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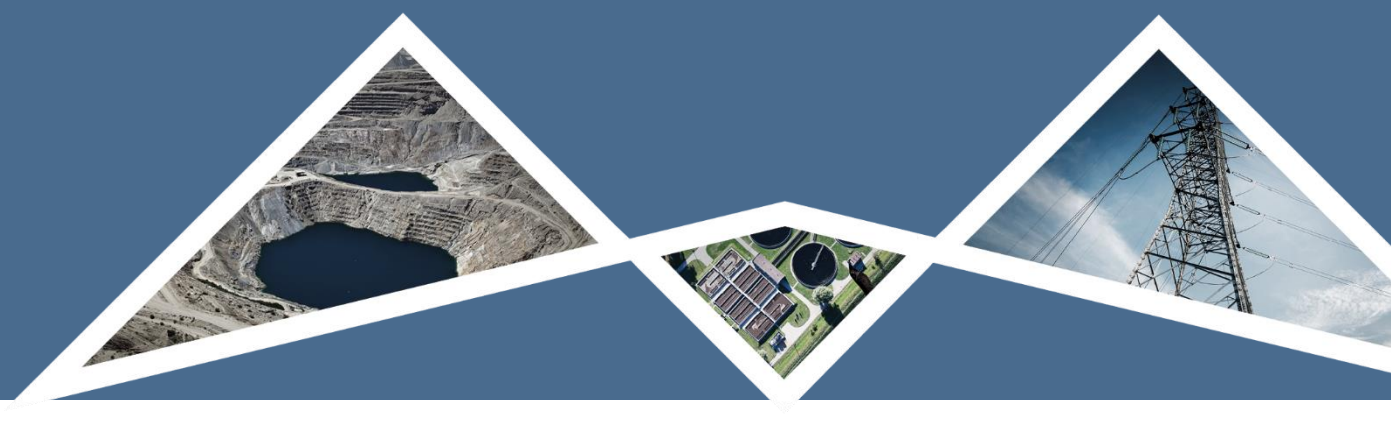
SCOPING REPORT

PROPOSED WESTERN PLATINUM KTD1 TAILINGS RESIDUE STOCKPILE REMINING IN NORTH WEST PROVINCE



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REVISION AND AMENDMENTS

REVISION DATE:	REV #	DESCRIPTION
2023/08/28	**ORIGINAL DOCUMENT**	**Scoping Report for Public Review**

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Abbreviations

ASTM	:	American Standard Testing Methodology
CMA	:	Catchment Management Agency
CMS	:	Catchment Management Strategy
CRM	:	Cultural Resource Management
DEA	:	Department of Environmental Affairs
DMRE	:	Department of Mineral Resources and Energy
DFFE	:	Department: Forestry, Fisheries and the Environment
DWS	:	Department of Water Affairs and Sanitation
EA	:	Environmental Authorisation
EAP	:	Environmental Assessment Practitioner
ECA	:	Environmental Conservation Act, 1989
EIA	:	Environmental Impact Assessment
EIMS	:	Environmental Impact Management Services
EMPr	:	Environmental Management Programme
GHG	:	Greenhouse Gas
GN	:	Government Notice
GVA	:	Gross Value Added
I&AP	:	Interested and Affected Party
IDP	:	Integrated Development Plan
IWWMP	:	Integrated Water and Waste Management Plan
IWUL	:	Integrated Water Use Licence
LOM	:	Life of Mine
LPMO	:	Lonmin Platinum Mining Operation
MAE	:	Mean Annual Evaporation
mamsl	:	metres above mean sea level
MAP	:	Mean Annual Precipitation
MAR	:	Mean Annual Runoff
mbs	:	metres below surface
MPRDA	:	Minerals and Petroleum Resources Development Act, 2002
MR	:	Mining Right
MRA	:	Mining right Area
MT	:	Million Tonnes
NEM:WA	:	National Environmental Management: Waste Amendment Act, 2008
NEMA	:	National Environmental Management Act, 2002
NEMA	:	National Environmental Management Act, 1998

NGL	:	Natural Ground Level
NHRA	:	National Heritage Resources Act, 1999
NWA	:	National Water Act, 1998
PGM	:	Platinum Group Metal
RoM	:	Run of Mine
SAHRA	:	South African Heritage Resources Agency
SANS	:	South African National Standards
SDF	:	Spatial Development Framework
SLP	:	Social & Labour Plan
tpm	:	Tonnes per Month
TSF	:	Tailings Storage Facility
UG	:	Underground
WCWDM	:	Water Conservation and Water Demand Management Strategy
WMA	:	Water Management Area
WML	:	Waste Management License
WPL	:	Western Platinum Limited
WUL	:	Water Use Licence
WULA	:	Water Use Licence Application

EXECUTIVE SUMMARY

Sibanye-Stillwater Marikana operations comprise of Western Platinum (Pty) Ltd and Eastern Platinum (Pty) Ltd, located on the western limb of the Bushveld complex near Madibeng and Rustenburg in the North West Province, South Africa. Western Platinum (Pty) Ltd has been granted a converted Mining Right Mining Right (NW30/5/1/2/2/106MR), in terms of the Minerals and Petroleum Resources Development Act (Act 28 of 2002 – MPRDA) as amended, for the mining of various minerals and further received Environmental Authorisation ("EA") for the mining and associated activities. The old order mining licenses were converted into new order mining rights in terms of the Mineral and Petroleum Resources Development Act, 2002 in 2008 (MPRDA).

The core business focus of Sibanye-Stillwater Marikana operations includes Platinum Group Metals (PGMs) such as platinum, palladium, rhodium, iridium, ruthenium, osmium and gold. Other refined by-products that are produced include silver (Ag), copper, nickel , chromite and cobalt sulphate, as well as sulphuric acid and sodium sulphate.

The applicant (Western Platinum (Pty) Ltd - WPL) is applying for a waste management license (WML) for the remining of the existing KTD 1 Tailings Residue Stockpile (KTD1 Tailing Storage Facility / KTD1 TSF) The KTD1 TSF is a dormant residue stockpile containing historical PGM and Chrome tailings, the residue stockpile will be remined using hydro mining and mechanical remining .The project aims to extend the Life of Mine (LOM) by processing a new feed source which includes the recovery of fine chrome and platinum group metals. No new infrastructure is proposed as part of this application.

The proposed project extends over various farm portions on a site located approximately 15km east of Rustenburg, and approximately 6km west of Marikana, within the Bojanala District Municipality, North-West Province. The relevant farm portions include Farm Rooikoppies 297JQ: Portion 225, 226, 227, 228, RE 223 and RE 189. A full Environmental Impact Assessment (EIA) process is being undertaken in support of the WML application.

PURPOSE OF THE SCOPING REPORT

The purpose of the scoping process is to:

- Identify the policies and legislation that are relevant to the activity;
- To motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
- To identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking;
- Where appropriate, to identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process including cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment;
- To identify the key issues to be addressed in the assessment phase;
- To agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required, as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and
- To 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.

PUBLIC PARTICIPATION PROCESS

The Public Participation Process (PPP) for the proposed project has been undertaken in accordance with the requirements of the MPRDA, and National Environmental Management Act (NEMA) in line with the principles of Integrated Environmental Management (IEM). The PPP commenced on the 10th August 2018 with an initial notification and call to register as interested and affected parties (I&APs). The comments received from I&APs during the initial call to register and commenting period to date have been captured in the Public Participation Report in Appendix C. No significant issues have been raised to date by any I&APs.

Comments received during this Scoping Report review period will also be collated and added to the Public Participation Report which will be updated accordingly for inclusion in the finalised Scoping Report to be submitted to the DMRE. Should the DMRE accept the Scoping Report, an EIA Report including an Environmental Management Programme (EMPr), will also be compiled and presented for public comment as part of this EIA process during which time further stakeholder engagement will take place.

This Scoping Report has been made available for public review and comment for a period of 30 days from 17 October 2023 until 16 November 2023. Environmental Impact Manager Services (EIMS) are conducting the public participation process for this project on behalf of EcoPartners. Contact details are provided below:

- Environmental Impact Management Services (Pty) Ltd (EIMS)
- P.O. Box 2083 Pinegowrie 2123
- Phone: 011 789 7170 / Fax: 011 787 3059
- Contact: Jolene Webber
- Email: KTD1remining@eims.co.za

ENVIRONMENTAL IMPACT ASSESSMENT

A scoping assessment was undertaken to identify all the potential risks and impacts associated with each phase of the proposed re-mining as well as any potentially feasible alternatives. The most significant risks and impacts identified were those that remain high in terms of significance even post mitigation measures being considered. No high significance impacts were identified. The following impacts were determined to have a potentially moderate final significance:

- Impacts on air quality (dust generation) during operation;
- Positive impacts on air quality and groundwater during closure / rehab phase and beyond;
- Positive impact of job retention during operational phase; and
- Positive impact on land use during closure / rehab phase and beyond.

The negative impacts, in particular, will be further assessed during the EIA phase of the project. Potential mitigation measures have been identified and will be refined based on input from the Environmental Assessment Practitioner (EAP) and public consultation during the EIA phase of the project. The associated EMPr will identify appropriate mitigation mechanisms for avoidance, minimisation and / or management of the negative impacts and enhancement of the positive.

1 INTRODUCTION

Sibanye-Stillwater's Marikana operations comprise of Western Platinum (Pty) Ltd and Eastern Platinum)Pty) Ltd, located on the western limb of the Bushveld complex near Madibeng and Rustenburg in the North West Province, South Africa. Western Platinum (Pty) Ltd has been granted a converted Mining Right Mining Right (NW30/5/1/2/2/106MR), in terms of the Minerals and Petroleum Resources Development Act (Act 28 of 2002 – MPRDA) as amended, for the mining of various minerals and further received Environmental Authorisation ("**EA"**) for the mining and associated activities. The old order mining licenses were converted into new order mining rights in terms of the Mineral and Petroleum Resources Development Act, 2002 in 2008 (MPRDA).

The core business focus of Sibanye-Stillwater Marikana operations includes Platinum Group Metals (PGMs) such as platinum, palladium, rhodium, iridium, ruthenium, osmium and gold. Other refined by-products that are produced include silver (Ag), copper, nickel , chromite and cobalt sulphate, as well as sulphuric acid and sodium sulphate.

The applicant (Western Platinum (Pty) Ltd) is applying for a waste management license (WML) for the remining of the existing KTD 1 Tailings residue stockpile (KTD1 Tailings Storage Facility – KTD1 TSF). The KTD1 TSF is a dormant residue stockpile containing historical PGM and Chrome tailings, the residue stockpile will be remined using hydro mining and mechanical remining. The project aims to extend the Life of Mine (LOM) by processing a new feed source which includes the recovery of fine chrome and platinum group metals. No new infrastructure is proposed as part of this application, it is only for the remining activity itself.

The proposed project extends over various farm portions on a site located approximately 15km east of Rustenburg, and approximately 6km west of Marikana, within the Bojanala District Municipality, North-West Province. The relevant farm portions include Farm Rooikoppies 297JQ: Portion 225, 226, 227, 228, RE223 and RE 189. A full Environmental Impact Assessment (EIA) process is being undertaken in support of the WML application. The following main rights, licenses, authorisations and permits are currently in place and are of relevance to the compilation of this report (Table 1).

Table 1: Mining rights, licenses, authorisations and permits held by the applicant of relevance to the KTD1 remining project.

Document	Reference Number
Mining right	NW30/5/1/2/2/106MR
Integrated Water Use License and Integrated Water and Waste Management Plan for LPMO	03/A21K/ABCFGIJ/1738
Approved EMPr EMPr update, amendment and consolidation of approved EMPr and amendments thereto in terms of the MPRDA (2002)	NW 30/5/1/2/3/2/2/105 EM WPL Mining Right No: ML8/1995, ML45/2004, MP7/2004, RDNW(R)6/2/2/38), RDNW(R)6/2/2/2567), RDNW (R)6/2/2/922)
EA for Construction of Storm Water Management Measures (Dam) and associated facilities at Western Platinum Mine	NWP/EIA/162/2006, NWP/EIA/161/2006 and NWP/EIA/162/2006

Therefore, it is in addition to the authorisations and licenses listed in Table 1, that Western Platinum (Pty) Ltd wishes to apply for approval for a Waste Management Licence (WML) for the remining of the KTD1 TSF in accordance with the requirements of the National Environmental Management: Waste Act- NEM:WA (Act 59 of 2008).

1.1 REPORT STRUCTURE

This report has been compiled in accordance with the 2014 NEMA EIA Regulations, as amended. A summary of the report structure, and the specific sections that correspond to the applicable regulations, is provided in Table 2 below.

Table 2: Report structure

Environmental Regulation	Description – NEMA Regulation 982 (2014) as amended	Section in Report
Appendix 2(2)(a):	Details of – i. The Environmental Assessment Practitioner (EAP) who prepared the report; and ii. The expertise of the EAP, including a curriculum vitae;	1
Appendix 2(2)(b):	The location of the activity. Including – i. The 21-digit Surveyor General code of each cadastral land parcel; ii. Where available, the physical address and farm name; iii. Where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	2
Appendix 2(2)(c):	A plan which locates the proposed activity or activities applied for at an appropriate scale, or, if it is – i. A linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or ii. On a land where the property has not been defined, the coordinates within which the activity is to be undertaken;	2
Appendix 2(2)(d):	A description of the scope of the proposed activity, including – i. All listed and specified activities triggered; ii. A description of the activities to be undertaken, including associated structures and infrastructure;	3
Appendix 2(2)(e):	A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process;	4

Environmental Regulation	Description – NEMA Regulation 982 (2014) as amended	Section in Report
Appendix 2(2)(f):	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;	5
Appendix 2(2)(h):	A full description of the process followed to reach the proposed preferred activity, site and location within the site, including – i. Details of all alternatives considered; ii. Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs; iii. 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; iv. The environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; v. The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts – a. Can be reversed; b. May cause irreplaceable loss or resources; and c. Can be avoided, managed or mitigated; vi. The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives; vii. 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; viii. The possible mitigation measures that could be applied and level of residual risk; ix. The outcome of the site selection matrix; x. If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and xi. A concluding statement indicating the preferred alternatives, including preferred location of the activity;	6, 7, 8, 9 and 10
Appendix 2(2)(i):	A plan of study for undertaking the environmental impact assessment process to be undertaken, including –	10

Environmental Regulation	Description – NEMA Regulation 982 (2014) as amended	Section in Report
	i. A description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity; ii. A description of the aspects to be assessed as part of the environmental impact assessment process; iii. Aspects to be assessed by specialists; iv. A description of the proposed method of assessing the environmental aspects, including a description of the proposed method assessing the environmental aspects to be assessed by specialists; v. A description of the proposed method of assessing duration and significance; vi. An indication of the stages at which the competent authority will be consulted; vii. Particulars of the public participation process that will be conducted during the environmental impact assessment process; and viii. A description of the tasks that will be undertaken as part of the environmental impact assessment process; ix. Identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored;	
Appendix 2(2)(j)	An undertaking under oath or affirmation by the EAP in relation to – i. The correctness of the information provided in the report; ii. The inclusion of comments and inputs from stakeholders and interested and affected parties; and iii. 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;	13
Appendix 2(2)(k):	An undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment;	13
Appendix 2(2)(l):	Where applicable, any specific information required by the competent authority; and	N/A
Appendix 2(2)(m):	Any other matter required in terms of section 24(4)(a) and (b) of the Act.	N/A

1.2 DETAILS OF THE EAP

EcoPartners (Pty) Ltd has been appointed as the Independent EAP and to assist in preparing and submitting the WML application, Scoping and EIA Reports, and undertaking a Public Participation Process (PPP) in support of the proposed project. The contact details of the EAP are as follows:

- Name of the consultant: San Oosthuizen
- E-mail address: KTD1remining@eims.co.za

EcoPartners (Pty) Ltd appointed EIMS to assist with the drafting this Scoping Report, the EIA report and completion of the application forms as well as conducting the public participation process for the project. EIMS is a private and independent environmental management-consulting firm that was founded in 1993. EIMS has in excess of 20 years' experience in conducting EIA's, including many EIA's for mines and mining related projects. Please refer to the EIMS website (www.eims.co.za) for examples of EIA documentation currently available. John von Mayer, the author of this scoping report, is a senior consultant at EIMS and has been involved in numerous significant projects the past 15 years. He has experience in Project Management, small to large scale Environmental Impact Assessments, Environmental Auditing, Water Use Licensing, and Public Participation.

