Regulations, 2014 (as amended), the objectives of the BA process are to:

- Identify the relevant policies and legislation relevant to the activity and determine how the activity complies and responds to the policy and legislative context;
- Present the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
- Identify and confirm the preferred activity, technology and sites related to the proposed project;
- Undertake an impact assessment, inclusive of cumulative impacts, to determine the biophysical and socio-economic sensitivity of the project sites and assess the nature, significance, consequence, extent, duration and probability of the impacts occurring;
- Assess the degree to which impacts can be reversed, may cause irreplaceable loss of resources and can be avoided, managed or mitigated; and
- Identify suitable measures to avoid, manage or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

## OPPORTUNITY FOR COMMENT

The BAR was distributed for a 30-day comment period from 10 September to 11 October 2021 in order to provide I&APs with an opportunity to comment on any aspect of the BA process and the proposed project. Copies of the full report were made available on the SLR website ([www.slrconsulting.com](http://www.slrconsulting.com)) and the SLR data-free website (<https://slrpublicdocs.datafree.co/public-documents>). As mentioned previously, all comments received during the comment period have been included in this revised BAR, which has been submitted to the DMRE for consideration and decision-making. It should be noted that all significant changes to the BAR are underlined and in a different font (Times New Roman) to the rest of the text, for ease of reference and understanding.

# **PART A – SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT**

## 1. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

This chapter provides the details, qualifications and experience of the EAPs undertaking the BA process for the proposed project.

### 1.1 DETAILS OF THE PROJECT TEAM

SLR, an independent firm of EAPs, has been appointed by HMM to manage the amended EMPR and EA processes. The details of the project team that were involved in the preparation of this BAR are provided in Table 1-1.

SLR has no vested interest in the proposed project other than fair payment for consulting services rendered as part of the amended EMPR and EA processes and has declared its independence, as required by the EIA Regulations, 2014 (as amended), in chapter 17.

**Table 1-1: Details of the EAP**

General		
<b>Organisation</b>	SLR Consulting (South Africa) (Pty) Ltd	
<b>Postal Address</b>	PO Box 1596, Cramerview, 2060	
<b>Tel</b>	011 467 0945	
<b>Fax</b>	011 467 0978	
<b>Name</b>	<b>Task and role</b>	<b>Email</b>
<b>Rob Hounsome</b>	Project Reviewer - Document and process review, quality control	rhounsome@slrconsulting.com
<b>Sharon Meyer</b>	Project Lead – EAP	smeyer@slrconsulting.com
<b>Rizqah Baker</b>	Project Manager – Management of BA process, report compilation	rbaker@slrconsulting.com
<b>Milisa Rala</b>	Project Assistant – Project Assistant	mrala@slrconsulting.com

### 1.2 EXPERTISE OF THE EAP

**Rob Hounsome** has undertaken more than 200 Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Due Diligence (ESDD) services in nearly 40 countries over the past 27 years in accordance with requirements of national governments, industry associations, and various funding agencies including all the major International Finance Institutes, Equator Principle Banks, and/or legal firms, including both Due Diligence Assessments for project financing and advisory on Lender expectations (and associated project financing negotiations). Rob is a member of the International Association for Impact Assessment South Africa (IAIAsa).

**Sharon Meyer** has over 20 years of experience as an environmental scientist and project manager. She has managed complex projects within the mining and power generation sectors, with a focus on industrial waste

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management. She has managed multi-national and multi-disciplinary teams on authorisation processes and social due diligence mining projects in Africa. Sharon has worked on a variety of mining projects including diamond, coal, gold, vanadium, and tailings reclamation projects. Sharon is registered as an EAP with the Environmental Assessment Practitioner’s Association of South Africa (EAPASA), is registered with the South African Council for Natural Scientific Professions (SACNASP) and is a member of IAIAsa.

**Rizqah Baker** is a consultant with four years’ experience working in the environmental field and has worked both in the public and private sectors. She worked for the City of Cape Town; her roles included environmental auditing and providing comment on various BARs, Method Statements, EMPRs and development proposals. In the private sector she worked for an environmental rehabilitation firm, with a main role being report compilation and writing and has spent considerable time in the field, having undertaken alien vegetation control and search and rescue operations. As a consultant, she has worked in the various fields including infrastructure, oil & gas, mining, and the built environment. She’s also worked as an Environmental Control Officer (ECO) in various fields and thus brings with her a strong understanding of, and implementation of EMPRs.

**Milisa Rala** has a MSc in Resource Conservation Biology and a BSc in Environmental Sciences. Her MSc research focused on using Geographic Information Systems (GIS) to find the relationship between land cover change and the socio-economics status of all ten of the former South African Homelands (Bantustans).

Curricula vitae and professional registrations of the project team are provided in Appendix B.

## 2. LOCATION OF ACTIVITY

This chapter provides details of the location of the proposed project.

### 2.1 LOCATION OF OVERALL ACTIVITY

Details of the properties on which the proposed project is located is provided in Table 2-1.

**Table 2-1: Property Description**

Description	Detail
<b>Farm name and portion</b>	<ul style="list-style-type: none"> <li>• Portion 2 of the farm Dibiaghomo 226</li> <li>• Remaining Extent of the farm Wessels 227</li> <li>• Portion 9 of the farm N’Chwaning 267</li> <li>• Remaining Extent of the farm Mukulu 265</li> <li>• Portion 1 of the farm Gloria 266</li> </ul>
<b>Application area (hectares (ha))</b>	The proposed project covers an area of approximately 10 ha
<b>Magisterial District</b>	John Taolo Gaetsewe Magisterial District
<b>Distance and direction from nearest town</b>	15 km north of the town of Hotazel
<b>21-digit surveyor general code</b>	<ul style="list-style-type: none"> <li>• Portion 2 of the farm Dibiaghomo 226 - C04100000000022600002</li> <li>• Remaining Extent of the farm Wessels 227 - C04100000000022700000</li> <li>• Portion 9 of the farm N’Chwaning 267 - C04100000000026700009</li> <li>• Remaining Extent of the farm Mukulu 265 - C04100000000026500000</li> <li>• Portion 1 of the farm Gloria 266 - C04100000000026600001</li> </ul>

### 2.2 LOCALITY MAP

Regional and local setting maps are provided in Figure 1-1 and Figure 1-2, respectively.



### 3. DESCRIPTION OF THE SCOPE OF THE ACTIVITY

This chapter provides an overview of the existing operations, identifies the Listed Activities triggered by the proposed project and provides a description of the proposed project activities.

#### 3.1 OVERVIEW OF EXISTING OPERATIONS

The Wessels Mine is located approximately 15 km north of the town of Hotazel. The mine comprises vertical and incline shafts for access to underground areas, WRD and stockpile areas, along with support services and infrastructure. Wessels Mine officially commenced with operations in 1973 and has been in operation ever since. Further detail is provided in the following sections.

##### 3.1.1 Mining Method

Wessels Mine is a trackless bord and pillar underground mine operating at a depth of approximately 350 m below surface. Currently two areas of mineralisation are being mined. One vertical and two decline shafts access the mineralisation and hydraulic twin boom drilling machines undertake drilling. Blasting takes place at the end of shift, using a mixture of emulsion and sensitizer, with electronic detonators to obtain a face advance of approximately 2.65 m for each blast.

The cleaning crew uses rubber wheeled loaders to load 25-ton haulers with ore. The haulers transport the ore to tipping points where the ore passes through a primary crusher, and after some conveyor transportation, is stored in silos underground until it is hoisted to surface by means of a continuous cable belt conveyor. Once on the surface, the ore passes through a screening and washing plant. The washing plant produces material from 150 micron and below. The material is then stockpiled for loading on to the railway line. Orders are generally received for specific ore, which is then selectively loaded onto trucks. The market tends to be both inland and for export.

##### 3.1.2 Existing Railway Line

From the Wessels Mine through to Hotazel, the railway line is privately owned as a joint venture. At the Wessels Mine, the railway consists of a single track and does not allow for optimal and cost-effective loading of manganese ore from the mine in its current configuration.

#### 3.2 PROPOSED LISTED AND SPECIFIED ACTIVITIES

The EIA Regulations, 2014 (as amended), promulgated under NEMA and published in Government Notice (GN) No. R982 (as amended by GN No. 326 of 7 April 2017) controls certain Listed Activities. These activities are listed in GN No. R983 (Listing Notice 1; as amended by GN No. 327 of 7 April 2017), R 984 (Listing Notice 2; as amended by GN No. 325 of 7 April 2017) and R985 (Listing Notice 3; as amended by GN No. 324 of 7 April 2017) and are prohibited until EA has been obtained from the competent authority. Such EA, which may be granted subject to conditions, will only be considered once there has been compliance with GN No. R982 (as amended).

GN No. R 983 (as amended) sets out the procedures and the documentation that needs to be complied with when applying for EA. A BA process must be applied to an application if the authorisation applied for is in



respect of an activity or activities listed in Listing Notices 1 and/or 3 and an EIA process must be applied to an application if the authorisation applied for is in respect of an activity or activities listed in Listing Notice 2.

The proposed project triggers Listing Activity 64 contained in Listing Notice 1 (see Table 3-1), thus, a BA process must be undertaken in order for the DMRE to consider the application in terms of NEMA and make a decision whether to grant EA or not.

**Table 3-1: Listing Activities Applicable to the Proposed Project**

Description of the proposed project	Extent of the activity	Listed Notice, Listing Activity and Relevance
Proposed extension of the railway infrastructure at the Wessels Mine	Approximately 10 ha	<p>Listing Notice 1, GN No. R983, Listing Activity 27: <i>The clearance of an area of 1 ha or more, but less than 20 ha of indigenous vegetation, except where such clearance of indigenous vegetation is required for -</i></p> <ul style="list-style-type: none"> <li><i>(i) the undertaking of a linear activity; or</i></li> <li><i>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</i></li> </ul> <p><b>Relevance: The proposed extension of the railway infrastructure at the Wessels Mine will require the clearance of approximately 10 ha of indigenous vegetation. However, given that the proposed project is characterised as a linear activity, SLR is of the opinion that this Listing Activity is <u>not triggered</u> by the proposed project.</b></p>
		<p>Listing Notice 1, GN No. R983, Listing Activity 64: The expansion of railway lines, stations or shunting yards where there will be an increased development footprint, excluding -</p> <ul style="list-style-type: none"> <li><i>(i) railway lines, shunting yards and railway stations in industrial complexes or zones;</i></li> <li><i>(ii) underground railway lines in mines; or</i></li> <li><i>(iii) additional railway lines within the railway line reserve.</i></li> </ul> <p><b>Relevance: The proposed project entails the extension of the railway infrastructure at the Wessels Mine which will increase the development footprint.</b></p>

### 3.3 DESCRIPTION OF THE PROPOSED PROJECT

South32 has a Manganese Export Corridor Allocation on the Transnet Freight Rail (TFR) manganese line between Hotazel, in the Northern Cape, and Coega, in the Eastern Cape. The allocation is underutilised due to train loading inefficiencies of the current railway configuration at the Wessels Mine. Additionally, TFR has initiated a manganese expansion programme which will increase manganese export capacity by

upgrading the rail network. TFR plans to increase capacity of the manganese rail line beyond the current four million tonnes per annum to 16 million tonnes per annum.