1.3 EXPERTISE OF THE EAP

1.3.1 EAP QUALIFICATIONS

In terms of Regulation 13 of the EIA Regulations (GN R. 982) as amended, an independent EAP, must be appointed by the applicant to manage the application. EcoPartners has been appointed by the Applicant as the EAP and EIMS is responsible to assist with compiling the necessary reports and undertaking the statutory consultation processes, in support of the proposed project. EcoPartners is compliant with the definition of an EAP as defined in Regulations 1 and 13 of the EIA Regulations, as well as Section 1 of the NEMA. This includes, *inter alia*, the requirement that Eco Partners is:

- Objective and independent;
- Has expertise in conducting EIA's;
- Comply with the NEMA, the environmental regulations and all other applicable legislation;
- Takes into account all relevant factors relating to the application; and
- Provides full disclosure to the applicant and the relevant environmental authority.

The Curriculum Vitae (indicating the experience with environmental impact assessment and relevant application processes) of the consultant that is involved in the WML process, and the compilation of this Scoping Report is presented in Appendix A.

2 DESCRIPTION OF THE PROPERTY

Table 3 indicates the farm portions that fall within the proposed project site including details on the location of the proposed remining as well as the distance from the proposed project area to the nearest towns.

Table 3: Locality details

Farm Name	The relevant farm portions include Farm Rooikoppies 297JQ: Portion 225, 226, 227, 228, RE223 and RE 189.		
Application Area (Ha)	The proposed project covers an extent of approximately 58 hectares (ha).		
Magisterial District	Bojanala District Municipality.		
Distance and direction from nearest towns	The proposed project extends over various farm portions on a site located approximately 15km east of Rustenburg, and approximately 6km west of Marikana, within the Bojanala District Municipality, North-West Province. The geographic coordinates at the center of the site are approximately: 25°40'54.20"S and 27°27'8.40"E.		
21-digit Surveyor General Code for each Portion	**Farm Name:**	**Portion:**	**21 Digit Surveyor General Code**
	Farm Rooikoppies 297JQ	RE 223	T0JQ00000000029700223
	Farm Rooikoppies 297JQ	225	T0JQ00000000029700225
	Farm Rooikoppies 297JQ	226	T0JQ00000000029700226
	Farm Rooikoppies 297JQ	227	T0JQ00000000029700227
	Farm Rooikoppies 297JQ	228	T0JQ00000000029700228
	Farm Rooikoppies 297JQ	RE 189	T0JQ00000000029700189

Figure 1 indicates the locality of the proposed location of the project.

2.1 SURROUNDING LAND USES

The proposed project footprint is situated approximately 15km east of Rustenburg, and approximately 6km west of Marikana within the Rustenburg Local Municipality, which is part of the Bojanala District Municipality, North-West Province. The proposed KTD1 remining project area, and its surroundings, can be described as a mining area. The KTD1 TSF is located within the mine area for Western Platinum (Pty) Ltd mine area. Although there are also some areas of remaining natural vegetation in close proximity, the only major land use types on and around the site is mining.

2.2 PROPERTY OWNERSHIP

As stated above, the proposed location of the project includes Farm Rooikoppies 297JQ: Portion 225, 226, 227, 228, RE223 and RE 189. All these properties are owned by the applicant.

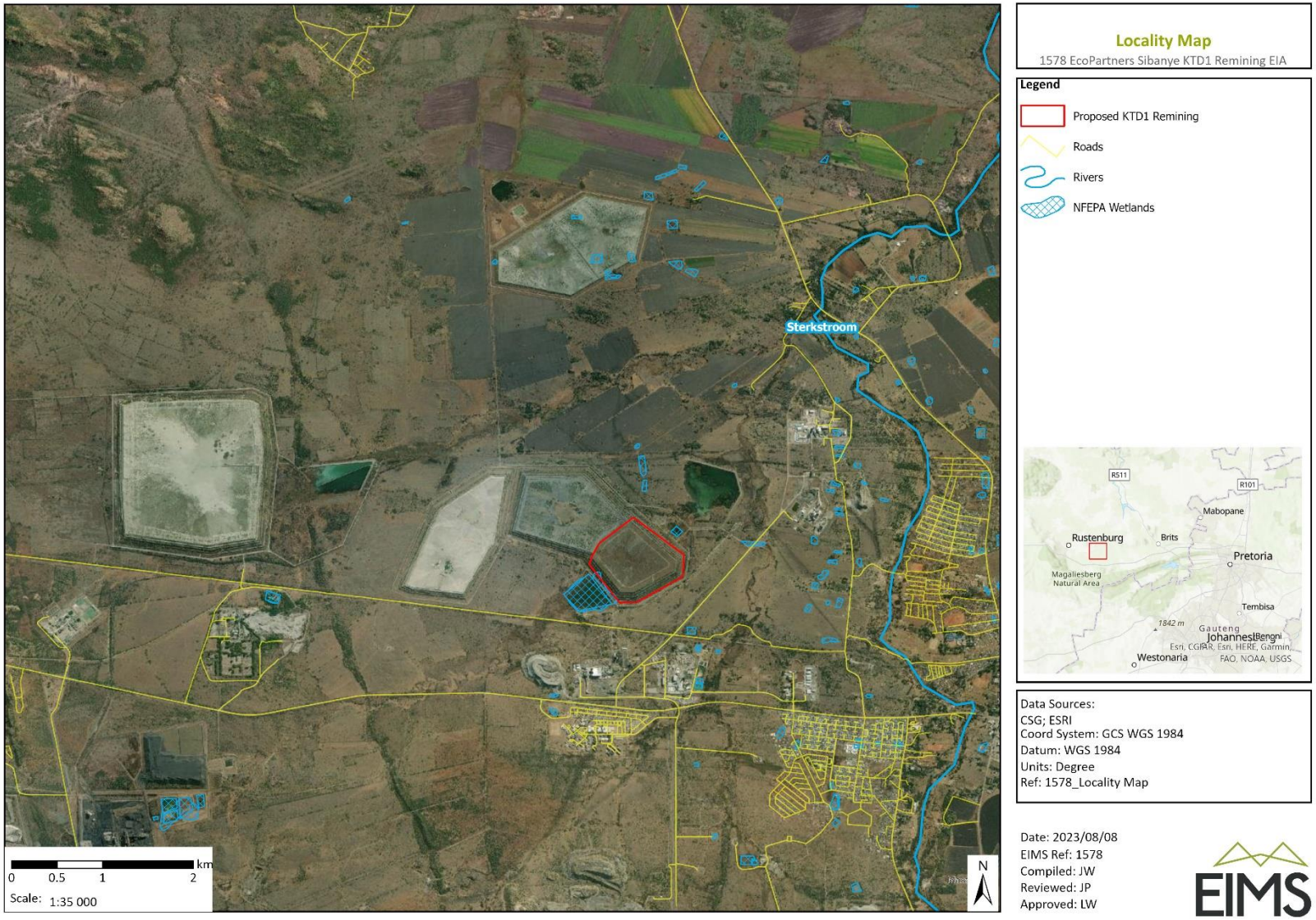

Figure 1: Aerial imagery locality map indicating the location of the KTD1 TSF.

3 DESCRIPTION AND SCOPE OF THE PROPOSED PROJECT

The section below provides a detailed project description for the proposed KTD1 remining project. The aim of the project description is to indicate the proposed activities to take place. Furthermore, the detailed project description below is designed to facilitate the understanding of the proposed project related activities which are anticipated to lead to the preliminary impacts identified and assessed in this Scoping Report, and for which management measures have been, or will be designed.

It is important to note that there is another project pertaining to the remining taking place in the vicinity of the proposed project area. Sibanye Rustenburg Mine (Pty) Ltd (SRPM) is applying for the retrofitting of the existing Western Limb Treatment Plant (known as the Meccano 2 project) which is located on their mine area whose LOM is expected to be complete near the close of 2025. The Mecanno 2 project aims to extend the LOM by processing new feed sources. The Mecanno 2 project will also involve the construction of new infrastructure such as an expansion to its existing bulk chemicals, a new loading bay, chrome stockpile, pipelines, a booster pump station, a hydro mining/repulping plant, a workshop, offices, powerlines, and associated service roads. Linear infrastructure will cross the mining right boundaries of SRPM (DMRE Ref: NW 30/5/1/2/2/ 82 MR) and Western Platinum Limited mining operations (DMRE Ref: NW/30/5/1/2/3/2/2/106 EM). This project is the subject of a separate EIA process. The remainder of this section and overall scoping report pertains only to the KTD1 Remining Project which involves remining of the existing KTD1 TSF in support of the WML application.

Platinum mining involves the exploration, mining, concentrating, smelting, base metals extraction and refining of ore obtained from the UG2 and Merensky reefs. Western Platinum (Pty) Ltd uses both underground and opencast mining methods. Underground mining methods vary between breast mining, up-dip mining, down-dip mining, conventional and mechanised mining. The ore is then broken and transported to the surface by either of the 12 shafts (consisting of both vertical and incline orientated shafts). Waste rock is transported to the waste rock residue stockpiles. There are also numerous infrastructural and service elements associated with the mining and processing areas including landfill sites, sewage plants, workshops and stores, hostels, road networks and other service and maintenance infrastructural networks.

The KTD1 tailings residue stockpile was placed under care and maintenance in February 2008 having reached its maximum design height of 37 m. The current monitoring and surveillance of KTD1 falls under the management of the Karee Mine K4 Concentrator. It is noted that KTD2, commissioned in 2001, was developed butting up against KTD1 along the northwestern flank. KTD2 is still active and is currently about 3 m higher than KTD1. The KTD2 end of life is projected to be around December 2025.

KTD1 is to be re-mined either mechanically (load and haul) or a combination of mechanical and hydraulic (re-pulping in-situ) re-mining. A recent geotechnical investigation (SLR, 2023) has demonstrated that the KTD1 TSF is relatively dry with a low phreatic surface. It is therefore not anticipated that re-mining will destabilise the residue stockpile or increase the risk posed. Both methods will involve removing the tailings in layers from top down. A mining plan will be developed to ensure that sufficient freeboard is available during the process to prevent any overtopping or overflowing of water or slurry into the surrounding environment. Overtopping is a credible failure mode for upstream TSFs. Various mitigations measures are proposed to prevent overtopping (refer to Section 9.3.4). Hydraulic re-mining has been utilised successfully for several decades. Although the re-pulping process adds water to the remined face and slurry launders, the flow rate restricts infiltration of water into the tailings body and hence does not have an impact on the phreatic surface or stability.

The remining will take place in two phases as described below:

Phase 1: Phase 1 is applicable to this application and involves the mechanical remining of the tailings residue stockpile via bench mining using excavators. The tailings will then be transported to Klipfontein processing plant (an existing plant) via trucks on existing roads as per Figure 2 and stored on the existing storage area. No new roads will be required to be constructed. The aim is to commence with the Phase 1 remining in 2025. The following is applicable to Phase 1:

- Tons per month: 200 000.
- Loads per day: 167.

- Trucks per shift: 10.

Phase 2: Phase 2 remining will be done via hydro-mining to Western Limb Tailings Retreatment, where various pipelines will be required. Remining will start at block 1 and will remining to block 6 (Figure 2). The sequence will continue until natural ground level (NGL) is reached. **Phase 2 is not applicable to this application.**

The anticipated timeline for remining is approximately 24 Months including commissioning. It will also increase Western Limb Tailings Retreatment Life of Mine by 15 Years. Run of Mine tonnages are planned as follows:

- 4 Mt/yr in the first year of remining.
- Ramp-down to 2.8 Mt/yr from the second year onwards.

Apart from extending the life of mine, the project also forms part of the business model and plans to reduce the mine footprint. Once the TSF has been remined, the area will be rehabilitated. It is estimated that this project will increase life of mine by 15 years and maintain a contribution of approximately R2BN per annum The proposed remining project will result in the continued employment of approximately 92 permanent employees and approximately 346 permanent contractors. 6 new employment opportunities will be created (cleaning crew). Employment from the surrounding communities is recommended where possible, such that there will be no significant influx of additional workers to the area as a direct result of the proposed project.

3.1.1 WATER MANAGEMENT

The Mecanno 2 project involves the construction of new infrastructure such as an expansion to its existing bulk chemicals, a new loading bay, chrome stockpile, pipelines, a booster pump station, a hydro mining/repulping plant, a workshop, offices, powerlines, and associated service roads and is the subject of a separate EIA process. No water management facilities or pipelines are proposed as part of this application for the remining of KTD1 TSF.

A mine wide Integrated Water and Waste Management Plan (IWWMP) for the then Lonmin Platinum Mining operation, now Sibanye-Stillwater Marikana operations, was initially developed and submitted to DWA in 2010. The objective of the IWWMP is a consolidated approach to summarise all relevant Water Resource Management information into a simple, feasible and implementable plan in support of water use licence authorisations. An Integrated Water Use License (IWUL) was issued by DWS on 23 October 2012 (License number 03/A21K/ABCFGIJ/1738).

The IWWMP was developed by consolidating all relevant and existing water management information into one strategic document. This information relates to water and salt balances, stormwater management plans, water conservation and demand management plans, water reuse and reclamation plans, waste minimization and recycling, relevant sections within the existing EMPrs, surface and groundwater monitoring networks and reports, existing IWWMPs, ISO140001 procedures relating to water and waste, the mine's philosophies, targets, environmental awareness and non-conformance plans. The IWWMP is reviewed on an on-going basis in support of the principle of continual improvement.

3.1.2 STORMWATER MANAGEMENT

Dirty stormwater containment areas need to be minimised and clean water areas need to be maximised and rerouted to leave the mine area. Stormwater management systems are already in place at the mine. Storm water from KTD1 TSF runs into the existing trenches and then to an existing RWD. Access Roads

The mine area is well served by paved provincial roads. The main road serving the area is the R104 which is paved and runs east-west through the project area. With regards to road infrastructure to serve the KTD1 area, no new access roads need to be constructed. There is an existing access road in place and includes the secondary roads to various mine areas. No new access roads are required to be constructed as part of this project.

3.1.3 WASTE MANAGEMENT

The mine generates waste resulting from the direct mining operations (i.e. waste rock dumps, tailings, slag, etc) as well as a secondary waste stream which relates to waste water treatment plants, business waste, domestic

waste and health care waste (medical waste). The waste streams range from general to hazardous wastes, for which management measures/plans/procedures are in place. There are also a number of licensed waste facilities on the mine for various types of waste storage.

The residue from the KTD1 TSF is considered to be hazardous waste. The activities applicable to this application involve the mechanical remining of the tailings residue stockpile via bench mining using excavators. The tailings will then be transported to Klipfontein processing plant via trucks on existing roads. The only disposal sites applicable to this application would be the residue stockpiles themselves.

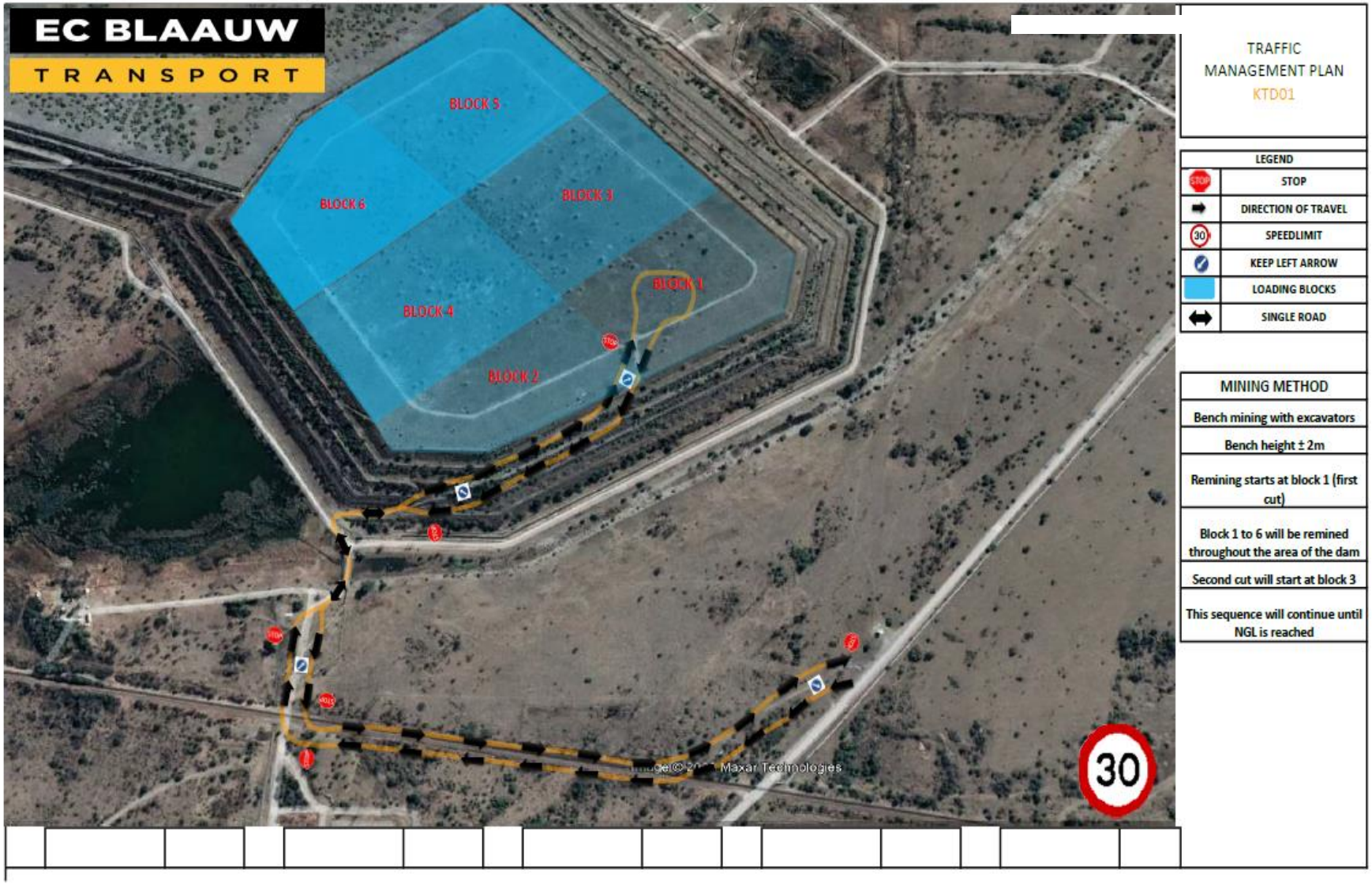

Figure 2: Load and haul plan for the KTD1 remining making use of existing access roads.

4 POLICY AND LEGISLATIVE CONTEXT

This section provides an overview of the governing legislation identified which may relate to the proposed KTD1 remining project. A summary of the applicable legislation is provided in Table 4 below. The primary legal requirement for this project stems from the need for an WML to be granted by the competent authority, which is the DMRE, in accordance with the requirements of the National Environmental Management: Waste Act (NEMWA) and Mineral and Petroleum Resources Development Act (MPRDA). In addition, there are numerous other pieces of legislation governed by many acts, regulations, standards, guidelines and treaties on an international, national, provincial and local level, which should be considered in order to assess the potential applicability of these for the proposed activity. More detail on the legislative framework is presented below.

Table 4: Applicable legislation and guidelines overview

Applicable Legislation and Guidelines	**Reference Where Applied**
(A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process).	
APPLICABLE LEGISLATION	
Constitution of the Republic of South Africa (Act 108 of 1996): The constitution of any country is the supreme law of that country. The Bill of Rights in chapter 2 section 24 of the Constitution of South Africa Act (Act 108 of 1996) makes provisions for environmental issues and declares that: "Everyone has the right - a) to an environment that is not harmful to their health or well-being; and b) to have the environment protected, for the benefit of present and future. c) generations, through reasonable legislative and other measures that: i. prevent pollution and ecological degradation; ii. promote conservation; and iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development". Therefore, the EIA is conducted to fulfil the requirement of the Bill of Rights.	Throughout the environmental Scoping and Impact Assessment process.
National Environmental Management Act (Act 107 of 1998 – NEMA); and the EIA Regulations (2014, as amended): The NEMA (1998) requires that a project of this nature must undergo a Scoping and Environmental Impact Assessment (EIA); an Environmental Management Programme (EMPr) must also be compiled. No NEMA listed activities are applicable to the remining project.	Throughout the environmental Scoping and Impact Assessment process.

Applicable Legislation and Guidelines	Reference Where Applied
Minerals and Petroleum Resources Development Act (Act 28 of 2002 – MPRDA) as amended; and the Mineral and Petroleum Resources Development Regulations (2004, as amended): The MPRDA (2002) requires an applicant who wishes to proceed with a mining project to obtain a Mining Right, part of which requires the applicant to obtain Environmental Authorisation in terms of the NEMA. The remining project is located within an existing mining right area.	Throughout the environmental Scoping and Impact Assessment process.
National Water Act (Act 36 of 1998 – NWA): The NWA recognises that water is a scarce and unevenly distributed national resource which must managed encompassing all aspects of water resources. In terms of Chapter 4 of the NWA, activities and processes associated with the proposed project and associated infrastructure, are required to be licensed by the Department of Water and Sanitation (DWS). Furthermore, an Integrated Water and Waste Management Plan (IWWMP) is already in place for the mine.	A WULA is being undertaken for the retrofitting of the existing Western Limb Treatment Plant Mecanno 2 project however this forms part of a separate process. No Water Use License application (WULA) is required for this specific application as no water uses are associated with the remining itself.
National Environmental Management: Air Quality Act (Act No. 59 of 2004): Dust control regulations promulgated in November 2013 may require the implementation of a dust management plan. The proposed remining will result in an increase in dust as a result of an increase in trucks within the area and through other activities associated with the remining activities.	The environmental Scoping and Impact Assessment Reports, and the EMPr.
National Environmental Management: Waste Act (Act No. 39 of 2008): In November 2013 the Minister of the then Water and Environmental affairs promulgated GN 921 in terms of the waste act which contained the List of Waste Management Activities that have, or are likely to have, a detrimental effect on the environment. Although the mine has an existing EMPr, no reclamation activities are included in the current EMPr and therefore a WML is required for the reclamation of the KTD1 TSF.	The environmental Scoping and Impact Assessment Reports, and the EMPr.

Applicable Legislation and Guidelines	Reference Where Applied
National Heritage Resources Act (Act 25 of 1999 – NHRA): The NHRA aims to promote good management of cultural heritage resources and encourages the nurturing and conservation of cultural legacy so that it may be bestowed to future generations. No heritage resources and palaeontological features will be affected by the project which is remining of an existing TSF. • Section 34(1); and • Section 38. Section 34(1) of the NHRA states that, "*no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority*…" The NHRA is utilised as the basis for the identification, evaluation and management of heritage resources and in the case of Cultural Resource Management (CRM) those resources specifically impacted on by development as stipulated in Section 38 of NHRA, and those developments administered through NEMA, and MPRDA legislation.	The environmental Scoping and Impact Assessment Reports, and the EMPr.
Specific Environmental Management Acts (SEMAs): The SEMAs refer to specific portions of the environment where additional legislation over and above the NEMA (1998) as amended, is applicable. SEMAs likely to be relevant to this application include the following: • National Environmental Management: Biodiversity Act (Act 10 of 2004); • NEMWA Regulations that may be applicable to the project and are discussed further below include: o **NEMWA Waste Classification and Management Regulations, 2013 (GN R. 634)** o **NEMWA National Norms And Standards for the Assessment of Waste for Landfill Disposal, 2013 (GN R. 635)** o **NEMWA Regulations Regarding the Planning and Management of Residue Stockpiles and Residue Deposits** SEMAs likely to be applicable in this regard (if any) include the Threatened or Protected Species (TOPS) permit for the removal of any protected tree species from site, and Waste Management related licencing or registration.	Baseline description for the environmental Scoping and Impact Assessment process, as well as the EMPr. Regulations pertaining to the planning and management of residue stockpiles and deposits were issued in 2015. The purpose of these regulations is to regulate the planning and management of residue stockpiles and residue deposits arising from a prospecting, mining, exploration or production operation.

Applicable Legislation and Guidelines	Reference Where Applied
APPLICABLE GUIDELINES	
Integrated Environmental Management Information Guidelines Series: This series of guidelines was published by the Department of Environmental Affairs (DEA) and refers to various environmental aspects. Applicable guidelines in the series for the remining project include: • Guideline 5: Companion to NEMA EIA Regulations, 2010; • Guideline 7: Public participation; and • Guideline 9: Need and desirability. Additional guidelines published in terms of the NEMA EIA Regulations, 2014 (as amended), in particular: • Guideline 3: General Guide to Environmental Impact Assessment Regulations, 2006; • Guideline 4: Public Participation in support of the EIA Regulations, 2006; and • Guideline 5: Assessment of alternatives and impacts in support of the EIA Regulations, 2006.	The guidelines will be used throughout the environmental Scoping and Impact Assessment process.
Best Practise Guideline (BPG) Series: The BPG series refers to publications by the then Department of Water Affair and Forestry (now Department of Water and Sanitation – DWS) providing best practice principles and guidelines relevant to certain aspects of water management. Best practice guidelines relevant to the proposed project include the following: • BPG H1: Integrated Mine Water Management; • BPG H2: Pollution Prevention and Minimisation of Impacts; • BPG H3: Water Reuse and Reclamation; • BPG H4: Water treatment; • BPG G1: Storm Water Management; • BPG G3: Water Monitoring Systems; and • BPG G4: Impact Prediction.	The environmental Scoping and Impact Assessment process.

4.1 APPLICABLE NATIONAL LEGISLATION

The legal framework within which the proposed KTD1 Remining Project operates is governed by many Acts, Regulations, Standards and Guidelines on an international, national, provincial and local level. Legislation applicable to the project includes (but is not limited to) those discussed below.

4.1.1 THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT (NEMWA)

The applicable waste act is no. 59 of 2008: National Environmental Management: Waste Act, 2008 (NEM:WA). On 2 June 2014 the National Environmental Management: Waste Amendment Act came into force. Mine Waste

is accordingly no longer governed by the MPRDA but is subject to all the provisions of the National Environmental Management: Waste Act, 2008 (NEMWA).

Section 16 of the NEMWA must also be considered which states as follows:

1. A holder of waste must, within the holder's power, take all reasonable measures to-

    a) "*Avoid the generation of waste and where such generation cannot be avoided, to minimise the toxicity and amounts of waste that are generated;*

    b) Reduce, re-use, recycle and recover waste;

    c) Where waste must be disposed of, ensure that the waste is treated and disposed of in an environmentally sound manner;

    d) Manage the waste in such a manner that it does not endanger health or the environment or cause a nuisance through noise, odour, or visual impacts;

    e) Prevent any employee or any person under his or her supervision from contravening the Act; and

    f) *Prevent the waste from being used for unauthorised purposes.*"

These general principles of responsible waste management will be incorporated into the requirements in the EMPr to be implemented for this project.

Waste can be defined as either hazardous or general in accordance with Schedule 3 of the NEMWA (2014) as amended. "Schedule 3: Defined Wastes" has been broken down into two categories – Category A being hazardous waste; and Category B being general waste.

In order to attempt to understand the implications of these waste groups, it is important to ensure that the definitions of all the relevant terminologies are defined:

- Hazardous waste: means "*any waste that contains organic or inorganic elements or compounds that may, owning to the inherent physical, chemical or toxicological characteristic of that waste, have a detrimental impact on health and the environment and includes hazardous substances, materials or objects within business waste, residue deposits and residue stockpiles*."
- Residue deposits: means "*any residue stockpile remaining at the termination, cancellation or expiry of a prospecting right, mining right, mining permit, exploration right or production right*."
- Residue stockpile: means "*any debris, discard, tailings, slimes, screening, slurry, waste rock, foundry sand, mineral processing plant waste, ash or any other product derived from or incidental to a mining operation and which is stockpiled, stored or accumulated within the mining area for potential re-use, or which is disposed of, by the holder of a mining right, mining permit or, production right or an old order right, including historic mines and dumps created before the implementation of this Act*." Residue stockpiles are considered to be hazardous waste.
- General waste: means "*waste that does not pose an immediate hazard or threat to health or to the environment and includes – domestic waste; building and demolition waste; business waste; inert waste; or any waste classified as non-hazardous waste in terms of the regulations made under Section 69*."

Furthermore, the NEMWA provides for specific waste management measures to be implemented, as well as providing for the licensing and control of waste management activities. It was determined that the remining triggered waste management activities in terms of Category B of GN R. 921 which states that "*a person who wishes to commence, undertake or conduct an activity listed under this Category, must conduct an environmental impact assessment process, as stipulated in the environmental impact assessment regulations made under section 24(5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as part of a waste management licence application*."

Although the mine has an existing EMPr, no reclamation activities are included in the current EMPr. The KDT 1 TSF remining project triggers Activity B11 of GN921. The following activities therefore form part of this application:

Table 5: Applicable Waste Activities

Relevant Notice and activity	Activity Description	Requirement
Activity B11 of GN921	*The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002).*	Although the mine has an existing EMPr, no reclamation activities are included in the current EMPr.

4.1.2 THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT (MPRDA)

The MPRDA aims to "make provision for equitable access to, and sustainable development of, the nation's mineral and petroleum resources". The MPRDA outlines the procedural requirements that need to be met to acquire mineral and petroleum rights in South Africa. The MPRDA further governs the sustainable utilisation of South Africa's mineral resources. In the event that the proposed activities require material (e.g. sand, gravel, aggregate) for the purposes of construction then the provisions of the MPRDA may apply.