To take-up the TFR's extended capacity, the loading rates at the Wessels Mine need to be improved. In this regard, HMM is proposing to extend the existing railway infrastructure at the Wessels Mine by upgrading the existing railway line. A site layout map is provided in Figure 3-1. The scope of work for the proposed project includes the following:

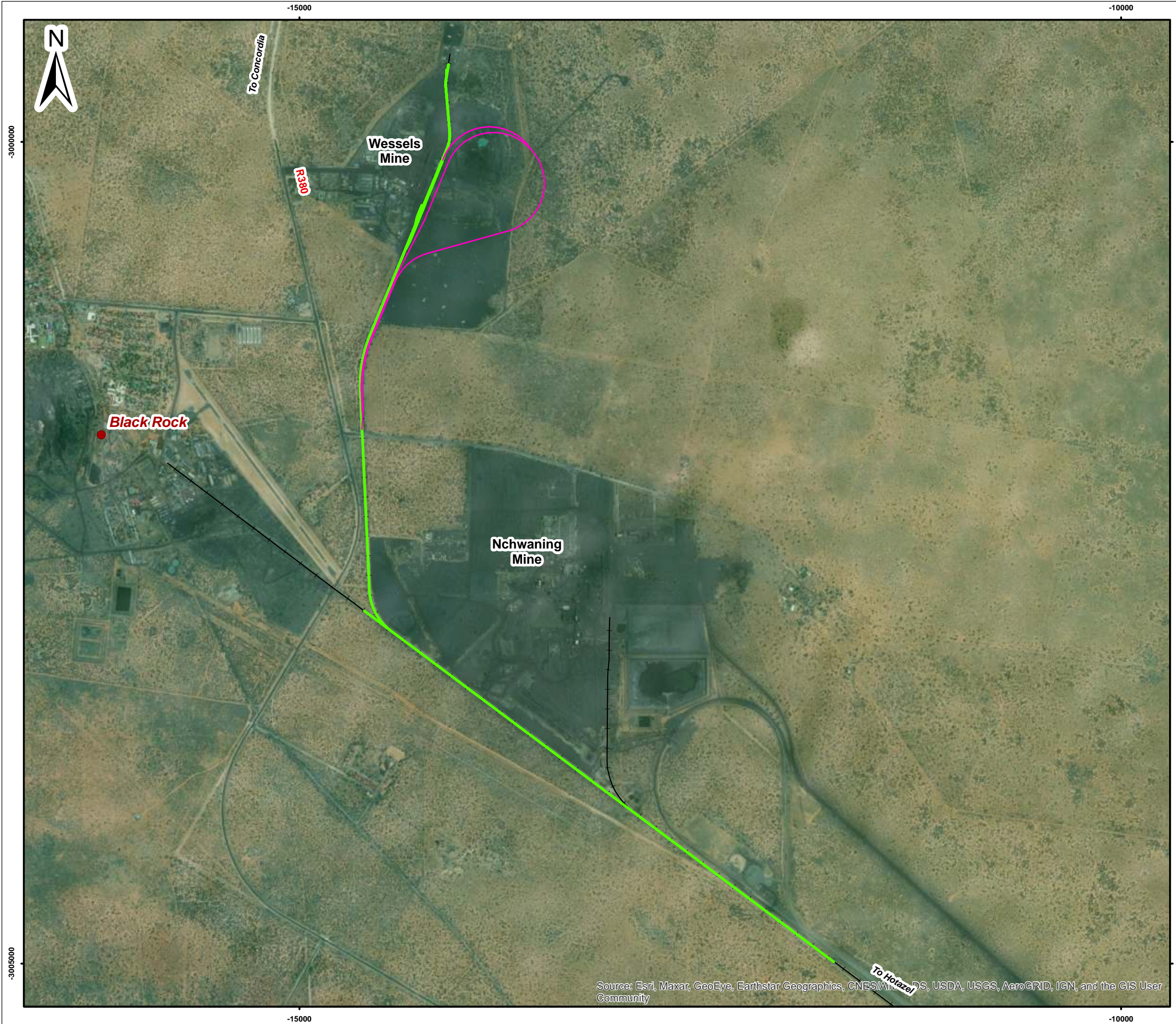
- The extension of the existing railway into a new railway balloon measuring at approximately 2 500 m long and 25 m wide;
- The extension of the railway onto a section of the existing tailings dam resulting in the removal of approximately 15 000 – 25 000 m<sup>3</sup> of material from the tailings area, which would be deposited on another existing tailings dam; and
- The upgrade of the existing railway line from the Wessels Mine to the tie-in point near Assmang (Pty) Ltd's (Assmang) railway line.

It must be noted that that the upgrade of the railway line does not trigger any Listed Activities in terms of the EIA Regulations, 2014 (as amended), and does not require authorisation. As such, the description of this portion of the proposed project is included for completeness only. Furthermore, it is important to note that decommissioning and closure-related activities for the proposed project will form part of the existing approved activities for the Wessels Mine.

An overview of the activities and infrastructure associated with the proposed project are provided in Table 3-2.

The duration of the construction phase of the proposed project is anticipated to be approximately 15 months. A staff complement of approximately 250 individuals would be required for the construction phase (skilled and unskilled job opportunities). Procurement opportunities would be sourced locally, as far as possible. Due to the nature of the proposed project, no job or procurement opportunities will be created post-construction.





- Legend**
- Towns
  - +— Existing Railway
  - Proposed Railway Extension Layout
  - Upgrade to Existing Line

0 250 500 Meters  
 Scale: 1:22 500 @ A3  
 Projection: Transverse Mercator  
 Datum: Hartbeeshoek, Lo 23

South32 Limited

**Figure 3-1**  
**Site Layout**

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

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus, DigitalGlobe, GeoEye, IGN, Aerogrid, IGN, and the GIS User Community



**Table 3-2: Overview of the Activities Associated with the Proposed Project**

Main Activity	Sub-Activity	Applicable Phase
Site preparation	Establishment of contractor’s site camp and laydown area	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
Earthworks	Vegetation clearing	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
	Topsoil removal	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
	Site excavation for foundations and base compaction	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
Civil works	Mixing of concrete and concrete work (including storage and handling of fuel, lubricants, sand, rock, cement and chemical additives)	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
	Dust suppression	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
	Piling	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
	Structural steelwork (including grinding and welding)	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
	Slope stabilisation and compaction	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
	Stormwater drainage management	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
Transport system	The use of parking, loading and off-loading areas for truck, plant and other equipment	<ul style="list-style-type: none"> <li>• Construction</li> <li>• Decommissioning</li> </ul>
	Transportation of staff to and from site	<ul style="list-style-type: none"> <li>• Construction</li> <li>• Decommissioning</li> </ul>
	Use of railway line	<ul style="list-style-type: none"> <li>• Operation</li> </ul>
General site management	Security and access control	<ul style="list-style-type: none"> <li>• Construction</li> <li>• Operation</li> </ul>
	Alien vegetation management	<ul style="list-style-type: none"> <li>• Construction</li> <li>• Operation</li> </ul>
	General monitoring, inspection and maintenance	<ul style="list-style-type: none"> <li>• Operation</li> </ul>
	Dust suppression	<ul style="list-style-type: none"> <li>• Construction</li> <li>• Operation</li> </ul>
Demolition	Removal of contractor’s site camp and laydown area	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
	Removal of infrastructure	<ul style="list-style-type: none"> <li>• Decommissioning</li> </ul>
Rehabilitation	Replenishment of soil resources	<ul style="list-style-type: none"> <li>• Decommissioning</li> </ul>
	Revegetation of disturbed areas	<ul style="list-style-type: none"> <li>• Decommissioning</li> </ul>
	Slope stabilisation and erosion control	<ul style="list-style-type: none"> <li>• Decommissioning</li> </ul>
	Alien vegetation management	<ul style="list-style-type: none"> <li>• Decommissioning</li> </ul>
Maintenance and aftercare	Initiation of aftercare and maintenance programme	<ul style="list-style-type: none"> <li>• Closure</li> </ul>
	Maintenance of post-closure landforms, facilities and rehabilitated areas	<ul style="list-style-type: none"> <li>• Closure</li> </ul>

## 4. POLICY AND LEGISLATIVE CONTEXT

In accordance with the EIA Regulations, 2014 (as amended), and the DMRE BAR template, this chapter outlines the key legislative requirements applicable to the proposed project and outlines the guidelines, policies and plans that have been considered during the EMPR amendment and EA processes.

### 4.1 CONSIDERATION OF LEGISLATION

#### 4.1.1 Mineral and Petroleum Resources Development Act, 28 of 2008

The MPRDA governs the acquisition, use and disposal of mineral and petroleum resources. The objectives of the Act, amongst others, are to promote economic growth and mineral and petroleum resources development in South Africa, particularly the development of downstream industries, through the provision of feedstock and the development of mining and petroleum inputs industries. Additionally, the aim is to promote employment and advance the social and economic welfare of all South Africans.

Chapter 4 of the Mineral and Environmental Regulation provides a framework for the application of mining, prospecting and closure rights. The DMRE must apply the range of environmental principles included in Section 2 of NEMA when taking decisions that significantly affect the environment. To give effect to the general objectives of Integrated Environmental Management (IEM), the potential impacts on the environment of listed or specified activities must be considered, investigated, assessed and reported to the competent authority. Section 24(4) of NEMA provides the minimum requirements for procedures for the investigation, assessment, management, and communication of the potential impacts.

In addition, Section 102 of the MPRDA governs the amendment of rights, permits, programmes and plans.

**The proposed project entails the extension of the railway infrastructure at the Wessels Mine. The proposed project will be undertaken within the boundary of the HMM's MR, but outside the boundary of the Wessels Mine. The proposed project does not include the addition of any minerals not currently included in the MR given that the proposed project relates to the extension of the railway infrastructure only, therefore, a separate EA under the MPRDA is not deemed applicable. However, an application, in terms of Section 102 of the MPRDA, to amend the approved amended EMPR must be submitted to the DMRE to take cognisance of the proposed project, the associated environmental impacts and the subsequent monitoring or mitigation measures.**

#### 4.1.2 National Environmental Management Act, 107 of 1998

NEMA establishes principles and provides a regulatory framework for decision-making on matters affecting the environment. Section 2 of NEMA sets out a range of environmental principles that are to be applied by all organs of state when taking decisions that significantly affect the environment. Included amongst the key principles is that all development must be socially, economically and environmentally sustainable and that environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably. NEMA also provides for the participation of I&APs and stipulates that decisions must take into account the interests, needs and values of all I&APs.

Chapter 5 of NEMA outlines the general objectives and implementation of IEM, which provides a framework for the integration of environmental issues into the planning, design, decision-making and implementation of plans and development proposals. Section 24 provides a framework for granting of EA. In order to give effect to the general objectives of IEM, the potential impacts on the environment of Listed Activities must be considered, investigated, assessed and reported to the competent authority. Section 24(4) provides the minimum requirements for procedures for the investigation, assessment and communication of the potential impact of activities.

**This EA process must be undertaken in consideration of the afore-mentioned principles. In line with sustainability principles, potential impacts arising from the proposed project must be identified and mitigation actions must be provided.**

#### **4.1.3 Environmental Impact Assessment Regulations, 2014 (as amended)**

The EIA Regulations, 2014 (as amended), promulgated under NEMA provide for the control over certain Listed Activities. These Listed Activities are detailed in Listing Notice 1, Listing Notice 2 and Listing Notice 3. The undertaking of activities specified in the Listing Notices is prohibited until EA has been obtained from the competent authority. Such EA, which may be granted subject to conditions, will only be considered once there has been compliance with the EIA Regulations, 2014 (as amended).

The EIA Regulations, 2014 (as amended), sets out the procedures and documentation that need to be complied with when applying for EA. A BA process must be applied to an application if the authorisation applied for is in respect of an activity or activities listed in Listing Notices 1 and/or 3 and a Scoping and EIA process must be applied to an application if the authorisation applied for is in respect of an activity or activities listed in Listing Notice 2.

Furthermore, Appendix 1, Appendix 4 and Appendix 6 of the EIA Regulations, 2014 (as amended), sets out the outcomes and requirements of reporting when compiling a BAR, EMPR and specialist reports, respectively. Compliance with these appendices is required upon submission of a BAR, EMPR and specialist reports (supporting documentation for a BAR) for application for EA in terms of the EIA Regulations, 2014 (as amended).