Several amendments have been made to the MPRDA. These include, but are not limited to, the amendment to Section 102 which concerns the amendment of rights, permits, programmes and plans, to requiring the written permission from the Minister for any amendment or alteration; and the Section 5A(c) requirement that landowners or land occupiers receive twenty-one (21) days' written notice prior to any activities taking place on their properties. One of the most recent amendments requires all mining related activities to follow the full NEMA process as per the 2014 EIA Regulations, which came into effect on 4 December 2014 as was amended in April 2017. This Scoping Report pertains to an WML application for the proposed remining of the KTD1 TSF within the Western Platinum Ltd (Pty) mining right area.

In support of the WML application submitted for the KTD1 remining project, the applicant is required to conduct an EIA process comprising of the preparation of environmental Scoping and EIA Reports, an EMPr, as well as Interested and Affected Party (I&AP) consultations, all of which must be submitted to the DMRE for adjudication. This report has been compiled in accordance with Regulation 49 of the MPRDA and Regulation 21 and Appendix 2 of the EIA Regulations (2014, as amended) in order to satisfy the criteria for a Scoping Report. Pending presentation of the results of the baseline / scoping studies and inclusion of comments from I&APs, the finalised Scoping Report will be submitted to the DMRE for review and acceptance as well as permission to proceed with the Impact Assessment phase of the EIA process. The review and commenting periods for the EIA Report and associated EMPr will be determined at a later date and communicated to all registered I&APs.

4.1.3 THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA)

The main aim of the National Environmental Management Act, 1998 (Act 107 of 1998 – NEMA) is to provide for co-operative governance by establishing decision-making principles on matters affecting the environment. In terms of the NEMA EIA Regulations, the applicant is required to appoint an EAP to undertake the EIA process, as well as conduct the public participation process towards an application for EA. In South Africa, EIAs became a legal requirement in 1997 with the promulgation of regulations under the Environment Conservation Act (ECA). Subsequently, NEMA was passed in 1998. Section 24(2) of NEMA empowers the Minister and any MEC, with the concurrence of the Minister, to identify activities which must be considered, investigated, assessed and reported on to the competent authority responsible for granting the relevant EA. On 21 April 2006, the Minister of Environmental Affairs and Tourism (now DEA) promulgated regulations in terms of Chapter 5 of the NEMA.

These regulations, in terms of the NEMA, were amended in June 2010 and again in December 2014 as well as April 2017 and in 2021. The 2014 NEMA EIA Regulations (as amended) are applicable to this project. Mining activities, including activities such as the proposed project, officially became governable under the NEMA EIA Regulations (as amended) in December 2014.

The objective of the EIA Regulations is to establish the procedures that must be followed in the consideration, investigation, assessment and reporting of the listed activities that have been identified to be triggered by the proposed development/ mining activity. The purpose of these procedures is to provide the competent authority with adequate information to make decisions which ensure that activities which may impact negatively on the environment to an unacceptable degree are not authorised, and that activities which are authorised are undertaken in such a manner that the environmental impacts are managed to acceptable levels.

In accordance with the provisions of Sections 24(5) and Section 44 of the NEMA the Minister has published Regulations (GN R. 982) pertaining to the required process for conducting EIAs in order to apply for, and be considered for, the issuing of an EA. These EIA Regulations provide a detailed description of the EIA process to be followed when applying for EA for any listed activity. The Regulations differentiate between a simpler Basic Assessment Process (required for activities listed in GN R. 983 and GN R. 985) and a more complete EIA process (activities listed in GN R. 984). This project does not trigger any activities listed in GN. 983, 984 or 895. In the case of the remining Project, there are Category B waste activities triggered under GN R. 921 made under NEM:WA which stipulates that a full EIA process is necessary.

An environmental Scoping and Impact Assessment process is reserved for activities which have the potential to result in significant impacts which are complex to assess, including waste activities identified under the NEM:WA. Scoping and Impact Assessment studies accordingly provide a mechanism for the comprehensive assessment of activities that are likely to have more significant environmental impacts. Figure 3 below provides a graphic representation of all the components of a full EIA process.

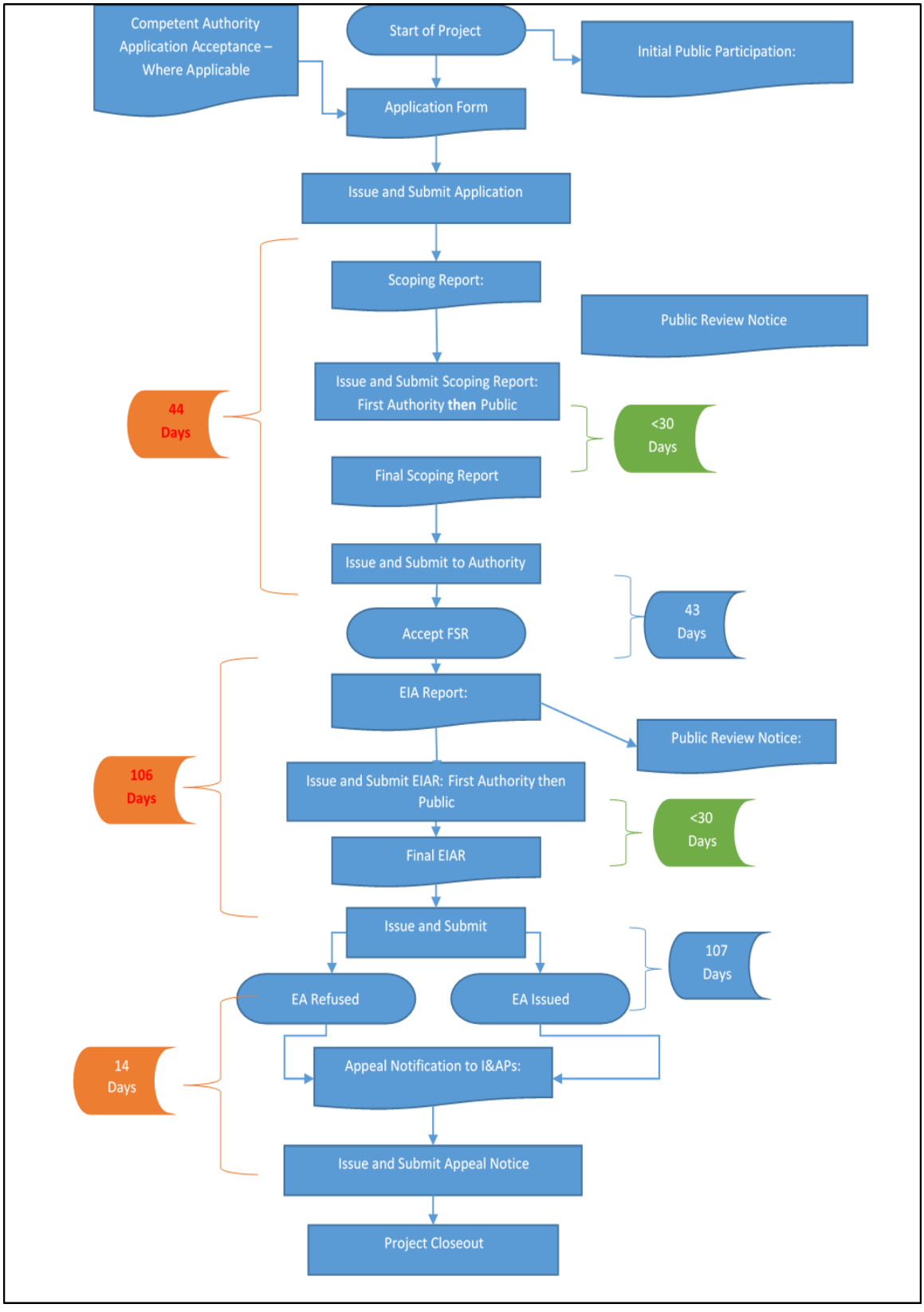

Figure 3: EIA process diagram

Section 24P of the NEMA requires that an applicant for an environmental authorisation relating to prospecting, mining or production must, before the Minister responsible for mineral resources issues the EA, comply with the prescribed financial provision for the rehabilitation, closure and ongoing post decommissioning management of negative environmental impacts. Therefore, the potential environmental liabilities associated

with the proposed activity must be quantified and indicate the method of financial provision in line with the NEMA Financial Provision Regulations (2015) pertaining to the financial provision for prospecting exploration, mining and production.

4.1.4 THE NATIONAL WATER ACT (NWA)

The National Water Act, 1998 (Act 36 of 1998 – NWA) makes provision for two types of applications for water use licences, namely individual applications and compulsory applications. The NWA also provides that the responsible authority may require an assessment by the applicant of the likely effect of the proposed licence on the resource quality, and that such assessment be subject to the NEMA EIA Regulations. A person may use water, if the use is –

- Permissible as a continuation of an existing lawful water use;
- Permissible in terms of a general authorisation (GA);
- Permissible under Schedule 1; or
- Authorised by a licence.

These water use processes are described in Figure 4.

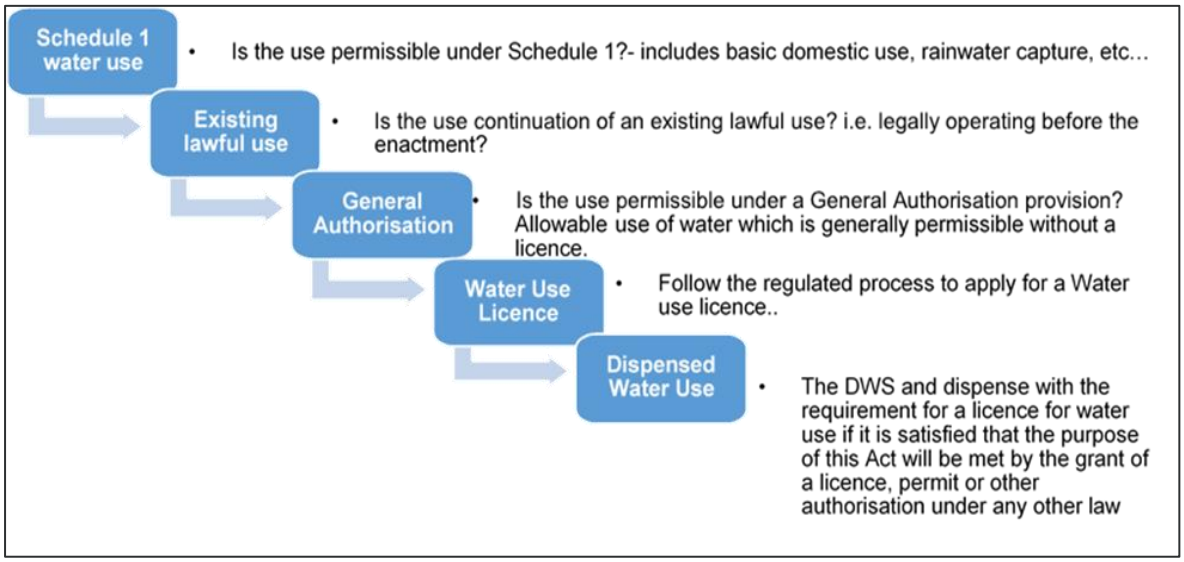

Figure 4: Authorisation processes for new water uses.

The NWA defines 11 water uses. A water use may only be undertaken if authorised by the Department of Water and Sanitation (DWS). Water users are required to register certain water uses that actually took place on the date of registration, irrespective of whether the use was lawful or not. The water uses for which an authorisation or licence can be issued include:

- Taking water from a water resource;
- Storing water;
- Impeding or diverting the flow of water in a watercourse;
- Engaging in a stream flow reduction activity contemplated in section 36;
- Engaging in a controlled activity identified as such in section 37(1) or declared under section 38(1);
- Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduits;
- Disposing of waste in a manner which may detrimentally impact on a water resource;

- Disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process;
- Altering the bed, banks, course or characteristics of a watercourse;
- Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and
- Using water for recreational purposes.

Western Platinum (Pty) Ltd was granted an Integrated Water Use Licence (IWUL) in October 2021 (Water Use Licence 3/A21K/ABCFGIJ/1738) for the various water uses. No new water uses are applicable to this KTD1 remining application.

4.1.5 NWA GOVERNMENT NOTICE 704 (GN 704)

GN 704 (Government Gazette 20118 of June 1999) was established to provide regulations on the use of water for mining and related activities aimed at the protection of water resources. The five main principle conditions of GN 704 applicable to this project are:

- Condition 4 – which defines the area in which, mine workings or associated structures may be located, with reference to a watercourse and associated flooding. Any residue deposit, dam, reservoir together with any associated structure or any other facility should be situated outside the 1:100 year flood-line. Any underground or opencast mining, prospecting or any other operation or activity should be situated or undertaken outside of the 1:50 year flood-line. Where the flood-line is less than 100 metres away from the watercourse, then a minimum watercourse buffer distance of 100 metres is required for infrastructure and activities;
- Condition 5 – which indicates that no residue or substance which causes or is likely to cause pollution of a water resource may be used in the construction of any dams, impoundments or embankments or any other infrastructure which may cause pollution of a water resource;
- Condition 6 – which describes the capacity requirements of clean and dirty water systems. Clean and dirty water systems must be kept separate and must be designed, constructed, maintained and operated to ensure conveyance the 1:50 year peak flow. Clean and dirty water systems should not spill into each other more frequently than once in 50 years. Any dirty water dams should have a minimum freeboard of 0.8m above full supply level;
- Condition 7 – which describes the measures which must be taken to protect water resources. All dirty water or substances which may cause pollution should be prevented from entering a water resource (by spillage, seepage, erosion, etc.) and ensure that water used in any process is recycled as far as practicable; and
- Condition 10 – which describes the requirements for operations involving extraction of material from the channel of a watercourse. Measures should be taken to prevent impacts on the stability of the watercourse, prevent scour and erosion resulting from operations, prevent damage to in-stream habitat through erosion, sedimentation, alteration of vegetation and flow characteristics, construct treatment facilities to treat water before returning it to the watercourse, and implement control measures to prevent pollution by oil, grease, fuel and chemicals.

These conditions above restrict the activities from being located within the 1:50 floodline. The provisions of GN704 are already triggered and the mine has the relevant GN704 exemptions already in place.

4.1.6 CATCHMENT MANAGEMENT STRATEGIES

The country has been divided into nineteen Water Management Areas (WMAs). The delegation of water resource management from central government to catchment level will be achieved by establishing Catchment Management Agencies (CMAs) at WMA level. Each CMA will progressively develop a Catchment Management Strategy (CMS) for the protection, use, development, conservation, management and control of water resources

within its WMA. This is to ensure that on a regional scale, water is protected, used, developed, conserved, managed and controlled in a sustainable and equitable manner for the benefit of all persons. The main instrument that guides and governs the activities of a WMA is the Catchment Management Strategy (CMS) which, while conforming to relevant legislation and national strategies, provides detailed arrangements for the protection, use, development, conservation, management and control of the region's water resources. According to DWS' water management areas delineations, the mine area is located within the Upper Crocodile sub-catchment (A21J and A21K) within the Crocodile (West) and Marico Water Management Area.