**The proposed project triggers a Listed Activity in terms of Listing Notice 1 (Activity 64) (refer to Table 3-1), therefore application for EA and a BA process, requiring the compilation of a BAR and EMPR (with specialist reports as supporting documentation), must be submitted to the DMRE.**

#### **4.1.4 National Environmental Management: Air Quality Act, 39 of 2004**

The National Environmental Management: Air Quality Act, 39 of 2004 (NEM: AQA) regulates all aspects of air quality, including prevention of pollution and environmental degradation; providing for national norms and standards regulating air quality monitoring, management and control; and licencing of activities that result in atmospheric emissions and have or may have a significant detrimental effect on the environment. NEM: AQA has established a National Framework for Air Quality Management with various standards being implemented. Activities that require an Atmospheric Emissions Licence (AEL) are listed in GN No. 893 (22 November 2013), published in terms of Section 21(1) ((b) of the NEM: AQA. In terms of Section 22 of NEM: AQA ,no person may conduct a listed activity without an AEL.

**The proposed project does not trigger any activities that require application for an AEL in terms of NEM: AQA. However, the proposed project would result in the clearance of vegetation and removal of topsoil during the construction phase. In this regard, the potential impacts on air quality in terms of NEM: AQA must be assessed and monitoring and mitigation measures must be recommended.**

#### **4.1.5 National Environmental Management: Waste Act, 59 of 2008**

The National Environmental Management: Waste Act, 59 of 2008 (NEM: WA) regulates all aspects of waste management and has an emphasis on waste avoidance and minimisation. NEM: WA creates a system for listing and licensing waste management activities. Listed waste management activities above certain thresholds are subject to a process of impact assessment and licensing. Activities listed in Category A require a BA, while activities listed in Category B require a Scoping and EIA process. Furthermore, in terms of Section 43A(1) contained in Chapter 5 of NEM: WA, residue stockpiles and residue deposits must be managed in the prescribed manner on any site demarcated for that purpose.

**The proposed project does not trigger any activities that require application for a Waste Management Licence in terms of NEM: WA. However, minimal volumes of construction waste may be generated during the construction phase of the proposed project. The proposed project would also entail the extension of the railway onto a section of the existing tailings dam resulting in the removal of approximately 15 000 – 25 000 m<sup>3</sup> of material from the tailings area, which would be deposited on another existing tailings dam. Given the afore-mentioned, monitoring and management measures of waste in terms of NEM: WA must be recommended, and it must be ensured that the removal and placement of materials from one tailings area to the other is done in compliance with the Act.**

#### **4.1.6 National Environmental Management: Biodiversity Act, 10 of 2004**

The National Environmental Management: Biodiversity Act, No. 10 of 2004 (NEM: BA) provides for the management and conservation of South Africa's biodiversity within the framework of NEMA and provides for the following:

- The protection of species and ecosystems that warrant national protection;
- The sustainable use of indigenous biological resources;
- The fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; and
- The establishment and functions of a South African National Biodiversity Institute (SANBI) and for matters connected therewith.

**The proposed project entails the clearance of approximately 10 ha of indigenous vegetation in order to make provision for the extension of the railway infrastructure at the Wessels Mine. In this regard, the potential impact on biodiversity must be considered as part of the EA process. Moreover, cognisance of protected species in terms of NEM: BA must be made, in the event that these species are identified within the project footprint.**

#### **4.1.7 National Forest Act, 84 of 1998**

The National Forest Act, 84 of 1998 (NFA) provides for the promotion of the sustainable management of forests for environmental, economic, educational, recreational, cultural, health and spiritual purposes, as

well as the provision of measures for the protection of forests and trees. The DFFE (previously the Department of Water Affairs and Forestry) followed an objective, scientific and participatory process to determine the tree species requiring protection by the Act. Protective actions take place within the framework of the Act, as well as national policy and guidelines and are protected for a variety of reasons. Moreover, some species require strict protection, while others require control over harvesting and utilisation.

**The proposed project entails the clearance of approximately 10 ha of indigenous vegetation in order to make provision for the extension of the railway infrastructure at the Wessels Mine. In this regard, cognisance of protected species in terms of the NFA must be made, in the event that these species are identified within the project footprint.**

#### **4.1.8 Northern Cape Nature Conservation Act, 9 of 2009**

The Northern Cape Nature Conservation Act, 9 of 2009 (NCNCA) provides for the sustainable utilisation of wild animals, aquatic biota and plants. The Act provides for the issuing of permits and other authorisations for restricted activities involving protected fauna or flora. Similarly to the NFA, some species require strict protection, while others require control over harvesting and utilisation.

**The proposed project entails the clearance of approximately 10 ha of indigenous vegetation in order to make provision for the extension of the railway infrastructure at the Wessels Mine. In this regard, cognisance of protected fauna and flora in terms of the NCNCA must be made, in the event that these species are identified within the project footprint.**

#### **4.1.9 National Heritage Resources Act, 25 of 1999**

The National Heritage Resources Act, 25 of 1999 (NHRA) provides for the identification, assessment and management of the heritage resources of South Africa. The Act lists development activities that would require authorisation by the responsible heritage resources authority. The Act requires that a person who intends to undertake a Listed Activity notify the relevant provincial heritage authority at the earliest stages of initiating such a development. The relevant provincial heritage authority would then in turn, notify the person whether a Heritage Impact Assessment (HIA) should be submitted. However, according to Section 38(8) of NHRA, a separate report would not be necessary if an evaluation of the impact of such development on heritage resources is required in terms of the Environment Conservation Act (No. 73 of 1989) (now replaced by NEMA) or any other applicable legislation. The decision-making authority should; however, ensure that the heritage evaluation fulfils the requirements of NHRA and consider in its decision-making any comments and recommendations made by the relevant heritage resources authority.

In terms of Section 38(1)(c)(i) of the NHRA, any development or activity exceeding 5 000 m<sup>2</sup> in extent would require that notification of the proposed development be made to the responsible heritage authority. Furthermore, details pertaining to the location, nature and extent of the proposed development are also required to be submitted to the responsible heritage authority.

**The proposed project entails the extension of railway infrastructure, measuring at approximately 10 ha i.e., exceeding 5 000 m<sup>2</sup> in extent. In this regard, the provisions of NHRA must be followed and notification**



and other relevant information must be submitted to the South African Heritage Resources Agency (SAHRA).

## 4.2 CONSIDERATION OF GUIDELINES, POLICIES, PLANS AND FRAMEWORKS

The guidelines, policies, plans and frameworks that have been considered during the EMPR amendment and EA processes are provided in Table 4-1.

**Table 4-1: Guidelines, Policies, Plans and Frameworks Applicable to the Proposed Project**

Document	Governing Body	Relevance
Covid-19 Directions	Department of Social Development	These Directions informed the form and levels of public participation possible within the restrictions related to the National State of Disaster.
Public Participation Guideline in terms of NEMA (2017)	Department of Forestry, Fisheries and Environment (DFFE)	The purpose of these guidelines is to ensure that an adequate PPP was undertaken during the EMPR amendment and EA process.
Guideline for consultation with communities and I&APs (2014)	DMRE	
IEM Guideline Series Guideline 7: Public participation in the EIA process (2012)	DFFE	
Guideline on need and desirability in terms of the EIA Regulations (2017)	DFFE	These documents informed the consideration of the need and desirability aspects of the proposed project.
Guideline on need and desirability in terms of the EIA Regulations (2014)	DFFE	
National Development Plan (NDP), 2030	National Planning Commission	
New Growth Path, 2011	Department of Economic Development	
Integrated Development Plan (IDP) JTGD, 2019-20	JTGDM	
“NC 451” Final IDP 2021/2022 Financial Year	JMLM	
Cumulative Effects Assessment, IEM, Information Series 7 (2004)	DFFE	
Criteria for determining Alternatives in EIA, IEM, Information Series 11 (2004)	DFFE	This guideline was consulted to inform the consideration of alternatives.

Document	Governing Body	Relevance
Environmental Management Plans (EMP), IEM, Information Series 12 (2004)	DFFE	This guideline will be consulted to ensure that the EMPR has been adequately compiled.
Environmental Impact Reporting, IEM, Information Series 15 (2004)	DFFE	This guideline was consulted to inform the approach to impact reporting.
Specialist Studies, IEM, Information Series 4 (2002)	DFFE	This guideline was consulted to ensure adequate development of terms of reference for specialist studies.
Impact significance, IEM, Information Series 5 (2002)	DFFE	This guideline was consulted to inform the assessment of significance of impacts of the proposed project.

### 4.3 LEGISLATIVE BAR CONTENT REQUIREMENTS

The BAR has been prepared in accordance with the DMRE BAR template format and Appendix 1 and Appendix 4 of EIA Regulations, 2014 (as amended), the contents of which are outlined in Table 4-2 and Table 4-3.

**Table 4-2: Requirements of a BAR in terms of Part A of the DMRE template and Appendix 1 of the EIA Regulations**

BAR requirements as per the DMRE template	BAR requirements as per the EIA Regulations, 2014 (as amended)	Reference in the report
Part A of the DMRE template	Appendix 1 of the EIA Regulations, 2014 (as amended)	
Details of the EAP.	Details of the EAP who prepared the report.	Chapter 1
Expertise of the EAP.	Details of the expertise of the EAP, including curriculum vitae.	Chapter 1 and Appendix A
Location of overall activity.	The location of the activity, including - the 21-digit Surveyor General code of each cadastral land parcel. Where available the physical address and farm name. Where the required information is not available, the coordinates of the boundary of the property or properties.	Chapter 2
Locality plan.	A plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale, or, if it is a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken or on land where the property has not been defined, the coordinates within which the activity is to be undertaken.	Figure 1-1, Figure 1-2 and Figure 3-1
Description of the scope of the proposed overall activity.	A description of the scope of the proposed activity, including all listed and specified activities triggered. A description of the activities to be undertaken, including associated structure and infrastructure.	Chapter 3
Policy and legislative context.	A description of the policy and legislative context within which the development is located and an explanation of how the	Chapter 0

BAR requirements as per the DMRE template	BAR requirements as per the EIA Regulations, 2014 (as amended)	Reference in the report
	proposed development complies with and responds to the legislation and policy context.	
Need and desirability of the proposed activity.	A motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location.	Chapter 5
Motivation for the overall preferred site, activities and technology alternative.	A motivation of the preferred development footprint within the approved site including.	Chapter 6
A full description of the process followed to reach the proposed development footprint within the site.	A full description of the process followed to reach the proposed development footprint within the approved site.	Chapter 7
Details of the development footprint alternatives considered.	Details of all the alternatives considered.	Chapter 6
Details of the PPP followed.	Details of the PPP undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs.	Chapter 7
Summary of issues raised by I&APs.	A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them.	Chapter 7
Environmental attributes associated with the alternatives.	The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects.	Chapter 7
Impacts and risks identified including the nature, significance, consequence, extent, duration and probability of the impacts including the degree of the impacts.	The impacts and risks identified, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts can be reversed, may cause irreplaceable loss of resources and can be avoided, managed and mitigated.	Appendix C
Methodology used in determining the nature, significance, consequence, extent, duration and probability of potential environmental impacts and risks.	The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks.	Section 7.6.
The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternative will have on the environment and the community that may be affected.	Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects.	Appendix C
The possible management actions that could be applied and the level of risk.	The possible management actions that could be applied and level of residual risk.	Chapter 26

BAR requirements as per the DMRE template	BAR requirements as per the EIA Regulations, 2014 (as amended)	Reference in the report
Motivation where no alternative sites were considered.	The outcome of the site selection matrix. If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such.	Chapter 6
Statement motivating the alternative development location within the overall site.	A concluding statement indicating the preferred alternatives, including preferred location within the approved site.	Chapter 7
Full description of the process undertaken to identify, assess and rank the impacts and risks the activity will impose on the preferred site (in respect of the final site layout) through the life of the activity.	A full description of the process undertaken to identify, assess and rank the impacts the activity and associated structure and infrastructure will impose on the preferred location through the life of the activity including a description of all environmental issues and risks that were identified during the environmental impact assessment process and an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of management actions.	Chapter 8
Assessment of each identified potentially significant impact and risk.	An assessment of each identified potentially significant impact and risk including cumulative impacts, the nature, significant and consequence of the impact and risk, the extent and duration of the impact and risk, the probability of the impact and risk occurring, the degree to which the impact can be reversed, the degree to which the impact and risk may cause irreplaceable loss of a resources and the degree to which the impact and risk can be mitigated.	Chapter 9
Summary of specialist reports.	Where applicable the summary of the findings and recommendations of any specialist report complying with Appendix 6 of these Regulations and an indication as to how these findings and recommendations have been included in the final assessment report.	Chapter 10
Environmental impact statement.	An environmental impact statement which contains a summary of the key findings of the environmental impact assessment, a map at an appropriate scale which superimposes the proposed activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers and a summary of the positive and negative impacts and risks of the proposed activity and identified alternatives.	Chapter 11
Proposed impact management objectives and the impact management outcomes for inclusion in the EMPR.	Based on the assessment, and where applicable, recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPR.	Chapter 12
Aspects for inclusion as conditions of authorisation.	Any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation.	Chapter 13

BAR requirements as per the DMRE template	BAR requirements as per the EIA Regulations, 2014 (as amended)	Reference in the report
Description of any assumptions, uncertainties and gaps in knowledge.	A description of any assumptions, uncertainties and gaps in knowledge which relate to the assessment and management actions proposed.	Chapter 14
Reasoned opinion as to whether the proposed activity should or should not be authorised.	Reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation.	Chapter 15
Period for which environmental authorisation is required.	Where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required and the date on which the activity will be concluded, and the post construction monitoring requirements finalised.	Chapter 16
Undertaking.	An undertaking under oath or affirmation by the EAP in relation to the correctness of the information provided in the reports, the inclusion of comments and inputs from stakeholders and I&APs, the inclusion of inputs and recommendations from the specialist reports where relevant and any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties.	Chapter 17
Financial provision.	Where applicable, details of any financial provisions for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts.	Chapter 27
Specific information required by the competent authority.	Any specific information required by the competent authority.	Chapter 30
Other matter required in terms of section 24(4)(a) and (b) of the Act.	Any other matter required in terms of section 24(4)(a) and (b) of the Act.	N/A

**Table 4-3: Requirements of a BAR in terms of Part A of the DMRE template and Appendix 4 of the EIA Regulations**

BAR requirements as per the DMRE template	EMPR requirements per the EIA Regulations, 2014 (as amended)	Reference in the report
Part B of the DMRE template	Appendix 4 of the EIA Regulations, 2014 (as amended)	
Details of EAP.	Details of the EAP who prepared the EMPR and the expertise of that EAP to prepare the EMPR, including curriculum vitae.	Chapter 1
Description of the aspects of the activity.	A detailed description of the aspects of the activity that are covered by the EMPR as identified by the project description.	Chapter 3
Composite map.	A map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers.	Figure 1-2, and Figure 3-1
Description of impact management objectives	A description of the impact management objectives, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through	Appendix C

BAR requirements as per the DMRE template	EMPR requirements per the EIA Regulations, 2014 (as amended)	Reference in the report
including management statements.	the environmental impact assessment process for all phases of the development including planning and design, pre-construction activities, construction activities, rehabilitation of the environment after construction and where applicable post closure; and where relevant, operation activities.	
Impacts to be mitigated in their respective phases.	-	Appendix C
Impact management outcomes.	A description and identification of impact management outcomes required for the aspects contemplated in paragraph.	Chapter 25
Impact management actions.	A description of proposed impact management actions, identifying the manner in which the impact management objectives and outcomes be achieved, and must, where applicable, include actions to avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation; comply with any prescribed environmental management standards or practices; comply with any applicable provisions of the Act regarding closure, where applicable comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable.	Chapter 26
Financial provision.	-	Chapter 27
Mechanism for monitoring compliance with and performance assessment against the environmental management programme and reporting thereon.	The method of monitoring the implementation of the impact management actions.	Chapter 28
-	The frequency of monitoring the implementation of the impact management actions.	Chapter 28
-	An indication of the persons who will be responsible for the implementation of the impact management actions.	
-	The time periods within which the impact management actions must be implemented.	
-	The mechanism for monitoring compliance with the impact management actions.	
-	A program for reporting on compliance, taking into account the requirements as prescribed by the Regulations.	
Environmental Awareness Plan.	An environmental awareness plan describing the manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work; and risks must be dealt with in order to avoid pollution or the degradation of the environment.	Chapter 29
Specific information required by the competent authority.	Any specific information that may be required by the competent authority.	Chapter 30
Undertaking.	-	Chapter 31

## 5. NEED AND DESIRABILITY OF THE PROPOSED PROJECT

This chapter aims to provide an overview of the need and desirability of the proposed project within the strategic context of national development policy planning, broader societal needs and regional and local planning, as well as the NEMA principles of sustainable development.

### 5.1 BACKGROUND

The DFFE's (previously the Department of Environmental Affairs (DEA)) guideline on need and desirability (2017) notes that while addressing the growth of the national economy through the implementation of various national policies and strategies, it is also essential that these policies take cognisance of strategic concerns such as climate change, food security, as well as the sustainability in supply of natural resources and the status of our ecosystem services. Thus, the over-arching framework for considering the need and desirability of development in general is taken at the policy level through the identification and promotion of activities/industries/developments required by civil society as a whole. The DFFE guideline further notes that at a project level (as part of an impact assessment process), the need and desirability of the project should take into consideration the content of regional and local plans, frameworks and strategies.

In light of the above, and in alignment with the above-mentioned guideline (DFFE, 2017), this section aims to provide an overview of the need and desirability for the proposed project by highlighting how it is aligned with the strategic context of national, regional and local development policy and planning, as well as with the goals of sustainable development, as outlined in NEMA.

### 5.2 RATIONALE FOR THE PROPOSED PROJECT

South32 has a Manganese Export Corridor Allocation on the TFR manganese line between Hotazel, in the Northern Cape, and Coega, in the Eastern Cape. The allocation is underutilised due to train loading inefficiencies of the current railway configuration at the Wessels Mine. Additionally, TFR has initiated a manganese expansion programme which will increase manganese export capacity by upgrading the rail network. TFR plans to increase capacity of the manganese rail line beyond the current four million tonnes per annum to 16 million tonnes per annum.

In order to meet the TFR's extended capacity requirements, the loading rates at the Wessels Mine need to be improved. The project is thus motivated by the inefficiency of the current railway configuration that does not allow for optimal and cost-effective loading of the manganese ore and product from the mine for transport to the market. The proposed project would allow for more ore to be loaded onto the railway carts in a shorter space of time, hereby increasing outputs and productivity. It would also decrease the need for road transport, which is considered more expensive and inefficient in relation to rail transport.

### 5.3 ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES

The proposed project footprint is located within the Savanna Biome, the Eastern Kalahari Bushveld Bioregion and the Kathu Bushveld vegetation type. Three habitat units were identified on site, of which majority of the project footprint is located within the Transformed Area habitat unit. These units are described as follows:



- **Transformed Area Habitat Unit:** This habitat unit includes existing gravel roads and the active mining area and comprises of little to no remaining vegetation. This habitat unit is no longer representative of the associated vegetation type (Kathu Bushveld) and is considered to be of low sensitivity. Existing impacts include historic transformation due to mining, edge effects of mining activities and active mining leading to dust and noise pollution, impacting on the biodiversity of the adjacent areas;
- ***Senegalia melifera* Thicket Habitat Unit:** This habitat unit, although encroached, is considered representative of the reference vegetation type. The herbaceous layer has recovered from extended dry periods and grazing activities, providing suitable groundcover. The vegetation structure comprises encroached stands of *Senegalia melifera* with relatively homogenous grass swards scattered throughout. No alien species were identified in this habitat unit. This habitat unit is not considered a unique landscape, as it is well-represented at a regional level; and
- **Open Mixed *Senegalia melifera* – *Vachellia erioloba* – *Vachellia haematoxylon* Woodland Habitat Unit:** This habitat unit comprises a well-established and dense herbaceous layer. The habitat unit is considered representative of the reference vegetation type and the woody component is open and not encroached. No alien species were identified in this habitat unit. This habitat unit is not considered a unique landscape, as it is well-represented at a regional level.

The proposed project has the potential to directly disturb fauna and flora, with specific reference to vegetation clearing within the development footprint. Furthermore, soil is considered to be a valuable resource that supports a variety of ecological functions, and the proposed project has the potential to damage soil resources through physical disturbance, which has a direct impact on the potential loss of the natural capability of the land. As part of the EA process, independent biodiversity and agricultural specialists were appointed to determine the sensitivity of the project footprint. Measures that were considered to avoid the destruction and disturbance of biodiversity resources include limiting the extent of the development footprint. Where sensitivities could not be avoided, management actions focussed on ensuring ecological sustainability through appropriate rehabilitation measures. These management measures have been included in the EMPR, where appropriate.

## 5.4 PROMOTING JUSTIFIABLE ECONOMIC AND SOCIAL DEVELOPMENT

### 5.4.1 National Policy and Planning Framework

#### 5.4.1.1 National Development Plan, 2030

The NDP, 2030 provides the context for all growth in South Africa, with the overarching aim of eradicating poverty and inequality between people in South Africa through the promotion of development. The NDP, 2030 provides a broad strategic framework, setting out an overarching approach to confronting poverty and inequality based on six focused and interlinked priorities. One of the key priorities is “faster and more inclusive economic growth”.

In order to transform the economy and create sustainable expansion for job creation, an average economic growth exceeding 5% per annum is required. One of the approaches to achieve this includes increasing exports by focusing on areas where South Africa already has natural endowments and comparative advantage, such as mining.



Notwithstanding the above, it is also acknowledged that environmental challenges are in conflict with some of these development initiatives. As such, it is emphasised that there is also a need to:

- Protect the natural environment;
- Enhance the resilience of people and the economy to climate change;
- Reduce carbon emissions in line with international commitments;
- Make significant strides toward becoming a zero-waste economy; and
- Reduce greenhouse gas emissions and improve energy efficiency.

The NDP, 2030 identifies the “minerals and metals cluster” (which encompasses all mining and quarrying activities, supplier industries to the mining sector, and downstream beneficiation of mined minerals) as a sector with substantial potential for growth stimulation and/or employment. It is pointed out that South Africa must exploit its mineral resources to create employment and generate foreign exchange and tax revenue.

The proposed project does not relate directly to the exploitation of mineral resources; however, the proposed extension of the railway infrastructure is considered an ancillary activity associated with current mining operations at the Wessels Mine. In this regard, as part of on-going mine planning, the need to extend the railway infrastructure at the mine was identified, which will improve productivity and efficiency at the mine.

#### **5.4.1.2 New Growth Path, 2011**

The New Growth Path, 2011 reflects the commitment of government to prioritise employment creation in all economic policies and sets out the key drivers and sectors for employment which will be the focus of government. The sectors identified for prioritisation include infrastructure, agriculture, mining, manufacturing, tourism and the green economy.

In this regard, a staff complement of approximately 250 individuals would be required for the construction phase (skilled and unskilled job opportunities) of the proposed project. Procurement opportunities would be sourced locally, as far as possible.

### **5.4.2 Regional and Local Policy and Planning Framework**

#### **5.4.2.1 John Taolo Gaetsewe District Municipality Integrated Development Plan 2019/20**

The BPDM IDP, 2019-2020 is the principle strategic instrument guiding all planning, management, investment and development within the district in order to provide the best solutions towards sustainable development. The vision statement of the BPDM IDP, 2019-2020 reflects its commitment to the ideal of an integrated, development-focused district and is built on the following four core values:

- Development – Strive for the development of the district and its people, while also striving for own personal development;
- Commitment – Stay committed to the vision of the JTGDM and to serving the people of the district in whatever you do;
- Care – To show empathy and care towards others, while striving to promote a positive working atmosphere; and

- **Integrity** – Stay true to whatever you commit to, performing your duties to the best of your ability, while conducting yourself professionally at all times.