According to the Crocodile West Internal Strategic Perspective (2004),The irrigation as well as urban demand (Madibeng, formerly Brits and environs) downstream of Hartbeespoort Dam is met by storage from Hartbeespoort Dam. The mining demand is partially met by transfers from the Upper Vaal WMA while the remainder is abstracted from groundwater or supplied from local dams. The Roodekopjes and Buffelspoort dams in this sub-catchment support irrigation activities below these dams. Water is also being transferred from Roodekopjes Dam to Vaalkop Dam via a canal for distribution to domestic, industrial and mining users by Magalies Water. There is a small surplus in this catchment that is essentially the portion of the irrigation return flows. This is allocated to irrigators in the Middle and Lower Crocodile. The contribution of mine dewatering on the surface and groundwater resources is not known. It may be assumed that some form of negative impact on users and the environment could be occurring as a result of these dewatering activities.

The Crocodile West River is the largest and most important river in the Crocodile West and Marico Water Management Area. The Catchment extends northwards from the Witwatersrand Catchment Divide in Central Johannesburg (where the Crocodile River originates) up to the confluence of the Crocodile and Marico rivers. From the confluence of the Crocodile and Marico rivers the river is known as the Limpopo River, which forms the northern border of South Africa with Botswana and then with Zimbabwe, before flowing into Mozambique where it discharges into the Indian Ocean. The Limpopo River Basin is thus an international basin shared by South Africa, Botswana, Zimbabwe and Mozambique. In South Africa the Crocodile West River is characterised by the sprawling urban and industrial areas of Northern Johannesburg and Pretoria, extensive irrigation downstream of Hartbeespoort Dam and large mining developments north of the Magaliesberg.

4.1.7 NEMWA WASTE CLASSIFICATION AND MANAGEMENT REGULATIONS, 2013 (GN R. 634)

These regulations pertaining to waste classification and management, including the management and control of residue stockpiles and residue deposits from a prospecting, mining, exploration or production operation which is relevant to the proposed project. The purpose of these Regulations is to –

- Regulate the classification and management of waste in a manner which supports and implements the provisions of the Act;
- Establish a mechanism and procedure for the listing of waste management activities that do not require a Waste Management Licence;
- Prescribe requirements for the disposal of waste to landfill;
- Prescribe requirements and timeframes for the management of certain wastes; and
- Prescribe general duties of waste generators, transporters and managers.

Chapter 8 of the Regulations stipulates that unless otherwise directed by the Minister to ensure a better environmental outcome, or in response to an emergency so as to protect human health, property or the environment –

- Waste generators must ensure that their waste is assessed in accordance with the Norms and Standards for Assessment of Waste for Landfill Disposal set in terms of section 7(1) of the Act prior to the disposal of the waste to landfill;
- Waste generators must ensure that the disposal of their waste to landfill is done in accordance with the Norms and Standards for Disposal of Waste to Landfill set in terms of section 7(1) of the Act; and

- Waste managers disposing of waste to landfill must only do so in accordance with the Norms and Standards for Disposal of Waste to Landfill set in terms of section 7 (1) of the Act.
- The residue from the KTD1 TSF is considered to be hazardous waste. The activities applicable to this application involve the mechanical remining of the tailings residue stockpile via bench mining using excavators. The tailings will then be transported to Klipfontein processing plant via trucks on existing roads. No additional waste will be generated as part of the remining project.

Moreover, Chapter 9 of this Regulation stipulates the requirements for motivation and consideration of listed Waste Management Activities that do not require a WML . The motivation must:

- Demonstrate that the waste management activity can be implemented without unacceptable impacts on, or risk to, the environment or health;
- Must provide a description of the waste;
- Description of waste minimisation or waste management plans; and
- Description of potential impacts, etc.

The transitional provisions under Chapter 6 of this Regulation prescribes timeframes in which all waste must be classified within 18 months from the date of commencement of these Regulations (23 August 2013). Waste streams generated from the proposed remining activities and not listed under Annexure 1 of this Regulation will be classified accordingly to SANS 10234 and subsequently managed and disposed or stored in accordance with the relevant legislative requirements.

4.1.8 NEMWA NATIONAL NORMS AND STANDARDS FOR THE ASSESSMENT OF WASTE FOR LANDFILL DISPOSAL, 2013 (GN R. 635)

These Norms and Standards prescribe the requirements for the assessment of waste prior to storage or disposal to landfill. The aim of the waste assessment tests is to characterise the material to be deposited or stored in terms of the above-mentioned waste assessment guidelines set by the DFFE. These norms and standard will be applicable to the project as residue from the KTD1 TSF is considered to be hazardous waste and this will be stored temporarily at Klipfontein processing plant before processing.

4.1.9 NEMWA NATIONAL NORMS AND STANDARDS FOR THE DISPOSAL OF WASTE TO LANDFILL, 2013 (GN R. 636)

Once the waste has been assessed and waste type determined, these Norms and Standards can be used to determine the minimum requirements for the landfill and containment barrier design. This will distinguish between Class A, Class B, Class C, or Class D landfills and the associated containment barrier requirements. Although these Norms and Standards prescribe the containment barrier or liner design for each determined waste type, the recent amendments in chapter 3 of the regulations to the planning and management of residue stockpiles and residue deposits, a competent person must recommend the pollution control measures suitable for a specific residue stockpile or residue deposit on the basis of a risk analysis as contemplated in regulations 4 and 5 of the regulations. The recommendation should be founded on a risk analysis based on the characteristics and classification in regulation 4 and 5 of these Regulations, towards determining the appropriate mitigation and management measures. As this project involves remining of an existing TSF these norms and standards will not be applicable to the remining project.

4.1.10 THE REGULATIONS REGARDING THE PLANNING AND MANAGEMENT OF RESIDUE STOCKPILES AND RESIDUE DEPOSITS AND ASSOCIATED AMENDMENT

These Regulations pertain to the planning and management of residue stockpiles and residue deposits from a prospecting, mining, exploration or production operation were published in 2015 and were amended in 2018. The Regulations and associated amendment relate to the assessment of impacts and the analyses of risks relating to the management of residue stockpiles and residue deposits, and involve the following:

- The identification and assessment of environmental impacts arising from the establishment of residue stockpiles and residue deposits must be done as part of the environmental impact assessment conducted in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998);
- A risk analysis based on the characteristics and the classification set out in regulation 4 (characterisation of residue stockpiles and residue deposits) and 5 (classification of residue stockpiles and residue deposits) of these regulations must be used to determine the appropriate mitigation and management measures; and
- A competent person must recommend the pollution control measures suitable for a specific residue stockpile or residue deposit on the basis of a risk analysis as contemplated in regulations 4 and 5 of these Regulations.

As this project involves remining of an existing TSF these regulations will not be applicable to the remining project.

4.1.11 THE NATIONAL ENVIRONMENTAL MANAGEMENT AIR QUALITY ACT (NEMAQA)

The National Environmental Management: Air Quality Act (Act No. 39 of 2004 as amended – NEMAQA) is the main legislative tool for the management of air pollution and related activities. The Object of the Act is:

- To protect the environment by providing reasonable measures for –
    i. the protection and enhancement of the quality of air in the republic;
    ii. the prevention of air pollution and ecological degradation; and
    iii. securing ecologically sustainable development while promoting justifiable economic and social development; and
- Generally, to give effect to Section 24(b) of the constitution in order to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and well-being of people.

The NEMAQA mandates the Minister of Environment to publish a list of activities which result in atmospheric emissions and consequently cause significant detrimental effects on the environment, human health and social

welfare. All scheduled processes as previously stipulated under the Air Pollution Prevention Act (APPA) are included as listed activities with additional activities being added to the list. The updated Listed Activities and Minimum National Emission Standards were published on the 22nd November 2013 (Government Gazette No. 37054).

According to the NEMAQA, air quality management control and enforcement is in the hands of local government with District and Metropolitan Municipalities as the licensing authorities. Provincial government is primarily responsible for ambient monitoring and ensuring municipalities fulfil their legal obligations, with national government primarily as policy maker and co-ordinator. Each sphere of government must appoint an Air Quality Officer responsible for co-ordinating matters pertaining to air quality management. Given that air quality management under the old Act was the sole responsibility of national government, local authorities have in the past only been responsible for smoke and vehicle tailpipe emission control.

The National Pollution Prevention Plans Regulations were published in March 2014 (Government Gazette 37421) and tie in with the National Greenhouse Gas (GHG) Emission Reporting Regulations which took effect on 3 April 2017. In summary, the Regulations aim to prescribe the requirements that pollution prevention plans of greenhouse gases declared as priority air pollutants, need to comply with in terms of the NEMAQA. The Regulations specify who needs to comply, and by when, as well as prescribing the content requirements. Mines do have an obligation to report on the GHG emissions under these Regulations. This is only applicable to stationary sources of pollution and therefore GHG emissions from trucks transporting the residue are not included as part of these reporting requirements and this will therefore not be applicable for the KTD1 remining project.

4.1.12 NATIONAL DUST CONTROL REGULATIONS

Dustfall is assessed for nuisance impact and not for inhalation health impact. The National Dust Control Regulations (Department of Environmental Affairs, 2013) prescribes measures for the control of dust in residential and non-residential areas. Acceptable dustfall rates are measured (using American Standard Testing Methodology (ASTM) D1739:1970 or equivalent) at and beyond the boundary of the premises where dust originates. In addition to the dustfall limits, the National Dust Control Regulations prescribe monitoring procedures and reporting requirements. Dust will be created from the proposed remining will be managed in accordance with these Regulations.

4.1.13 THE NATIONAL HERITAGE RESOURCES ACT (NHRA)

The National Heritage Resources Act (Act 25 of 1999 – NHRA) stipulates that cultural heritage resources may not be disturbed without authorisation from the relevant heritage authority. Section 34(1) of the NHRA states that, "*no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority…*" The NHRA is utilised as the basis for the identification, evaluation and management of heritage resources and in the case of Cultural Resource Management (CRM) those resources specifically impacted on by development as stipulated in Section 38 of NHRA, and those developments administered through the NEMA, MPRDA and the Development Facilitation Act (FDA) legislation. In the latter cases the feedback from the relevant heritage resources authority is required by the State and Provincial Departments managing these Acts before any authorisations are granted for a development. The last few years have seen a significant change towards the inclusion of heritage assessments as a major component of Environmental Impact Processes required by the NEMA and MPRDA. This change requires us to evaluate the Section of these Acts relevant to heritage (Fourie, 2008b).

The NEMA 23(2)(b) states that an integrated environmental management plan should, "*…identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage*". A study of subsections (23)(2)(d), (29)(1)(d), (32)(2)(d) and (34)(b) and their requirements reveals the compulsory inclusion of the identification of cultural resources, the evaluation of the impacts of the proposed activity on these resources, the identification of alternatives and the management procedures for such cultural resources for each of the documents noted in the Environmental Regulations. A further important aspect to be taken into account of in the EIA Regulations under the NEMA relates to the Specialist Report requirements (Appendix 6 of EIA Regulations 2014, as amended).

The MPRDA defines 'environment' as it is in the NEMA and, therefore, acknowledges cultural resources as part of the environment. Section 39(3)(b) of this Act specifically refers to the evaluation, assessment and identification of impacts on all heritage resources as identified in Section 3(2) of the NHRA that are to be impacted on by activities governed by the MPRDA. Section 40 of the same Act requires the consultation with any State Department administering any law that has relevance on such an application through Section 39 of the MPRDA. This implies the evaluation of Heritage Assessment Reports in Environmental Management Plans or Programmes by the relevant heritage authorities (Fourie, 2008b).

As the remining project only involves remining of an existing TSF and no other infrastructure is proposed as part of this WML application no heritage impacts are expected.

4.1.14 NATIONAL ENVIRONMENTAL MANAGEMENT BIODIVERSITY ACT (NEMBA) – ALIEN AND INVASIVE SPECIES LIST

This Act is applicable since is protects the quality and quantity of arable land in South Africa. Loss of arable land should be avoided and declared Weeds and Invaders in South Africa are categorised according to one of the following categories, and require control or removal:

- *Category 1a Listed Invasive Species*: Category 1a Listed Invasive Species are those species listed as such by notice in terms of section 70(1)(a) of the Act as species which must be combated or eradicated;
- *Category 1b Listed Invasive Species*: Category 1b Listed Invasive Species are those species listed as such by notice in terms of section 70(1)(a) of the Act as species which must be controlled;
- *Category 2 Listed Invasive Species*: Category 2 Listed Invasive Species are those species listed by notice in terms of section 70(1)(a) of the Act as species which require a permit to carry out a restricted activity within an area specified in the Notice or an area specified in the permit, as the case may be; and
- *Category 3 Listed Invasive Species*: Category 3 Listed Invasive Species are species that are listed by notice in terms of section 70(1)(a) of the Act, as species which are subject to exemptions in terms of section 71(3) and prohibitions in terms of section 71A of Act, as specified in the Notice.

The provisions of this Act have been considered and where relevant will be incorporated into the proposed mitigation measures and requirements of the EMPr.

4.1.15 THE CONSERVATION OF AGRICULTURAL RESOURCES ACT

The law on Conservation of Agricultural Resources (Act 43 of 1983) aims to provide for the conservation of the natural agricultural resources of the Republic by the maintenance of the production potential of land, by the combating and prevention of erosion and weakening or destruction of the water sources, and by the protection of the vegetation and the combating of weeds and invader plants. In order to achieve the objectives of this Act, control measures related to the following may be prescribed to land users to whom they apply:

- The cultivation of virgin soil;
- The utilisation and protection of land which is cultivated;
- The irrigation of land;
- The prevention or control of waterlogging or salination of land;
- The utilisation and protection of vleis, marshes, water sponges, water courses and water sources;
- The regulating of the flow pattern of run-off water;
- The utilisation and protection of the vegetation;
- The grazing capacity of veld, expressed as an area of veld per large stock unit;
- The maximum number and the kind of animals which may be kept on veld; The prevention and control of veld fires;

- The utilisation and protection of veld which has burned;
- The control of weeds and invader plants;
- The restoration or reclamation of eroded land or land which is otherwise disturbed or denuded;
- The protection of water sources against pollution on account of farming practices;
- The construction, maintenance, alteration or removal of soil conservation works or other structures on land; and
- Any other matter which the Minister may deem necessary or expedient in order that the objects of this Act may be achieved.

Further, different control measures may be prescribed in respect of different classes of land users or different areas or in such other respects as the Minister may determine. As the project involves remining of an existing TSF no negative impacts on agricultural land availability are expected. There is the possibility of reinstating agricultural use possibilities with rehabilitation of the footprint of the KDT1 site post remining, which could have a positive impact on agricultural land availability in the future.

4.1.16 THE SPATIAL PLANNING AND LAND USE MANAGEMENT ACT (SPLUMA)

The Spatial Planning and Land Use Management (Act 16 of 2013 – SPLUMA) is set to aid effective and efficient planning and land use management, as well as to promotes optimal exploitation of minerals and mineral resources. The SPLUMA was developed to legislate for a single, integrated planning system for the entire country. Therefore, the Act provides a framework for a planning system for the country and introduces provisions to cater for development principles; norms and standards; inter-governmental support; Spatial Development Frameworks (SDFs) across national, provincial, regional and municipal areas; Land Use Schemes (LUS); and municipal planning tribunals. Furthermore, the SPLUMA strengthens the position of mining right holders when land needs to be re-zoned for mining purposes. The KTD1 project area is currently zoned as mining and agricultural however the site is located within the boundary of the mining right and therefore no re-zoning is required.