Consistent with the afore-mentioned core values, five key performance areas were identified when compiling the IDP, namely:

1. Basic Service Delivery and Infrastructure;
2. Local Economic Development;
3. Financial Viability and Financial Management;
4. Good Governance and Community Participation and;
5. Municipal Transformation and Institutional Development

The proposed project is considered to relate to the afore-mentioned key performance area number 2. This is because the proposed project will support economic development through the provision of job and procurement opportunities within the region during the construction phase. It will also increase productivity and efficiency at the mine, hereby contributing to the national South African economy at a macro level by exporting its product that leverages foreign income into the country.

#### **5.4.2.2 Joe Morolong Local Municipality Integrated Development Plan, 2021/2022**

The JMLM IDP, 2021/2022 identifies key performance areas which form the foundation of its five-year IDP 2016 - 2021. These include:

- Basic Service Delivery and Infrastructure Development;
- Good Governance and Public Participation;
- Municipal Transformation and Organisational Development;
- Local Economic Development; and
- Municipal Financial Management and Management Viability.

The JMLM IDP, 2021/2022 identifies agriculture, mining and community services, as sectors that contribute to local economic development. As mentioned previously, the proposed project will support economic development through the provision of job and procurement opportunities within the region during the construction phase. It will also increase productivity and efficiency at the mine, hereby contributing to the national South African economy at macro level by exporting its product that leverages foreign income into the country.

## **5.5 CONSISTENCY WITH NEMA PRINCIPLES**

When considering an application for EA, the competent authority must comply with Section 24O of NEMA and must have regard for any guideline published in terms of Section 24J of the Act and any minimum requirements for the application. This includes the DFFE's Guideline on Need and Desirability (2017). Additionally, the EIA Regulations, 2014 (as amended), require EAPs who undertake environmental assessments, to have knowledge and consider relevant guidelines. A person applying for an EA must abide by the Regulations, which are binding on the applicant.

The DFFE's Guideline on Need and Desirability (2017) sets out a list of questions which should be addressed when considering the need and desirability of a proposed development. These are divided into questions

that relate to the aspects of ecological sustainability and justifiable economic and social development of the proposed project. Table 5-1 sets out the list of questions as per the Guideline.

**Table 5-1: Questions to be Engaged with when Considering Need and Desirability, as per the DFFE Guideline on Need and Desirability (2017)**

QUESTION	LOCATION IN REPORT/RELEVANCE
<b>1. How will this development (and its separate elements / aspects) impact on the ecological integrity of the area?</b>	
<p>1.1 How were the ecological integrity considerations taken into account?</p> <p>1.1.1. Threatened Ecosystems,</p> <p>1.1.2. Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure,</p> <p>1.1.3. Critical Biodiversity Areas (“CBAs”) and Ecological Support Areas (“ESAs”),</p> <p>1.1.4. Conservation targets,</p> <p>1.1.5. Ecological drivers of the ecosystem,</p> <p>1.1.6. Environmental Management Framework,</p> <p>1.1.7. Spatial Development Framework, and</p> <p>1.1.8. Global and international responsibilities relating to the environment (e.g., RAMSAR sites, Climate Change, etc.)</p>	<p>A Terrestrial Biodiversity Study was commissioned as part of the EA process. The study outlined the biodiversity sensitivities of the development footprint and recommended monitoring, mitigation and enhancement measures to limit impacts and enhance benefits have been included in the EMPR.</p>
<p>1.2 How will this development disturb or enhance ecosystems and / or result in the loss or protection of biological diversity? What measures were explored to firstly avoid these negative impacts, and where these negative impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?</p>	
<p>1.3 How will this development pollute and/or degrade the biophysical environment? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?</p>	<p>See response provided above. Recommended monitoring, mitigation and enhancement measures have been included in the EMPR.</p>
<p>1.4 What waste will be generated by this development? What measures were explored to firstly avoid waste, and where waste could not be avoided altogether, what measures were explored to minimise, reuse and/or recycle the waste? What measures have been explored to safely treat and/or dispose of unavoidable waste?</p>	<p>Minimal volumes of construction waste will be generated by the proposed project. Measures to management waste have been included in the EMPR.</p>
<p>1.5 How will this development disturb or enhance landscapes and/or sites that constitute the nation’s cultural heritage? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?</p>	<p>A Phase I Heritage Study was commissioned as part of the EA process. No cultural/heritage resources were identified within the development footprint. Recommended monitoring, mitigation and enhancement measures to limit impacts on cultural/heritage and enhance benefits have been included in the EMPR.</p>
<p>1.6 How will this development use and/or impact on non-renewable natural resources? What measures were explored to ensure responsible and equitable use of the resources? How have the consequences of the depletion of the non-renewable natural resources been considered? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?</p>	<p>The proposed project does not relate directly to the development or use of non-renewable/ renewable resources; however, the proposed extension of the railway infrastructure is considered an ancillary activity associated with the current mining operations at the Wessels Mine, and associated exploitation of manganese. In this regard, as part of on-going mine planning, the need for an improved railway system was identified, and will support the current mining operations.</p>
<p>1.7 How will this development use and/or impact on renewable natural resources and the ecosystem of which they are part? Will the use of the resources and/or impact on the ecosystem jeopardise the integrity of the resource and/or system considering carrying capacity restrictions, limits of acceptable change, and thresholds? What measures were explored to firstly avoid the use of resources, or if avoidance is not possible, to minimise the use of resources? What measures were taken to ensure responsible and equitable use of the resources? What measures were explored to enhance positive impacts?</p> <p>1.7.1. Does the proposed development exacerbate the increased dependency on increased use of resources to maintain economic growth or does it reduce resource dependency (i.e., de-materialised growth)? (Note: sustainability requires that settlements reduce their ecological footprint by using less material and energy demands and reduce the amount of waste they generate, without compromising their quest to improve their quality of life)</p> <p>1.7.2. Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra- and intergenerational equity, and are there more important priorities for which the resources should be used (i.e., what are the opportunity costs of using these resources this the proposed development alternative?)</p> <p>1.7.3. Do the proposed location, type and scale of development promote a reduced dependency on resources?</p>	
<p>1.8 How were a risk-averse and cautious approach applied in terms of ecological impacts?</p> <p>1.8.1. What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)?</p> <p>1.8.2. What is the level of risk associated with the limits of current knowledge?</p> <p>1.8.3. Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?</p>	<p>Assumptions, uncertainties and limitations associated with the compilation of this BAR are included in chapter 14. Compliance with the various legislative requirements is presented in this BAR.</p>
<p>1.9. How will the ecological impacts resulting from this development impact on people’s environmental right in terms following:</p> <p>1.9.1. Negative impacts: e.g., access to resources, opportunity costs, loss of amenity (e.g., open space), air and water quality impacts, nuisance (noise, odour, etc.), health impacts, visual impacts, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts?</p> <p>1.9.2. Positive impacts: e.g., improved access to resources, improved amenity, improved air or water quality, etc. What measures were taken to enhance positive impacts?</p>	<p>The impact assessment is undertaken in accordance with SLR’s methodology. The potential impacts and the significance thereof are presented in Appendix C.</p>
<p>1.10. Describe the linkages and dependencies between human wellbeing, livelihoods and ecosystem services applicable to the area in question and how the development’s ecological impacts will result in socioeconomic impacts (e.g., on livelihoods, loss of heritage site, opportunity costs, etc.)?</p>	

QUESTION	LOCATION IN REPORT/RELEVANCE
1.11. Based on all of the above, how will this development positively or negatively impact on ecological integrity objectives/targets/considerations of the area?	
1.12. Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the “best practicable environmental option” in terms of ecological considerations?	The locality of the proposed project was determined due to the need to be in close proximity to the existing railway infrastructure. In this regard, location alternatives were not applicable to the proposed project. Design alternatives related to alternative routes, one of which included a larger railway balloon.
1.13. Describe the positive and negative cumulative ecological/biophysical impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and existing and other planned developments in the area?	The impact assessment is undertaken in accordance with SLR’s methodology. The potential impacts and the significance thereof are presented in Appendix C.
2.1. What is the socio-economic context of the area, based on, amongst other considerations, the following considerations? 2.1.1. The IDP (and its sector plans’ vision, objectives, strategies, indicators and targets) and any other strategic plans, frameworks of policies applicable to the area, 2.1.2. Spatial priorities and desired spatial patterns (e.g., need for integrated or segregated communities, need to upgrade informal settlements, need for densification, etc.), 2.1.3. Spatial characteristics (e.g., existing land uses, planned land uses, cultural landscapes, etc.), and 2.1.4. Municipal Economic Development Strategy (“LED Strategy”).	The need and desirability of the proposed project has been presented in terms of the consideration of the national, regional and local context.
2.2. Considering the socio-economic context, what will the socio-economic impacts be of the development (and its separate elements/aspects), and specifically also on the socio-economic objectives of the area? 2.2.1. Will the development complement the local socio-economic initiatives (such as local economic development (LED) initiatives), or skills development programs?	The impact assessment is undertaken in accordance with SLR’s methodology. The potential impacts and the significance thereof are presented in Appendix C.
2.3. How will this development address the specific physical, psychological, developmental, cultural and social needs and interests of the relevant communities?	The proposed project aims to increase productivity and outputs associated with the mining operations at Wessels Mine. Due to the nature of the proposed project, it is not anticipated to have an impact on intergenerational impact distribution.
2.4. Will the development result in equitable (intra- and inter-generational) impact distribution, in the short and long-term? Will the impact be socially and economically sustainable in the short- and long-term?	
2.5. In terms of location, describe how the placement of the proposed development will: 2.5.1. Result in the creation of residential and employment opportunities in close proximity to or integrated with each other, 2.5.2. Reduce the need for transport of people and goods, 2.5.3. Result in access to public transport or enable non-motorised and pedestrian transport (e.g., will the development result in densification and the achievement of thresholds in terms public transport), 2.5.4. Compliment other uses in the area, 2.5.5. Be in line with the planning for the area, 2.5.6. For urban related development, make use of underutilised land available with the urban edge, 2.5.7. Optimise the use of existing resources and infrastructure, 2.5.8. Opportunity costs in terms of bulk infrastructure expansions in non-priority areas (e.g., not aligned with the bulk infrastructure planning for the settlement that reflects the spatial reconstruction priorities of the settlement), 2.5.9. Discourage "urban sprawl" and contribute to compaction/densification, 2.5.10. Contribute to the correction of the historically distorted spatial patterns of settlements and to the optimum use of existing infrastructure in excess of current needs, 2.5.11. Encourage environmentally sustainable land development practices and processes, 2.5.12. Consider special locational factors that might favour the specific location (e.g., the location of a strategic mineral resource, access to the port, access to rail, etc.), 2.5.13. The investment in the settlement or area in question will generate the highest socio-economic returns (i.e., an area with high economic potential), 2.5.14. Impact on the sense of history, sense of place and heritage of the area and the socio-cultural and cultural-historic characteristics and sensitivities of the area, and 2.5.15. In terms of the nature, scale and location of the development promote or act as a catalyst to create a more integrated settlement?	A staff complement of approximately 250 individuals would be required for the construction phase (skilled and unskilled job opportunities) of the proposed project. Procurement opportunities would be sourced locally, as far as possible. However, due to the limited nature and extent of the proposed project, the development is not anticipated to contribute to the other factors mentioned.
2.6. How were a risk-averse and cautious approach applied in terms of socio-economic impacts? 2.6.1. What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)? 2.6.2. What is the level of risk (note: related to inequality, social fabric, livelihoods, vulnerable communities, critical resources, economic vulnerability and sustainability) associated with the limits of current knowledge? 2.6.3. Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?	Assumptions, uncertainties and limitations associated with the compilation of this BAR is included in chapter 14. Compliance with the various legislative requirements is presented in this BAR.
2.7. How will the socio-economic impacts that result from this development impact on people’s environmental right in terms following: 2.7.1. Negative impacts: e.g., health (e.g., HIV-Aids), safety, social ills, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts? 2.7.2. Positive impacts. What measures were taken to enhance positive impacts?	The impact assessment is undertaken in accordance with SLR’s methodology. The potential impacts and the significance thereof are presented in Appendix C.