4.1.1 ENVIRONMENT CONSERVATION ACT (ECA)

The Environment Conservation Act (Act 73 of 1989 – ECA) was, prior to the promulgation of the NEMA, the backbone of environmental legislation in South Africa. To date the majority of the ECA has been repealed by various other Acts, however Section 25 of the Act and the Noise Regulations (GN R. 154 of 1992) promulgated under this section are still in effect. These Regulations serve to control noise and general prohibitions relating to noise impact and nuisance.

4.1.2 NOISE CONTROL REGULATIONS, 1992 (GN R.154)

In terms of section 25 of the ECA, the National Noise Control Regulations (GN R. 154 – NCRs) published in Government Gazette No. 13717 dated 10 January 1992, were promulgated. The NCRs were revised under GN R. 55 of 14 January 1994 to make it obligatory for all authorities to apply the regulations.

The NCRs will need to be considered in relation to the potential noise that may be generated mainly during the operational phase of the proposed project. The two key aspects of the NCRs relate to disturbing noise and noise nuisance.

Section 4 of the Regulations prohibits a person from making, producing or causing a disturbing noise, or allowing it to be made produced or caused by any person, machine, device or apparatus or any combination thereof. A disturbing noise is defined in the Regulations as "*a noise level which exceeds the zone sound level or if no zone sound level has been designated, a noise level which exceeds the ambient sound level at the same measuring point by 7 dBA or more*."

Section 5 of the NCRs in essence prohibits the creation of a noise nuisance. A noise nuisance is defined as "*any sound which disturbs or impairs or may disturb or impair the convenience or peace of any person.*" Noise nuisance

is anticipated from the proposed project particularly to those residents that are situated in close proximity to the project area.

The South African National Standard 10103 also applies to the measurement and consideration of environmental noise and should be considered in conjunction with these Regulations.

4.1.3 NOISE STANDARDS

There are a few South African scientific standards (SABS) relevant to noise from mines, industry and roads. They are:

- South African National Standard (SANS) 10103:2008 – 'The measurement and rating of environmental noise with respect to annoyance and to speech communication';
- SANS 10210:2004 – 'Calculating and predicting road traffic noise';
- SANS 10328:2008 – 'Methods for environmental noise impact assessments';
- SANS 10357:2004 – 'The calculation of sound propagation by the Concave method';
- SANS 10181:2003 – 'The Measurement of Noise Emitted by Road Vehicles when Stationary'; and
- SANS 10205:2003 – 'The Measurement of Noise Emitted by Motor Vehicles in Motion'.

The relevant standards use the equivalent continuous rating level as a basis for determining what is acceptable. The levels may take single event noise into account, but single event noise by itself does not determine whether noise levels are acceptable for land use purposes. With regards to SANS 10103:2008, the recommendations are likely to inform decisions by authorities, but non-compliance with the standard will not necessarily render an activity unlawful per se.

4.2 PERIOD FOR WHICH AUTHORIZATION IS REQUIRED

The authorisation will be required for the duration of the Mining Right.

5 NEED AND DESIRABILITY OF THE PROPOSED PROJECT

This section will examine the need and desirability of the proposed KTD1 remining Project. This section will examine of the project as a source of employment particularly with regards to the benefits of continuing and expanding Western Platinum operations at the existing mine, whilst taking environmental aspects into consideration.

5.1 IMPORTANCE OF THE RESOURCE

The use of PGMs produced as part of the platinum mining operations spreads over a vast array of products such as catalytic converters in emission control equipment for which platinum, palladium and rhodium are used. The largest application for platinum catalysts is used in the production of silicones, followed by paraxylene production. Other uses include autocatalysis (such as three-way catalyst compositions which employ platinum, palladium and/or rhodium in an arrangement of combinations for the abatement of emissions from petrol/rich-bur engines), jewellery, electrical and electronic equipment (hard disks, video recorders, music players), glass (glassware, liquid crystal display for flat-screen computer monitors and televisions), medical (drugs including the treatment of cancer), automotive (sparks plugs, oxygen sensors), fertilisers and in chemical and petroleum refining industries (SEF Western Platinum Mine EIA and EMPr, 2012).

5.2 PROJECT BENEFITS

The proposed KTD1 remining operations, will allow the continued contribution of the mine to favourable economic impacts on both the local and regional economies. The proposed KTD1 remining project activities do fit in with the surrounding developments and land uses, which are largely mining related. The KTD1 residue stockpile is a dormant stockpile containing historical PGM and Chrome tailings, the residue stockpile will be remined using hydro mining and mechanical remining which will allow further extraction of PGM and chrome. No non-renewable resource will be depleted as the project is for remining of an existing residue stockpile. As the residue stockpile is an already constructed and is a dormant TSF, the project will not have highly significant environmental impacts while allowing the mine to extend it current operations and associated socio-economic benefits. The project will also allow the mine to use the area going forward for a new land use or new infrastructure.

5.3 NEED AND DESIRABILITY ANALYSIS

The needs and desirability analysis component of the "*Guideline on need and desirability in terms of the Environmental Impact EIA Regulations (Notice 819 of 2014*)" includes, but is not limited to, describing the linkages and dependencies between human well-being, livelihoods and ecosystem services applicable to the area in question, and how the proposed development's ecological impacts will result in socio-economic impacts (e.g. on livelihoods, loss of heritage sites, opportunity costs, etc.). Table 6 below presents the needs and desirability analysis undertaken for the project.

Table 6: Needs and desirability analysis for the KTD1 Remining Project

Ref No.	Question	Answer
1	**Securing ecological sustainable development and use of natural resources**	
1.1	How were the ecological integrity considerations taken into account in terms of: Threatened Ecosystems, Sensitive and vulnerable ecosystems, Critical Biodiversity Areas, Ecological Support Systems, Conservation Targets, Ecological drivers of the ecosystem, Environmental Management Framework, Spatial Development Framework (SDF) and global and international responsibilities.	The project is for remining of an existing residue stockpile, and this application does not include any infrastructure. The identified preliminary impacts and associated mitigation measures will be further assessed in the EIA phase and the results thereof included in the EIA Report and accompanying EMPr. The potential benefits and motivation for the project is presented in Sections 5.1 and 5.2.
1.2	How will this project disturb or enhance ecosystems and / or result in the loss or protection of biological diversity? What measures were explored to avoid these negative impacts, and where these negative impacts could not be avoided altogether, what measures were explored to minimise and remedy the impacts? What measures were explored to enhance positive impacts?	Refer to baseline ecological information in Section 8, and the impact assessment and mitigation measures in Section 9 of this Scoping Report. Efforts will be made to avoid disturbance to sensitive biodiversity. These sections will be further expanded on in the EIA Report and EMPr.
1.3	How will this development pollute and / or degrade the biophysical environment? What measures were explored to either avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise	Refer to the alternatives considered for this project in Section 6, the baseline ecological information in Section 8, and the impact assessment and mitigation measures in Section 9 of this Scoping Report. These sections will be further expanded on in the EIA Report and EMPr.

Ref No.	Question	Answer
	and remedy the impacts? What measures were explored to enhance positive impacts?	
1.4	What waste will be generated by this development? What measures were explored to 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?	Refer to Section 3.1.3 of this Scoping Report.
1.5	How will this project 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 the impacts? What measures were explored to enhance positive impacts?	No impact on heritage is expected as the site is already an existing residue stockpile. The removal of the TSF will lead to an enhancement of the visual landscape once remining is completed.
1.6	How will this project 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	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. No non-renewable resource will be depleted as the project is for remining of an existing residue stockpile.

Ref No.	Question	Answer
	avoided altogether, what measures were explored to minimise and remedy the impacts? What measures were explored to enhance positive impacts?	
1.7	How will this project use and / or impact on renewable natural resources and the ecosystem of which they are part? Will the use of the resources and / or impacts on the ecosystem jeopardise the integrity of the resource and / or system taking into account 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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
1.7.1	Does the proposed project exacerbate the increased dependency on increased use of resources to maintain economic growth or does it reduce resource dependency (i.e. de-materialised growth)?	The proposed project will rely on / depend on the extraction of a natural, non-renewable resource however the resource is to be extracted from an existing residue stockpile. This should therefore not contribute in any significant way to any resource dependency.
1.7.2	Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra-	The proposed project will extend the life of the mine in an area where mineral reserves have already been identified and are already being mined. Refer to Section 6 for the alternatives considered in this Scoping Report. The project extends the life of mine, forms part of the

Ref No.	Question	Answer
	and intergenerational equity, and are there more important priorities for which the resources should be used?	business model and plans to reduce the mining footprint. Once the residue stockpile has been remined, the area will be rehabilitated.
1.7.3	Do the proposed location, type and scale of development promote a reduced dependency on resources?	The remining is already within existing mine and the proposed project will be an addition to the existing mine processes utilising mostly existing infrastructure.
1.8	**How were a risk-averse and cautious approach applied in terms of ecological impacts**	
1.8.1	What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)?	In terms of the ecological impacts, there are no significant current limitations. The project is only for remining of an existing residue stockpile and therefore ecological impacts will be low to negligible.
1.8.2	What is the level of risk associated with the limits of current knowledge?	The level of risk is low as previous specialist studies have been conducted in the areas surrounding the proposed project location, and therefore some information is already available. The project is only for remining of an existing residue stockpile and therefore ecological impacts will be low to negligible.
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?	Sufficient information was gathered prior to the onset of this process to indicate that the potential mining remining is feasible. In addition, it is noted that this project forms part of another existing mining operation.

Ref No.	Question	Answer
1.9	**How will the ecological impacts resulting from this development impact on people's environmental right in terms following?**	
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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
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 socio-economic impacts (e.g. on livelihoods, loss of heritage site, opportunity costs, etc.)?	Refer to baseline ecological information in Section 8, and the impact assessment and mitigation measures in Section 9 of this Scoping Report. These sections will be further expanded in the EIA Report and EMPr.
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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.

Ref No.	Question	Answer
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?	Refer to Section 6 for details of the alternatives considered, as well as this section of the Scoping Report for the advantages and disadvantages of the proposed activity. This aspect will be further expanded on in the EIA Report.
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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
2	**Promoting justifiable economic and social development**	
2.1	**What is the socio-economic context of the area, based on, amongst other considerations, the following:**	
2.1.1	The IDP (and its sector plans' vision, objectives, strategies, indicators and targets) and any other strategic plans, frameworks or policies applicable to the area,	According to the Rustenburg IDP 2022 – 2027; in 2020, the mining sector is the largest within Rustenburg Local Municipality accounting for R 52.1 billion or 76.6% of the total Gross Value Added (GVA) in the local municipality's economy. The sector that contributes the second most to the GVA of the Rustenburg Local Municipality is the community services sector at 6.4%, followed by the finance sector with 5.2%. The sector that contributes the least to the economy

		of Rustenburg Local Municipality is the agriculture sector with a contribution of R 383 million or 0.56% of the total GVA. The mining sector is estimated to be the largest sector within the Rustenburg Local Municipality in 2025, with a total share of 65.3% of the total GVA (as measured in current prices), growing at an average annual rate of 3.9%. The sector that is estimated to grow the slowest is the mining sector with an average annual growth rate of 3.93%. The proposed project will extend the Life of Mine of the allowing the mine to continue supplying jobs at that mine for a longer time period. The surrounding communities will also continue to benefit through direct and indirect income, as well as the mine's use of local contractors and suppliers. According to the Bojanala District Municipality IDP: Bojanala PDM is blessed with mineral deposits and currently there are no signs that these mineral reserves will be depleted. The mining sector has been on upward trend specifically from 2002 onwards, this was due to the increase in demand for platinum which exceeded supply, resulting in a deficit and thus causing an increase in the price. Economic linkages Most of the mining products extracted from BPDM are beneficiated elsewhere. The local mining produce presents opportunities for forward linkages such as the processing and beneficiation of mining products such as the refining of minerals, manufacture of jewellery etc. Mining inputs, such as machinery, piping, tubing, chemicals, mining timber, iron and steel products, explosives, electrical machinery, cables and wiring and foodstuffs are sourced from outside the North West, resulting in a massive income leakage out of the area.

Ref No.	Question	Answer
		The mines potentially represent a substantial local market for these manufactured products and by strengthening the local backward linkages, the manufacturing sector can be stimulated. The mines also provide a market for local SMME's, which act as service providers to the mines, incl. brick making, gearbox repair, general repairs, welding, office cleaning, catering, dry cleaning, laundry services, etc. Technology change – The cost of extraction Overall extraction costs are determined by a combination of variables such as grade of ore, mining depth, geology, labour efficiency and technology. More efficient technology and improved labour productivity can therefore increase the profitability of the mines. Small Scale Mining of Construction Minerals (i.e. small-scale mining of Tin, Chrome, Slate, Lead and Granite) provides an opportunity to second economy players to engage in first economy activities thus narrowing the gap between the two.
2.1.2	Spatial priorities and desired spatial patterns (e.g. need for integrated of segregated communities, need to upgrade informal settlements, need for densification, etc.),	No SDF is in place for the district municipality at this stage. According to the 2018 Rustenburg Local Municipality SDF the development of Rustenburg over the past 20 – 25 years is closely linked with the development of platinum mining in the region. Rustenburg has benefitted greatly from the rise in platinum output between 1994 and 2009 in South Africa, which grew by 67% over that period. Before 2012, Rustenburg had the third fastest growing economy of metropolitan cities in South Africa. As further urban and mining expansion is anticipated, the continuous loss of high potential agricultural land is evident. As the remining project is located in an existing mine are, no further loss of agricultural land is expected as a result of the project and it can be seen to be in line with the SDF.

Ref No.	Question	Answer
2.1.3	Spatial characteristics (e.g. existing land uses, planned land uses, cultural landscapes, etc.), and	Refer to the baseline environment in Section 8 of this Scoping Report. This section will be expanded on in the EIA Report and EMPr.
2.1.4	Municipal Economic Development Strategy ("LED Strategy").	The proposed project will promote and support the sustainability of existing business, as well as assist in increasing local beneficiation and shared economic growth.
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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
2.2.1	Will the development complement the local socio-economic initiatives (such as local economic development (LED) initiatives), or skills development programs?	The proposed project will increase the life of the mine, which will ensure that the community projects initiated by the mine will have an increased life. This will complement the local socio-economic initiatives identified for the area.
2.3	How will this development address the specific physical, psychological, developmental, cultural and social needs and interests of the relevant communities?	Refer to the public participation process undertaken to date in Section 7 of this Scoping Report. Public participation and consultation will continue during the EIA phase as described in Section 10. Furthermore, refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. The impacts will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.

Ref No.	Question	Answer
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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
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.	Refer to Section 6 for details of alternatives considered in this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
2.5.2	Reduce the need for transport of people and goods.	Refer to Section 6 for details of alternatives considered in this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
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),	Refer to Section 6 for details of alternatives considered in this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
2.5.4	Compliment other uses in the area,	Refer to item 1.3 of this table (above). The proposed project entails the remining of an existing residue stockpile. The existing land use, which is mining, will therefore be complimented by the continuation of the project.
2.5.5	Be in line with the planning for the area.	Refer to item 2.2.1 of this table (above).