QUESTION	LOCATION IN REPORT/RELEVANCE
2.8. Considering the linkages and dependencies between human wellbeing, livelihoods and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development’s socio-economic impacts will result in ecological impacts (e.g., over utilisation of natural resources, etc.)?	
2.9. What measures were taken to pursue the selection of the “best practicable environmental option” in terms of socio-economic considerations?	An alternatives analysis was undertaken as part of the proposed project.
2.10. What measures were taken to pursue environmental justice so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons (who are the beneficiaries and is the development located appropriately)? Considering the need for social equity and justice, do the alternatives identified, allow the “best practicable environmental option” to be selected, or is there a need for other alternatives to be considered?	An EMPR has been compiled for the proposed project which will be implemented during the development’s life cycle.
2.11. What measures were taken to pursue equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing, and what special measures were taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination?	Due to the nature of the proposed project, this is not applicable.
2.12. What measures were taken to ensure that the responsibility for the environmental health and safety consequences of the development has been addressed throughout the development’s life cycle?	An EMPR has been compiled for the proposed project which will be implemented during the development’s life cycle.
<p>2.13. What measures were taken to:</p> <p>2.13.1. Ensure the participation of all interested and affected parties,</p> <p>2.13.2. Provide all people with an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation,</p> <p>2.13.3. Ensure participation by vulnerable and disadvantaged persons,</p> <p>2.13.4. Promote community wellbeing and empowerment through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means,</p> <p>2.13.5. Ensure openness and transparency, and access to information in terms of the process,</p> <p>2.13.6. Ensure that the interests, needs and values of all interested and affected parties were taken into account, and that adequate recognition were given to all forms of knowledge, including traditional and ordinary knowledge, and</p> <p>2.13.7. Ensure that the vital role of women and youth in environmental management and development were recognised and their full participation therein were be promoted?</p>	The PPP for the proposed project was undertaken in terms of the EIA Regulations, 2014 (as amended) promulgated under NEMA. The PPP undertaken to date, as well as the proposed process for the remainder of the application process, is provided in section 7.2
2.14. Considering the interests, needs and values of all the interested and affected parties, describe how the development will allow for opportunities for all the segments of the community (e.g., a mixture of low-, middle-, and high-income housing opportunities) that is consistent with the priority needs of the local area (or that is proportional to the needs of an area)?	A staff complement of approximately 250 individuals would be required for the construction phase (skilled and unskilled job opportunities) of the proposed project. Procurement opportunities would be sourced locally, as far as possible.
2.15. What measures have been taken to ensure that current and/or future workers will be informed of work that potentially might be harmful to human health or the environment or of dangers associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected?	Project activities would comply with HMM’s occupational health and safety policies and/or standards, as well as national legislation.
<p>2.16. Describe how the development will impact on job creation in terms of, amongst other aspects:</p> <p>2.16.1. The number of temporary versus permanent jobs that will be created,</p> <p>2.16.2. Whether the labour available in the area will be able to take up the job opportunities (i.e., do the required skills match the skills available in the area),</p> <p>2.16.3. The distance from where labourers will have to travel,</p> <p>2.16.4. The location of jobs opportunities versus the location of impacts (i.e., equitable distribution of costs and benefits), and</p> <p>2.16.5. The opportunity costs in terms of job creation (e.g., a mine might create 100 jobs, but impact on 1000 agricultural jobs, etc.).</p>	A staff complement of approximately 250 individuals would be required for the construction phase (skilled and unskilled job opportunities) of the proposed project. Procurement opportunities would be sourced locally, as far as possible. Due to the nature of the proposed project, no job or procurement opportunities will be created post-construction.
<p>2.17. What measures were taken to ensure:</p> <p>2.17.1. That there were intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment, and</p> <p>2.17.2. That actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures?</p>	The need and desirability of the proposed project has been presented in terms of the consideration of the national, regional and local context.
2.18. What measures were taken to ensure that the environment will be held in public trust for the people, that the beneficial use of environmental resources will serve the public interest, and that the environment will be protected as the people’s common heritage?	Measures to mitigate environmental impacts associated with the proposed project have been included in the EMPR.
2.19. Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?	
2.20. What measures were taken to ensure that the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects will be paid for by those responsible for harming the environment?	HMM will be responsible for the implementation of the measures included in the EMPR. The financial provision has been determined to cater for the costs associated with the rehabilitation of the environmental post-closure.
2.21. Considering the need to secure ecological integrity and a healthy bio-physical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the best practicable environmental option in terms of socio-economic considerations?	The locality of the proposed project was determined due to the need to be in close proximity to the existing railway infrastructure. In this regard, location alternatives were not applicable to the proposed project. Design alternatives related to alternative routes, one of which included a larger railway balloon.
2.22. Describe the positive and negative cumulative socio-economic impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and other planned developments in the area?	The impact assessment is undertaken in accordance with SLR’s methodology.

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## 6. MOTIVATION FOR THE PREFERRED SITE, ACTIVITIES AND TECHNOLOGY ALTERNATIVES

This section provides a motivation for the preferred site, technology and design alternatives relative to the proposed project.

### 6.1 LOCATION ALTERNATIVES

The proposed project entails the extension of the existing railway infrastructure and, therefore, it is most effective if it is adjacent to the existing railway line. It follows that no site alternatives were considered due to this fixed position.

### 6.2 TECHNOLOGY ALTERNATIVES

Due to the nature and limited extent of the proposed project, no technology alternatives were considered.

### 6.3 DESIGN ALTERNATIVES

The proposed project entails the extension of the existing railway infrastructure and the construction of a railway balloon or turning loop. One design alternative, in addition to the preferred alternative, was considered for the proposed project. The alternative railway loop was proposed to be larger than the preferred alternative (see Figure 6-1). This alternative was not considered further for assessment, due to the larger development footprint. It would require a larger area of land to be cleared, which was not considered favourable.





- Legend**
- Towns
  - +— Existing Railway
  - Upgrade to Existing Line
  - Proposed Railway Extension Layout - Preferred Alternative
  - Proposed Railway Extension Layout - Alternative 1

0 250 500 Meters  
 Scale: 1:20 000 @ A3  
 Projection: Transverse Mercator  
 Datum: Hartbeeshoek, Lo 23

South32 Limited

**Figure 6-1**  
**Alternatives**

**SLR**  
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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



## 7. FULL DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED PREFERRED ALTERNATIVES WITHIN THE SITE

This chapter describes the alternatives considered for the proposed project and summarises the process followed to reach the preferred alternative.

### 7.1 DETAILS OF THE DEVELOPMENT FOOTPRINT CONSIDERED

#### 7.1.1 Site Alternatives

As mentioned in section 6.1, the proposed project entails the extension of the existing railway infrastructure and therefore it is most effective if it is adjacent to the existing railway line. It follows that no site alternatives were considered due to this fixed position.

#### 7.1.2 Technology Alternatives

As mentioned in section 6.2, due to the nature and limited extent of the proposed project, no technology alternatives were considered.

#### 7.1.3 Activity Alternatives

The proposed extension of the railway infrastructure is considered an ancillary activity associated with current mining operations at the Wessels Mine. In this regard, the need for a railway balloon was identified, as part of on-going mine planning, to increase productivity, which will decrease the time needed to load ore onto the railway carts. It follows that no other activity alternatives were considered.

#### 7.1.4 Design Alternatives

As mentioned above, one design alternative, in addition to the preferred alternative, was considered for the proposed project. The alternative railway loop was proposed to be larger than the preferred alternative (refer to Figure 6-1). This alternative was not considered further for assessment, due to the larger development footprint. It would require a larger area of land to be cleared, which was not considered favourable.

#### 7.1.5 No-Go Alternative

The No-Go alternative is the non-occurrence of the proposed project. The negative implications of not going ahead with the proposed project are as follows:

- Loss of opportunity to increase efficiency and productivity at the Wessels Mine, as well as associated cost savings, safety improvements and reduced carbon footprint associated with rail transport in comparison to road transport; and
- Lost job and procurement opportunities associated with the construction phase.

The positive implications of the no-go option are that there would be no effects on the biophysical environment within the development footprint.

## 7.2 DETAILS OF THE PPP FOLLOWED

The PPP was undertaken in accordance with the requirements of chapter 6 of the EIA Regulations, 2014 (as amended), promulgated under NEMA. In addition to this, consideration was also given to various public participation guidelines governed by the DFFE (refer to Table 4-1).

### 7.2.1 PPP Undertaken to Date

The PPP undertaken to date is provided in Table 7-1. Proof of the undertaking of the PPP associated with the pre-application phase and the application phase has been included in Appendix D.

**Table 7-1: PPP Undertaken to Date**

Step	Detail
<b>Pre-Application Phase</b>	
Stakeholder identification	<p>A project I&amp;AP database was developed for the proposed project and comprises key I&amp;APs (surrounding landowners, land users and community forums; neighbouring mines and industries, Non-Government Organisations and Associations, Parastatals and regulatory and commenting authorities (local and regional). The commenting authorities who have been identified include:</p> <ul style="list-style-type: none"> <li>• DMRE;</li> <li>• DFFE;</li> <li>• Department of Water and Sanitation (DWS);</li> <li>• Northern Cape Department of Environment and Nature Conservation (DENC);</li> <li>• Northern Cape DRDLR (inclusive of Land Claims Commissioner);</li> <li>• Transnet SOC Limited;</li> <li>• SAHRA;</li> <li>• Northern Cape Department of Roads and Public Works;</li> <li>• JMLM; and</li> <li>• JTGDM.</li> </ul>
Consultation with Land Claims Commissioner	<p>The DRDLR (Land Claims Commissioner) in the Northern Cape was contacted to confirm if there were any land claims on the properties on which the project infrastructure will be placed. The Land Claims Commissioner confirmed that no land claims have been lodged on the properties.</p>
Meetings with authorities	<p>Meetings with the DMRE and commenting authorities were undertaken on 14 July 2021 and 7 July 2021, respectively. The meetings were undertaken virtually, via Microsoft Teams, and were facilitated by SLR. The main aims of the meetings were to present the proposed project, to propose stakeholder engagement strategies and to provide a platform for any initial concerns or queries to be raised.</p>
Meetings with key stakeholders	<p>A meeting with key I&amp;APs (landowners of properties on which infrastructure would be placed and adjacent landowners) was undertaken on 21 July 2021. The meeting was undertaken virtually, via Microsoft Teams, and was facilitated by SLR. The main aims of the meeting were to present the proposed project, to propose stakeholder engagement strategies and to provide a platform for any initial concerns or queries to be raised.</p>



Step	Detail
Background Information Document (BID)	<p>A BID (English, Setswana and Afrikaans) was compiled by SLR was made available for a public and authority review period from 1 July – 2 August 2021 on SLR’s websites (including a data-free option). The BID provided:</p> <ul style="list-style-type: none"> <li>• Information about the proposed project;</li> <li>• Information about the baseline environment of the proposed project footprint;</li> <li>• Information regarding possible biophysical/cultural/socio-economic impacts associated with the proposed project activities;</li> <li>• Details pertaining to stakeholder engagement;</li> <li>• Information on how I&amp;APs and commenting authorities can have input into the environmental assessment process.</li> </ul> <p>A registration and response form was attached to the BID, which provided I&amp;APs with an opportunity to register as an I&amp;AP and submit comments on the proposed project.</p> <p>A notification letter (English, Setswana and Afrikaans) indicating the availability of the BID and providing the links to the SLR websites in order to access the BID, was provided to I&amp;APs registered on the project database, via email on 1 July 2021.</p> <p>A notification (English) indicating the availability of the BID and providing a link to the SLR data-free website in order to access the BID, was provided to I&amp;APs registered on the project database, via SMS on 1 July 2021.</p>
Site notices	<p>Six laminated A2-sized site notices (English and Setswana and English and Afrikaans) were placed at key conspicuous positions in and around Hotazel, as well as along the property boundary on 2 July 2021.</p> <p>The site notices provided information about the proposed project, details pertaining to stakeholder engagement, information on how I&amp;APs can have input into the environmental assessment process, and information pertaining to the availability and access of the BID for review and comment.</p>
Newspaper advertisements	<p>Advertisements (English) were placed in two local newspapers. These include the <i>Kathu Gazette</i> (3 July 2021) and <i>Noordkaap Bulletin</i> (2 July 2021). The advertisements provided information about the proposed project, details pertaining to stakeholder engagement, information on how I&amp;APs can have input into the environmental assessment process, and information pertaining to the availability and access of the BID for review and comment.</p>
<b>Application Phase</b>	
BAR and Non-Technical Summary (NTS)	<p>The BAR (English) and NTS (English, Setswana and Afrikaans) <u>were</u> made available for a 30-day public review and comment period from 10 September – 11 October 2021 in order to provide I&amp;APs with an opportunity to comment on any aspect of the proposed project and the findings of the environmental assessment process. Full copies of the BAR and the NTS <u>were</u> placed on the SLR website (<a href="http://www.slrconsulting.com">www.slrconsulting.com</a>) and the SLR data-free website (<a href="https://slrpublicdocs.datafree.co/public-documents">https://slrpublicdocs.datafree.co/public-documents</a>).</p> <p>A notification letter (English, Setswana and Afrikaans) indicating the availability of the BAR and NTS and providing the links to the SLR websites in order to access the documents, was provided to I&amp;APs registered on the project database, via email on 9 September 2021.</p>

Step	Detail
	<p>A notification (English) indicating the availability of the documents and providing a link to the SLR data-free website in order to access the documents, was provided to I&amp;APs registered on the project database, via SMS on 9 September 2021.</p>
<p>Revised BAR and NTS</p>	<p><u>This</u> revised BAR (English) and NTS (English, Setswana and Afrikaans) <u>is</u> compiled and updated with comments received from the I&amp;APs. The revised BAR and NTS <u>have been</u> submitted to the DMRE for consideration and decision-making. Full copies of the revised BAR and the NTS <u>have been</u> placed on the SLR website (www.slrconsulting.com) and the SLR data-free website (<a href="https://slrpublicdocs.datafree.co/public-documents">https://slrpublicdocs.datafree.co/public-documents</a>).</p> <p>A notification letter (English, Setswana and Afrikaans) indicating the submission of the revised BAR and NTS to the DMRE, as well as the links to the SLR websites in order to access the documents, <u>was</u> provided to I&amp;APs registered on the project database, via email, <u>on 21 October 2021</u>.</p> <p>A notification (English) indicating the submission of the revised BAR and NTS to the DMRE, as well as the links to the SLR websites in order to access the documents, <u>was</u> provided to I&amp;APs registered on the project database, via SMS, <u>on 21 October 2021</u>.</p>
<p>DMRE decision</p>	<p>All I&amp;APs registered on the project database will be notified once the decision to grant or refuse EA is received. The notification letter (English, Setswana and Afrikaans) will include information on how to access the decision, as well as information pertaining to the appeal process. The notification letter will be provided to I&amp;APs registered on the project database via email.</p> <p>A notification (English) of the afore-mentioned will also be provided by SMS.</p>

### 7.3 SUMMARY OF ISSUES RAISED BY I&APS

A full record of the issues and concerns raised to date have been included in Table 7-2.

**Table 7-2: Full Record of Issues Raised by I&APs to date**

I&AP	Date comment received	Issue raised	Response provided	Report reference where the issue and responses were incorporated
<b>Authorities</b>				
Natasha Higgitt (SAHRA)	7 July 2021 (at commenting authorities pre-application meeting)	It is noted that SLR will be undertaking cultural/heritage and palaeontological assessments as part of the BA process. SLR can take into consideration that an area that is highly disturbed would have limited potential for the impact on heritage resources. As part of the BA process, SLR can consider the compilation of exemption letters for cultural/heritage and paleontological components instead.	The potential for exemption letters for the cultural/heritage and palaeontological components have been discussed with the heritage specialist, as well as through the consideration of the findings of the DFFE Screening Tool Report. Based on the outcome of the Screening Tool Report, and the level of environmental sensitivity identified, it was determined that a full HIA and a desktop paleontological study be undertaken as part of the proposed project.	Section 7.4.2, chapter 10 and Appendices C and F
	8 October 2021 (South African Heritage Resources Information System (SAHRIS))	<u>The proposed development footprint is located in an area of moderate sensitivity as per the SAHRIS Palaeo-Sensitivity map. The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit requests that a desktop Palaeontological Impact Assessment (PIA) be conducted by a qualified palaeontologist as part of the proposed development EA process. Further comments will be issued upon the receipt of the outstanding report. Should you have any further queries, please contact the designated official using the case number quoted above in the case header.</u>	<u>As part of the HIA completed for the proposed project (see Appendix E), findings of existing paleontological desktop assessments were referenced. However, in response to SAHRA's comment, a new desktop PIA was commissioned. The report, which mirrors the findings contained in the HIA, is contained in this BAR and EMPr.</u>	<u>Appendix E</u>
	18 October 2021 (SAHRIS)	<p><u>In an interim comment issued on 8/10/2021, SAHRA requested that a desktop PIA be conducted by a qualified paleontologist as part of the proposed development EA process. Since the issuing of the interim comment, a desktop PIA has been submitted for review.</u></p> <p><u>The following comments are made as a requirement in terms of section 3(4) of the NEMA Regulations and section 38(8) of the NHRA in the format provided in section 38(4) of the NHRA and must be included in the final BAR and EMPr:</u></p> <ul style="list-style-type: none"> <li>• <u>38(4)a – The SAHRA Archaeology, Palaeontology and Meteorites (APM) Unit has no objections to the proposed development.</u></li> <li>• <u>38(4)b – The recommendations of the specialists are supported and must be adhered to. No further additional specific conditions are provided for the development.</u></li> <li>• <u>38(4)c(i) – If any evidence of archaeological sites or remains (e.g. remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, charcoal and ash concentrations), fossils or other categories of heritage resources are found during the proposed development, SAHRA APM Unit (Natasha Higgitt/Phillip Hine 021 462 5402) must be alerted as per section 35(3) of the NHRA. Non-compliance with section of the NHRA is an offense in terms of section 51(1)e of the NHRA and item 5 of the Schedule.</u></li> <li>• <u>38(4)c(ii) – If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Thingahangwi Tshivhase/Mimi Seetelo 012 320 8490), must be alerted immediately as per section 36(6) of the NHRA. Non-compliance with section of the NHRA is an offense in terms of section 51(1)e of the NHRA and item 5 of the Schedule.</u></li> <li>• <u>38(4)d – See section 51 of the NHRA for offences.</u></li> <li>• <u>38(4)e – The following conditions apply with regards to the appointment of specialists:</u> <ol style="list-style-type: none"> <li>i) <u>If heritage resources are uncovered during the course of the development, a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the heritage resource. If the newly discovered heritage resources prove to be of archaeological or</u></li> </ol> </li> </ul>	<p><u>This comment is correct and is supported by the information uncontained in this BAR and EMPr.</u></p> <p><u>This comment is noted. The revised BAR and EMPr have been updated, where appropriate.</u></p> <p><u>These comments are noted.</u></p> <p><u>The Chance Find Protocol has been updated to include this.</u></p> <p><u>The Chance Find Protocol has been updated to include this.</u></p> <p><u>This comment is noted.</u></p> <p><u>The Chance Find Protocol has been updated to include this.</u></p>	<p><u>Table 7-2 and Appendix E</u></p> <p><u>-</u></p> <p><u>-</u></p> <p><u>Table 10-1</u></p> <p><u>Table 10-1</u></p> <p><u>-</u></p> <p><u>Table 10-1</u></p>

I&AP	Date comment received	Issue raised	Response provided	Report reference where the issue and responses were incorporated
		<p><u>palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA.</u></p> <ul style="list-style-type: none"> <li>• <u>The final BAR and EMPr must be submitted to SAHRA for record purposes.</u></li> <li>• <u>The decision regarding the EA Application must be communicated to SAHRA and uploaded to the SAHRIS Case application</u></li> <li>• <u>Should you have any further queries, please contact the designated official using the case number quoted above in the case header</u></li> </ul>	<p><u>These comments are noted.</u></p>	<p>=</p>
Jacoline Mans (DFFE)	7 July 2021 (at commenting authorities pre-application meeting)	<p>It is noted that a terrestrial study will be undertaken as part of the BA process. The study will cover the occurrence of protected trees on site. I am satisfied with this, given that it was noted that protected trees have been identified in the area.</p>	<p>A biodiversity study has been undertaken as part of the BA process for the proposed project. The presence of protected species within the project footprint has been identified and have been noted in the BAR. Recommendations to mitigate the impacts on vegetation and protected species are also included.</p>	<p>Section 7.4.1.5, chapter 10 and Appendices C and F</p>
	<u>11 October 2021 (email)</u>	<p><u>May you please resend the link?</u></p>	<p><u>The notification letter containing the link to the SLR website and data-free website, as requested, was provided to Jacoline Mans via email by Mrs. Rizqah Baker, of SLR, on 11 October 2021.</u></p>	<p>=</p>
		<p><u>I downloaded the documents, but Appendix E (Part 1 of 3 and Part 3 of 3 are both the HIA Report). May you please forward me the Terrestrial Biodiversity Impact Assessment Report because I cannot find it. I can receive up to 5 MB per e-mail. Thank you.</u></p>	<p><u>The Terrestrial Biodiversity Study, as requested, was provided to Jacoline Mans via email by Mrs. Rizqah Baker, of SLR, on 11 October 2021.</u></p>	<p>=</p>
		<p><u>The Directorate: Forestry Management (Other Regions) in DFFE is responsible for the administration of the NFA and the National Veld and Forest Fires Act, Act 101 of 1998 (NVFFA) as amended.</u></p> <p><u>The BAR and Biodiversity Assessment Report confirmed the presence of nationally and provincially protected plants in the project footprint, namely <i>Vachellia erioloba</i>, <i>Vachellia haematoxylon</i>, <i>Harpagophytum procumbens</i> and <i>Boophone disticha</i>. No indication was given of the density of protected trees on site and/or the number of trees that may be impacted on. The developer will therefore need to apply for and obtain a valid forest act license, prior to disturbing any protected trees on site. The department is assessing cumulative impacts on protected trees and once a certain threshold is exceeded, may ask for a biodiversity offset to be implemented, for impacts on slow-growing, long-lived protected trees that cannot be mitigated.</u></p> <p><u>Trees with active bird nests or other significant biodiversity features may not be damaged or disturbed without a valid fauna permit from the provincial Conservation Authority, under the NCNCA, if these would be affected.</u></p> <p><u>The developer must kindly take note of the timeframe to obtain a license. It can take up to 30-days upon receipt of all the requested information, to process the application. Please submit a .kml or .kmz with the license application, as well as an accurate estimation of the tree count (number of protected trees per species affected), as well as the supporting documentation listed in the license application form, i.e., the applicant's I.D. document and a copy of the approved EA. Should any additional information be required, the department will inform the applicant upon receipt of the license application form.</u></p>	<p><u>This comment is noted.</u></p> <p><u>This information is correct and is supported by the information contained in the Terrestrial Biodiversity Study (see Appendix E). Prior to the disturbance of any protected flora, permits would need to be obtained from DFFE. This has been noted in the mitigation and management actions contained in the BAR and EMPR.</u></p> <p><u>This information is correct and is supported by the information contained in the Terrestrial Biodiversity Study (see Appendix E). Prior to the disturbance of any protected fauna, permits would need to be obtained from DFFE. This has been noted in the mitigation and management actions contained in the BAR and EMPR.</u></p> <p><u>This comment is noted.</u></p>	<p>=</p> <p><u>Chapter 9, Table 9-1 and Appendix C</u></p> <p><u>Chapter 9, Table 9-1 and Appendix C</u></p> <p>=</p>