Ref No.	Question	Answer
2.5.6	For urban related development, make use of underutilised land available with the urban edge.	Not applicable. The proposed project area is outside an urban area.
2.5.7	Optimise the use of existing resources and infrastructure.	Refer to Section 3 of this Scoping Report.
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).	Refer to Section 3 of this Scoping Report. No new infrastructure proposed as part of this application.
2.5.9	Discourage "urban sprawl" and contribute to compaction / densification.	It is estimated that this project will increase life of mine by 15 years and maintain a contribution of approximately R2BN per annum The proposed remining project will result in the continued employment of approximately 92 permanent employees and approximately 346 permanent contractors. 6 new employment opportunities will be created (cleaning crew). Employment from the surrounding communities is recommended where possible, such that there will be no significant influx of additional workers to the area as a direct result of the proposed project.
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.	Refer to items 2.5.7 to 2.5.9 of this table (above).
2.5.11	Encourage environmentally sustainable land development practices and processes.	One of the key aspects to ensuring long terms land sustainability will be to ensure successful rehabilitation and post mining land-use capability.

Ref No.	Question	Answer
2.5.12	Take into account 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.).	Refer to item 1.7.3 of this table (above).
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).	The proposed project will allow the mine to continue contributing to the local, regional and national Gross Domestic Product (GDPs), and also to the local communities through continued employment of workers and local contractors, as well as other influences and community upliftment programmes that are undertaken by the mine through their Social & Labour Plan (SLP).
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.	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr. No heritage impacts are expected.
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?	The proposed project will ensure continued employment in the area, as well as programmes implemented from the mine's SLP. The project extends the life of mine, forms part of the business model and plans to reduce the mining footprint. Once the residue stockpile has been remined, the area will be rehabilitated.
2.6	**How was 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)?	No knowledge gaps – the project will have limited socio-economic impacts.

Ref No.	Question	Answer
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?	The level of risk is low as the project is not expected to have far reaching impacts on socio-economic conditions should the recommended mitigation and management measures be implemented and adhered to.
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?	This project is part of a current mining operation. A cautious approach has been applied.
2.7	**How will the socio-economic impacts resulting 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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
2.7.2	Positive impacts. What measures were taken to enhance positive impacts?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
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 socioeconomic impacts will result	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.

Ref No.	Question	Answer
	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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr. Moreover, Western Platinum (Pty) Ltd will, in line with the regulatory requirements, provide financial provision to ensure that the mitigation measures proposed can be carried out. This aspect will also be further addressed in the EIA phase. The project extends the life of mine, forms part of the business model and plans to reduce the mining footprint. Once the residue stockpile has been remined, the area will be rehabilitated.
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?	By conducting a Scoping and EIA process, the applicant ensures that equitable access to the environment has been considered. Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.

Ref No.	Question	Answer
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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
2.13	**What measures were taken to:**	
2.13.1	Ensure the participation of all interested and affected parties.	Refer to the public participation process undertaken to date in Section 7 of this Scoping Report. Public participation and consultation will continue during the EIA phase as described in Section 10.
2.13.2	Provide all people with an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation,	Refer to the public participation process undertaken to date in Section 7 of this Scoping Report. Public participation and consultation will continue during the EIA phase as described in Section 10. Advertisements as well as site notices were distributed in and around the project area in English, Afrikaans and Setswana to assist in understanding the project.
2.13.3	Ensure participation by vulnerable and disadvantaged persons,	
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,	
2.13.5	Ensure openness and transparency, and access to information in terms of the process,	

Ref No.	Question	Answer
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,	
2.13.7	Ensure that the vital role of women and youth in environmental management and development were recognised and their full participation therein will be promoted?	
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)?	Refer to the public participation process undertaken to date in Section 7 of this Scoping Report. Public participation and consultation will continue during the EIA phase as described in Section 10. Furthermore, refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. The impacts will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr. The mine's SLP must also be updated on a regular basis.
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	Workers at the mine are educated on a regular basis through toolbox talks on the environmental risks that may occur within their work environment, and adequate measures have been taken to ensure that the appropriate personal protective equipment is issued to workers based on the areas that they work in as well as the requirements of their job.

Ref No.	Question	Answer
	been taken to ensure that the right of workers to refuse such work will be respected and protected?	
2.16	**Describe how the development will impact on job creation in terms of, amongst other aspects:**	
2.16.1	The number of temporary versus permanent jobs that will be created.	It is estimated that this project will increase life of mine by 15 years and maintain a contribution of approximately R2BN per annum The proposed remining project will result in the continued employment of approximately 92 permanent employees and approximately 346 permanent contractors. 6 new employment opportunities will be created (cleaning crew). Employment from the surrounding communities is recommended where possible, such that there will be no significant influx of additional workers to the area as a direct result of the proposed project. Labourers will mostly be sourced from surrounding towns such as Marikana which is located 2km from the mine itself.
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).	
2.16.3	The distance from where labourers will have to travel.	
2.16.4	The location of jobs opportunities versus the location of impacts.	
2.16.5	The opportunity costs in terms of job creation.	
2.17	**What measures were taken to ensure:**	
2.17.1	That there were intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment.	The Scoping and EIA process requires governmental departments to communicate regarding any application. In addition, all relevant Departments and key stakeholders have been notified about the project by the EAP and registered as Interested and Affected Parties who will continue to be notified and engaged with regarding the project throughout the EIA process.

Ref No.	Question	Answer
2.17.2	That actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures.	The Scoping and EIA process requires governmental departments to communicate regarding any application. In addition, all relevant Departments and key stakeholders have been notified about the project by the EAP and registered as Interested and Affected Parties who will continue to be notified and engaged with regarding the project throughout the EIA process.
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?	Refer to the public participation process undertaken to date in Section 7 of this Scoping Report. Public participation and consultation will continue during the EIA phase as described in Section 10. Furthermore, refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. The impacts will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr. No impacts on heritage are expected.
2.19	Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. The impacts will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
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?	The applicant has financial provisions in place. The amount is calculated using the published DMRE guideline document as required by section 54 (1) of the regulations *"Guideline Document for the evaluation of Quantum of Closure Related Financial Provision Provided by a Mine"*. Furthermore, in accordance with the NEMA Regulations Pertaining to the Financial Provision for Prospecting Exploration, Mining or Production Operations, an applicant or holder of a right or permit must determine and make financial provision to guarantee the availability of sufficient funds to undertake rehabilitation and remediation of the adverse environmental impacts of

Ref No.	Question	Answer
		prospecting, exploration, mining or production operations. In this regard, the applicant, needs to include such financial provisions and this is already being undertaken by the mine. The reclamation of the TSF should reduce the mine's liability in this regard.
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?	Refer to Section 6 for details of alternatives considered in this Scoping Report. This aspect will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.
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?	Refer to the identified impacts, their assessment and recommended mitigation measures in Section 9 of this Scoping Report. The impacts will be further explored in the EIA phase and findings thereof presented in the EIA Report and EMPr.

6 PROJECT ALTERNATIVES

The identification of alternatives is a key aspect of the success of the environmental scoping phase. All reasonable and feasible alternatives must be identified and screened to determine the most suitable alternatives to consider and assess in the EIA phase. There are, however, some significant constraints that have to be taken into account when identifying alternatives for a project of this scope. Such constraints include social, financial and environmental issues, which will be discussed as part of the evaluation of the alternatives for this project. Alternatives can typically be identified according to:

- Location alternatives (including design and layout);
- Process alternatives;
- Technology alternatives; and
- Activity alternatives (including the No-Go option).

For any alternative to be considered feasible such an alternative must meet the need and purpose of the development proposal without presenting significantly high associated impacts. In this section the various alternatives considered are described and their advantages and disadvantages are presented where applicable. Furthermore, the feasibility of the considered alternatives, from both a technical as well as environmental perspective, is determined and the result thereof are the alternatives that will be investigated further in the EIA phase, towards the selection of preferred alternatives. Essentially, alternatives represent different means of meeting the general purpose and need of the proposed project through the identification of the most appropriate and feasible method of development, all of which are discussed below.

Alternatives can further be distinguished into discrete or incremental alternatives. Discrete alternatives are overall development options, which are typically identified during the pre-feasibility, feasibility and or scoping phases of the EIA process. Incremental alternatives typically arise during the EIA process and are usually suggested as a means of addressing identified impacts. These alternatives are closely linked to the identification of mitigation and management measures and are not specifically identified as distinct alternatives. This section provides information on the KTD1 Remining Project's location, process, technology and activity alternatives under consideration and those that will be assessed further in the upcoming EIA phase.

6.1 LOCATION ALTERNATIVES

The project is for remining of an existing residue stockpile and no infrastructure forms part of this application, therefore no location alternatives are applicable. The preliminary environmental impacts associated with this single location are discussed in Section 9 of this Scoping Report and will be further investigated in the EIA phase.

6.2 DESIGN OR LAYOUT ALTERNATIVES

The project is for remining of an existing residue stockpile and no infrastructure forms part of this application, therefore no design or layout alternatives are applicable. The preliminary environmental impacts associated with this single location are discussed in Section 9 of this Scoping Report and will be further investigated in the EIA phase.

6.3 PROCESS ALTERNATIVES

Process alternatives imply the investigation of alternative processes or methods to achieve the same goal for the proposed KTD1 Remining Project. This includes using environmentally friendly designs or materials and re-using scarce resources like water and non-renewable energy sources. Since no infrastructure is proposed as part of the remining application no process alternatives are considered applicable.

6.4 TECHNOLOGY ALTERNATIVES

The project is for remining of an existing residue stockpile and no infrastructure forms part of this application, therefore no location technologies are applicable.

The only applicable technology alternative for this application would relate the mining process proposed. There are two technically feasible options for the remining:

- Mechanical remining; and
- Hydro remining.

Mechanical remining of the tailings residue stockpile via bench mining using excavators is currently the only technology alternative proposed as part of this WML application. The aim is to commence with the Phase 1 remining in 2025. Phase 2 of the remining project will be done via hydro-mining to Western Limb Tailings Retreatment, where various pipelines will be required. **Phase 2 is not applicable to this application, therefore the only technology alternative that will be considered further is the Mechanical Remining.**

6.5 ACTIVITY ALTERNATIVES

The current land use within and around the KTD1 Remining Project area comprise almost entirely of mining activities. The EIA process being undertaken includes the assessment of potential impacts and the identification of environmental sensitivities within and in the vicinity of the proposed project area thereby allowing for the recommendation of mitigation measures towards the avoidance, minimisation and / or management of the anticipated impacts. The EIA process outcomes will play a role in determining the mining activity footprint for the project, in relation to existing surrounding land uses. Since the area is already utilized for a residue stockpile there are no activity alternatives applicable to the remining application apart from the “no-go” alternative.

6.6 NO-GO ALTERNATIVE

The no-go option means ‘do nothing’ or the option of not undertaking the proposed KTD1 remining project or any of its alternatives, and therefore links to the above activity alternative of continuing with the residue stockpile remaining in place and the loss of any opportunities to extract further minerals from the residue stockpile. As such, the ‘do nothing’ alternative also provides the baseline against which the impacts of other alternatives should be compared.

The implication of not undertaking the project, whereby additional resources would be obtained from an existing residue stockpile, would entail a reduction in the existing mine’s overall LOM as well as compromising its ability to ensure a consistent supply of PGMs to its buyers including extended local and regional economic benefits.

The no-go alternative would mean that the benefits of local and regional employment at the mine would not be fully realised in the long term. The potential employment and economic benefits of continued employment will therefore be fore gone. There are also a number of potential positive environmental impacts that would be foregone as the remining of the KTD 1 residue stockpile would remove a potential source of contamination and allow the area to be used for another purpose. The no-go alternative would maintain the current environmental *status quo* at the site.

7 STAKEHOLDER ENGAGEMENT

The Public Participation Process (PPP) is a requirement of several pieces of South African legislation and aims to ensure that all relevant Interested and Affected Parties (I&APs) are consulted, involved and their opinions are taken into account, and a record included in the reports submitted to relevant authorities. The process aims to ensure that all stakeholders are provided an opportunity as part of a transparent process which allows for a robust and comprehensive environmental study. The PPP for the proposed project needs to be managed sensitively and according to best practises in order to ensure and promote:

- Compliance with international best practise options;
- Compliance with national legislation;
- Establish and manage relationships with key stakeholder groups; and
- Encourage involvement and participation in the environmental study and authorisation / approval process.

As such, the purpose of the PPP and stakeholder engagement process is to:

- Provide an opportunity for I&APs to obtain clear, accurate and comprehensible information about the proposed activity, its alternatives or the decision and the environmental impacts thereof;
- Provide I&APs with an opportunity to indicate their viewpoints, issues and concerns regarding the activity, alternatives and / or the decision;
- Provide I&APs with the opportunity to suggest ways of avoiding, reducing or mitigating negative impacts of an activity and enhancing positive impacts;
- Enable the applicant to incorporate the needs, preferences and values of I&APs into the activity;
- Provide opportunities to avoid and resolve disputes and reconcile conflicting interests;
- Enhance transparency and accountability in decision-making;
- Identify all significant issues for the project; and
- Identify possible mitigation measures or environmental management plans to minimise and / or prevent environmental impacts associated with the project.

The PPP for this project has been undertaken in accordance with the requirements of the MPRDA and NEMA, as well as in line with the principles of Integrated Environmental Management (IEM). IEM implies an open and transparent participatory process, whereby stakeholders and other I&APs are afforded an opportunity to comment on the project.

7.1 LEGAL COMPLIANCE

The PPP must comply with several important sets of legislation that require public participation as part of an application for authorisation or approval, namely:

- The Mineral and Petroleum Resources Development Act (Act No. 28 of 2002 – MPRDA);
- The National Environmental Management Act (Act No. 107 of 1998 – NEMA);
- The National Environmental Management Waste Act (Act No. 59 of 2008 – NEMWA); and
- The National Water Act (Act No. 36 o1998 – NWA).

Adherence to the requirements of the above-mentioned Acts will allow for an Integrated PPP to be conducted, and in so doing, satisfy the requirement for public participation referenced in the Acts. The details of the Integrated PPP followed are provided below.

7.2 GENERAL APPROACH TO PUBLIC PARTICIPATION

The PPP for the proposed KTD1 Remining Project has been undertaken in accordance with the requirements of the MPRDA, NWA and NEMA, as well as in line with the principles of Integrated Environmental Management (IEM). IEM implies an open and transparent participatory process, whereby stakeholders and other I&APs are afforded an opportunity to comment on the project. The PPP for the proposed KTD1 Remining Project have been undertaken in accordance with Chapter 6 of the NEMA EIA Regulations (2014, as amended).

7.3 IDENTIFICATION OF INTERESTED AND AFFECTED PARTIES

The I&AP databases compiled for various past environmental authorisation processes in the vicinity of the proposed project have been utilised towards compiling a pre-notification register of key I&APs to be notified of the Environmental Authorisation Application. The I&AP database includes amongst others: landowners, communities, regulatory authorities and other specialist interest groups. Additional I&APs have been registered during the initial notification and call to register period. The I&APs database will continue to be updated throughout the duration of the EIA process. A full list of I&APs is attached in Appendix C.