I&AP	Date comment received	Issue raised	Response provided	Report reference where the issue and responses were incorporated
Hambulani Mashau (DMRE)	14 July 2021 (at DMRE pre-application meeting)	How long is the loop/balloon that is being extended?	The balloon loop measures at 2 500 m long with a 25 m wide corridor.	Chapter 3
		Please extend the PPP to the relevant heritage authority to verify whether or not heritage resources have been located on site.	SLR has engaged with SAHRA as part of a commenting authority pre-application meeting held on 7 July 2021. SLR has also commissioned a HIA and desktop PIA to verify the presence of heritage and paleontological resources on site.	Section 7.4.2, chapter 10 and Appendices C and F
Johannes Nematatani (DMRE)	14 July 2021 (at DMRE pre-application meeting)	Does SLR intend to follow a BA process?	A BA process will be followed as the proposed project triggers Listed Activities in contained in Listing Notice 1.	Table 3-1
		Please note that a copy (hard or soft copy) of the BAR must be provided to the commenting authorities, not only a notification letter. Please engage with each authority as to what their specific requirements are in order to conduct a proper PPP.	SLR has engaged with commenting authorities as part of a commenting authority pre-application meeting held on 7 July 2021. SLR will also engage with all commenting authorities with regard to the format they prefer for the review of project documentation.	-
		Please load the application on the SAHRIS.	SLR has engaged with SAHRA as part of a commenting authority pre-application meeting held on 7 July 2021. The project documentation will be uploaded onto SAHRIS as part of the BA process and will ensure that final comment is received from SAHRA.	-
	12 October 2021 (email)	<u>The case officer will not give you comments on the draft BAR. The case officer is Mr Humbulani Mashau.</u>	<u>This comment is noted. The DMRE Case Officer was contacted regarding the requirements for final submission of this revised BAR.</u>	-
<b>Landowners, Land Users and Adjacent Landowners and Land Users</b>				
Michelle Reynecke	6 July 2021 (email)	As representative of the landowner of Nchwaning Farm 267, and holder of the property lease for Dikgatlong 268 we would like to register as an I&AP for the proposed railways infrastructure extension at Wessel Mine, South32.	Michelle Reynecke was included on the I&AP database for the proposed project.	-
		I have read through the background information. May I please request a more detail map for the proposed extension.	A detailed map, as requested, was provided to Michelle Reynecke via email by Mrs. Rizqah Baker, of SLR, on 12 July 2021.	N/A
		From the background information I do understand that South32 are the mining right holder (mineral rights) of the four properties, but they are not the surface use right holder and/or landowners of Nchwaning 267, Dikgatlong 268 and Dibiagomo 226. Please confirm that the information is on SLR's side the same.	HMM is the landowner of portions 1 and 2 of the farm Dibiaghomo 226 and portion 1 of the farm Dikgathlong 268. This information is verified by the Windeed database. There are other surface rights owners of portions of the afore-mentioned farms.	-
		Furthermore, may I please ask that you forward me the draft BAR and EIA.	A notification letter (English, Afrikaans and Setswana) has been provided to all I&APs registered on the project database notifying them of the availability of this BAR for review and comment. The notification letter provided links to the SLR websites (including a data-free option) that I&APs can use to access the full BAR and NTS.	Section 7.2
	21 July 2021 (at key I&AP focussed meeting)	Will the work not pass the servitude into N'Chwaning south? In other words, will you be working (doing upgrades) in the line running by the square piece by N'Chwaning Mine?	The proposed upgrades to the existing railway line will not be undertaken outside of the existing servitude.	Chapter 3
		Are there going to be changes where the existing railway is coming into the South32 laydown area?	The proposed project entails upgrading the existing railway line within the existing servitude up until where the railway ties into the existing Assmang loop.	Chapter 3
		Where the loop turns onto the farm Dibiaghomo, will negotiations with the surface right owner be undertaken? It is understood that South32 does not own this land.	Both the surface rights and mining rights of portion 2 of the farm Dibiaghomo 226 are owned by HMM. This information is verified by the Windeed database. Negotiations with other surface right owners, where HMM is not the owner, will be undertaken. This process; however, will be undertaken as part of a separate process to the BA process.	Section 7.4.3.2
		A major concern is that of dust created by the laydown station and the impact it has on the adjacent land. Dust affects the grazing capabilities of the adjacent land.	HMM will comply with the provisions of the EMPR which will include dust suppression measures during the construction phase.	Chapter 12 and Appendix C
With regards to the loop, will South32 be doing a laydown station similar to what UMK and Assmang have?	The railway balloon will be tied to the existing laydown station. In future another laydown station will be constructed but it does not form part of the current BA process.	Chapter 3		



I&AP	Date comment received	Issue raised	Response provided	Report reference where the issue and responses were incorporated
Melissa Pillay, East Manganese	2 August 2021 (email)	Good day. Please register myself and Gomolemo (cc'd in this email) as I&APs for the project mentioned below. Also, provide me with an update on the application. Thank you	Melissa Pillay and Gomolemo Fritz were added to the I&AP database for the proposed project. An update on the BA process, was requested, was provided to Melissa Pillay via email by Mrs. Rizqah Baker, of SLR, on 3 August 2021.	-
	4 August 2021 (email)	Good morning. Can you send me a BID?	A BID, as requested, was provided to Melissa Pillay via email by Mrs. Rizqah Baker, of SLR, on 4 August 2021.	N/A
Gomolemo Fritz, East Manganese	23 September 2021 (email)	I have been looking at the documents provided for the BAR but the link for the data-free website is not opening. It keeps saying "Page not found".	The link to the data-free website ( <a href="https://slrpublicdocs.datafree.co/public-documents">https://slrpublicdocs.datafree.co/public-documents</a> ) was provided Gomolemo Fritz via email by Mrs. Rizqah Baker, of SLR, on 23 September 2021.	-
	13 October 2021 (email)	<p>Soil erosion: This region where the mine is situated has very loose sandy soil. Rainfall in the area is associated with very windy conditions. The tree removal with earthworks phase of the project will leave exposed soil which may affect the dust fall of the East Manganese Mine. Dust fall is tested on a monthly basis on the mine and the mine has been compliant thus far. The project may lead to excessive dust and may lead to non-compliance on the mine.</p> <p>Chemical pollution of soils: The project will result in contamination of groundwater resources. Based on the Geohydrological report of East Manganese the Regional groundwater flow is mainly in a north-western direction, with localised groundwater flow towards the drainage channels. Boreholes for groundwater testing are situated around the pit; the open pit is located in the in the Ga-Mogara River. There is a possibility that the chemical pollution of soils will be picked up in the quarterly borehole testing of the mine.</p>	<p>The proposed project presents a number of sources that can have a negative impact on the ambient air quality and surrounding land uses in all phases of development. Sources include clearing of vegetation, materials handling, wind erosion from stockpiles and disturbed areas, as well as vehicle tailpipe emissions from vehicles from construction vehicles. The aforementioned activities will be limited in time and extent, i.e., to the project area and to the construction phase (15 months). During operation, the proposed project does not present sources of contaminants that differ from those at the existing railway line. In this regard, any potential impact to air quality is expected to be negligible. However, the management actions, as outlined in this BAR and EMPR are required to ensure this rating is achieved. Furthermore, HMM has an existing dust fallout monitoring programme. This monitoring would need to be implemented continually in order to monitor and manage air quality-related impacts.</p> <p>The proposed project presents a potential for long-term contamination through accidental spills and leaks from trucks, plant, equipment and vehicles, that may seep into the ground and affect groundwater resources. It is anticipated that these spills will be localised and at low volumes. This potential exists during all phases of the project. At elevated pollution concentrations, these contaminants can be harmful; however, it is important to note that the proposed project does not present sources of contaminants that differ from those at the existing railway line. Management actions as outlined in this BAR and EMPR are required to manage groundwater-related impacts.</p>	<p>Chapter 9, Table 9-1 and Appendix C</p> <p>Chapter 9, Table 9-1 and Appendix C</p>
Joseph and Engela van der Walt	8 August 2021 (email)	Good day. Can we please be registered as an interested and affected party on the proposed extension of the Wessels Mine railroad. We gain entrance to our farm driving next to Wessels security fence and our turn off is more or less at the proposed turn of the new extension. We farm on the remaining portion of the farm Dibiaghomo. Thank you.	Joseph and Engela van der Walt were added to the I&AP database for the proposed project.	-
<b>Businesses and Other I&amp;APs</b>				
Modiegi Matsietsa	2 July 2021 (email)	Good afternoon. I would like to know if there are any sub-contracting opportunities for local contractors.	A staff complement of approximately 250 individuals would be required for the construction phase (skilled and unskilled job opportunities). Procurement opportunities would be sourced locally, as far as possible. The appointment of contractors for the construction phase does not form part of the BA process. HMM and South32 would need to be contacted at the relevant stage of development.	Chapter 3
Moses Moalahi	8 July 2021 (email)	Thanks once again to let us know about current activities which are taking place in Wessels mine South 32. Last time I registered as an interested party for the new development which was also taking place at Mamatwan Mine South 32. At Mamatwan my interest was to have access to waste rock for aggregate and to use it for the construction of the roads, bricks and paving blocks making including other road materials like culverts & bridges/rails concrete components. Recycling of waste rock from the mine was also the initiative of South 32 Mine because last year they advertised in our local newspapers looking for local SMME'S which are interested in recycling of the waste rock from the mine. I was also interested in having access to wastewater from the mine to use it during road construction and irrigation of lucerne or gain/maize for animal feedings. In short, I hereby registered once again to have access to waste rock for aggregate and wastewater from both mines, Wessels, Mamatwan including UMK mine. Last but not list, I also interest to work with the		

I&AP	Date comment received	Issue raised	Response provided	Report reference where the issue and responses were incorporated
		Engineers for both mines during construction at Mamatwan and Wessels. Looking forward for your positive response		
	14 September 2021 (email)	<u>Thanks for letting me know about the progress at Wessels mine. We can save water in the mine especially the overflowing of the reservoirs and any quality wastewater which can be used for irrigation purposes and irrigation of crops. I can recycle waste metals during the construction and recycle waste rock for aggregate purposes, especially making of paving blocks in order to maintain our internal roads in our local municipalities.</u>		
Lenton Van Heerden	30 August 2021 (email)	<u>We are looking to bulk purchase Sugalite from the mine. We seek your assistance and clarity on how we can acquire, mode and method of delivery payment grade certificates etc.</u>		
Mantwa Aletta Gabaitumele, Mvelaphande Trading	22 September 2021 (email)	<p><u>Your mail dated 10 September 2021 refers. With reference to your above-mentioned application, I hereby inform you that the proposed application is approved by our client (Openserve) in terms of Section 22 of the Electronic Communications Act No. 36 of 2005 as amended. This approval is valid for 6 months only, after which re-application must be made if the work has not been completed.</u></p> <p><u>No infrastructure of our client (Openserve) will be affected by this proposal; however, care should be taken should it become evident that there is in fact infrastructure of our client (Openserve) present at the actual sites. We did our utmost to ensure that we indicate our route as accurate as possible and should you discover any of our cables that are not on the sketch please stop and contact us immediately to arrange a site meeting. Please make use of pilot holes in order not to damage our infrastructure. In the event that our cables are exposed and damaged/stolen by a third party the damages will be repaired at the customer's account. Please make use of pilot holes in order not to damage our infrastructure. On completion of this project, please certify that all requirements as stipulated in this letter have been met. Please note that should any of our client (Openserve) infrastructure has to be relocated or altered as a result of your activities the costs for such an alteration or relocation will be for your account in terms of section 25 of the Electronic Communications Act.</u></p> <p><u>Although we are not affected, Mr. Vivian Groenewald must be contacted at telephone number 054 338 6501 / 081 362 6738 two weeks prior to commencement of the proposed work from our client (Openserve's) Network Field Services before any commencement of work.</u></p>	<p><u>This comment is noted.</u></p> <p><u>The EMPR has been updated to include the following mitigation measure: Care must be taken to ensure that third-party infrastructure, such as telephone lines, etc. are not damaged during the construction phase.</u></p> <p><u>The EMPR has been updated to include the following mitigation measure: Notification of the commencement of the construction phase must be provided to Mvelaphande Trading two weeks in advance.</u></p>	=