7.3.1 LIST OF AUTHORITIES IDENTIFIED AND NOTIFIED

The following Government Authorities were notified of the proposed project:

- Bojanala District Municipality
- Cooperative Governance and Traditional Affairs (COGTA)
- Eskom Holdings SOC Limited
- National Department of Agriculture, Forestry and Fisheries
- National Department of Environmental Affairs
- National Department of Forestry, Fisheries and Environment
- National Department of Mineral Resources
- National Department of Rural Development and Land Reform
- National Department of Tourism
- National Department of Water and Sanitation
- National Department of Water and Sanitation
- North West Department of Minerals and Energy
- North West Department Public Works and Roads
- North West Provincial Government: Department of Economic Development, Environment, Conservation and Tourism
- North West Provincial Government: Department of Social Development
- Rustenburg Local Municipality
- South African Civil Aviation Authority
- South African Heritage Resources Agency (SAHRA)
- South African National Parks (SanParks)
- South African National Roads Agency Limited (SANRAL)
- Transnet SOC Limited

7.3.2 OTHER KEY STAKEHOLDERS IDENTIFIED AND NOTIFIED

The following key stakeholders have been identified and notified of the proposed project:

- North West Wetland Forum
- North West Parks Board
- Transnet Soc Ltd
- Endangered Wildlife Trust

- Birdlife South Africa
- WESSA
- Council of Geoscience
- Magalies Water
- Western Platinum Ltd
- Rustenburg Platinum Mines
- Glencore Operations South Africa (Pty) Ltd
- Bapo ba Mogale Tribal Authority

7.4 INITIAL NOTIFICATION OF I&APS

The PPP commenced on 4 July 2023 with an initial notification and call to register for a period of 30 days. Initial call to register notifications were conducted as presented below.

7.4.1 REGISTERED LETTERS, FAXES AND EMAILS

Registered letters, emails and facsimiles (faxes) were prepared and distributed to the identified relevant authorities, affected and adjacent landowners and legal occupiers, ward councillors and other pre-identified key stakeholders. The notification documents included the following information:

- The purpose of the proposed project;
- Details of the NEMA Regulations that are anticipated to be applicable and must be adhered to;
- List of anticipated activities to be authorised;
- Location and extent of activities to be authorised;
- Details of the affected properties (including a locality map or an indication of where the locality map may be viewed or obtained);
- Brief but sufficient detail of the intended operation to enable I&APs to assess / surmise what impact the project will have on them or on the use of their land (if any);
- Initial call to register duration; and
- Contact details of the EAP.

Proof of the registered letters, emails and facsimiles that were distributed during the initial notification and call to register period are attached in Appendix C.

7.4.2 SITE NOTICES AND POSTERS

10 Site notices were placed along the perimeter of the proposed project area and its surroundings on 4 July 2023. Furthermore, A3 posters (English and Afrikaans and Setswana) were placed at three public areas / venues in the vicinity of the proposed project area. The on-site notices and posters included the following information:

- Project name;
- Applicant name;
- Project location;
- Description of the environmental authorisation application process;
- Legislative requirements; and
- Relevant EAP contact person details for the project.

Please refer Appendix C for proof of site notice and poster placement.

7.4.3 BACKGROUND INFORMATION DOCUMENT

Included in the I&AP notification letters, emails and facsimiles, was a Background Information Document (BID). The BID includes the following information:

- Project name;
- Applicant name;
- Project location;
- Map of affected project area;
- Description of the environmental authorisation application process;
- Information on document review; and
- Relevant EAP contact person details for the project.

Please refer to Appendix C for a copy of the BID issued to I&APs.

7.4.4 NEWSPAPER NOTICES

Two notices (English and Setswana) were placed on 30 June 2023 in the Rustenburg Herald newspaper which was indicated to have the widest reach within the project area and its vicinity towards notifying the public regarding the proposed project. The newspaper notices included the following information:

- Project name;
- Applicant name;
- Project location;
- Description of the environmental authorisation application process;
- Legislative requirements; and
- Relevant EAP contact person details for the project.

As stated in sections above, I&APs were provided a 30 day period to register for the proposed project. It is important to note however, that I&AP registration is on-going and will continue through the EIA process. Another notification advert is planned to be placed in a separate newspaper with local distribution during the scoping phase review period.

7.5 NOTIFICATION OF AVAILABILITY OF SCOPING REPORT

Notification regarding the availability of this Scoping Report for public review has been given in the following manner:

- Registered letters with details on where the Scoping Report is available from, as well as the duration of the public review comment period, were distributed to all registered I&APs (which includes key stakeholders, affected and surrounding landowners, and registered occupiers);
- Facsimile notifications with information similar to that in the registered letter described above, were distributed to all registered I&APs; and
- Email notifications with a letter attachment containing the information described above were also distributed to all registered I&APs.

The Scoping Report is being made available for public review from 17 October 2023 until 16 November 2023, for a period of 30 days.

7.6 ISSUES AND REPONSES

Issues raised to date have been addressed in a transparent manner and the full details (such as the comment received, the name of the I&AP who commented, the issue raised and the main aspect of the raised issue, as well as the response provided to the I&AP) included in the Public Participation Report (Appendix C).

8 ENVIRONMENTAL ATTRIBUTES AND BASELINE

This section of the Scoping Report provides a description of the environment that may be affected by the proposed KTD1 Remining Project. Aspects of the biophysical, social and economic environment that could be directly or indirectly affected by, or could affect, the proposed extension have been described. Baseline information was sourced from available baseline data as well as the 2012 EMPr prepared by Strategic Environmental Focus. It should be noted that the DFFE screening tool locates the site within areas of very high Aquatic and Terrestrial biodiversity sensitivity. Therefore, compliance statements for these aspects will be required from relevant specialists. These are included in Appendix F. A copy of the screening tool report is provided as part of Appendix D.

8.1 TOPOGRAPHY

The North West Province is typically flat or has gently undulating plains within its central and western regions, whist the eastern region varies in typography which also produces the Magaliesburg mountain range. The altitude of the North West Province ranges from 920 -1782 m above sea level. The typography of WPL Mining Right Area (MRA) is typically very flat to slightly undulating and lies within a seemingly east-west valley bottom. The mine area is situated between two hills (Magaliesburg and Kareepoortberg) which have an average of 100-180m above the surrounding plains with the highest points being 1357m above sea level. The Catchment area is drained by the Crocodile River and associated tributaries in a northern direction.

8.2 GEOLOGY AND SOILS

The geology of the area comprises of the Rustenburg Layered Suite of the Bushveld Complex, which is thought to be the world's largest mafic-ultramafic layered intrusion which underlies an area of roughly 66,000 km^2. The Bushveld complex which is well known for its large platinum and palladium resources consist of three different ore bodies namely:

- Merensky Reef;
- Upper Group (U2) Chromotite; and
- Platreef.

Underground mining operations at Western Platinum Limited (WPL) consist of the UG2 Reef whilst the EP-Opencast operations are focused on the Merensky and UG2 Reefs of the Upper Critical Zone. Refer to Figure 30 for the vertical sections of the UG2 and Merensky Reef illustrating the distribution of PGM within the zones.

The WPL operation is situated within the western limb of the Bushveld Complex as illustrated in Figure 6. The Rustenburg Layered Suite is the collective name for the mafic-ultramafic rocks found in the Bushveld Complex and has been subdivided into zones namely the Marginal, Lower, Critical, Main and Upper Zones which ranges from the base of the Suite to the top of the Suite. Of significant importance is the Critical Zone which contains chromium and PGMs within the Bushveld Complex.

The Critical Zone is host to both the Merensky Reef and UG2 Reef which are found in the upper sub-zone. The Merensky Reef lies above the UG2 Reef (approximately 130 m to 210 m above) with both economic layers exhibiting a general east to west strike trend. Dips vary from approximately 12 degrees in the south to around 10 degrees in the northern area. The Merensky reef and UG2 reef are therefore expected to be at depths of 1 250 m and 1 400 m respectively in the deepest parts of the mining area. Underground mining operations at WPL consist of the UG2 Reef whilst the EP-Opencast operations are focused on the Merensky and UG2 Reefs of the Upper Critical Zone.

The site is located on a single soil type as indicated in Figure 7. This soil form is naturally fertile, with high cation exchange capacities and high organic carbon contents.

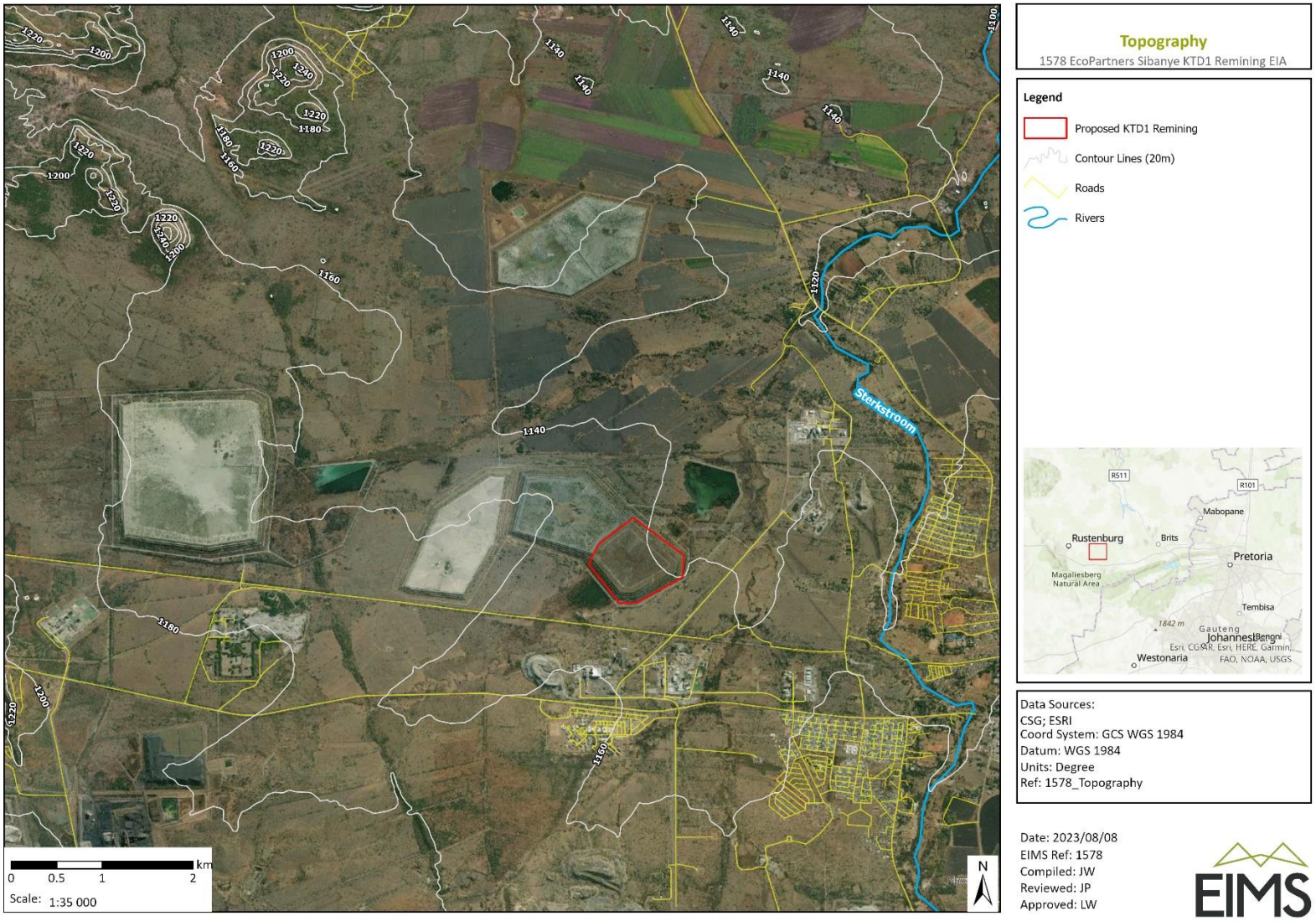

Figure 5: Relief Map

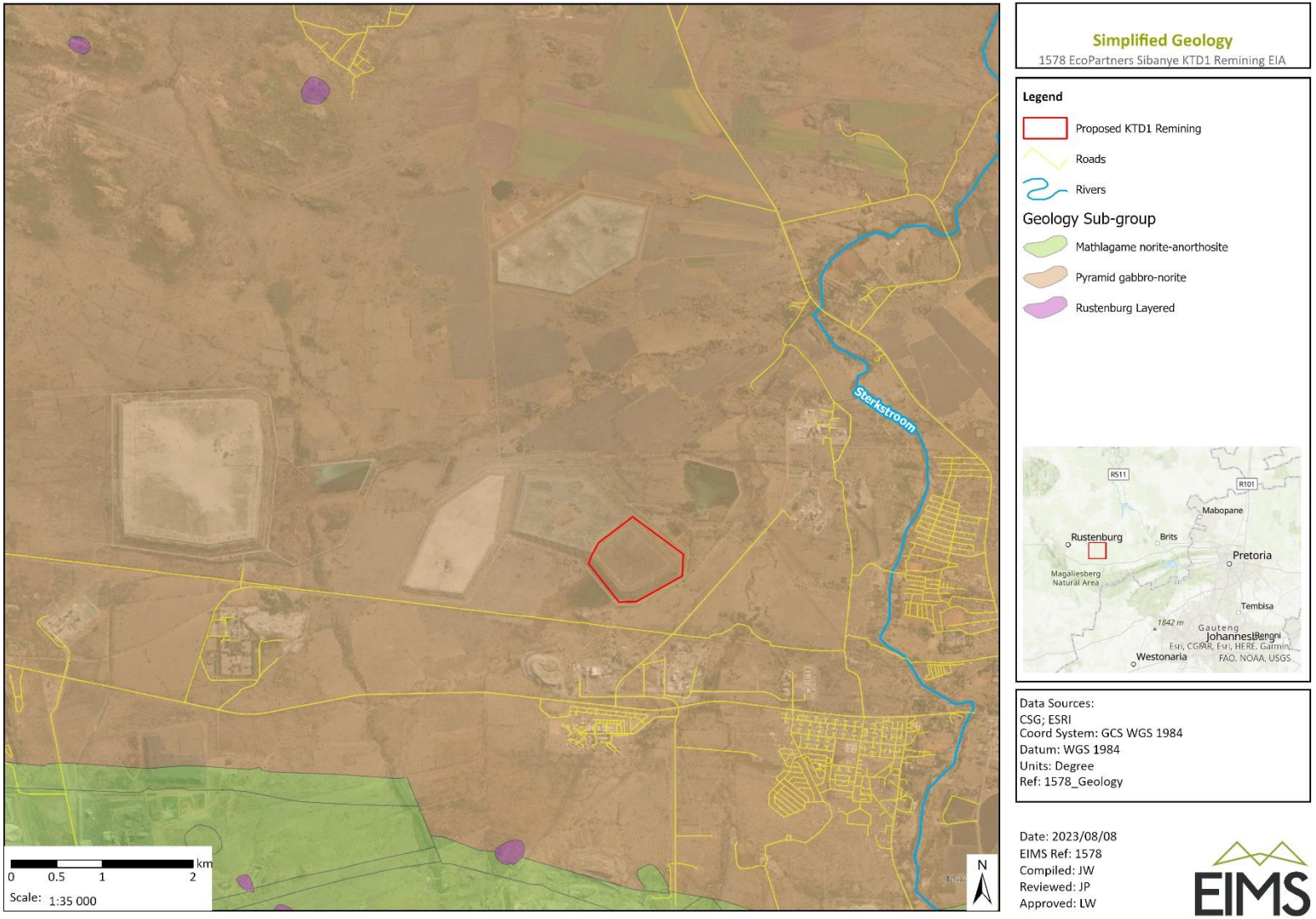

Figure 6: Local geology of the project area

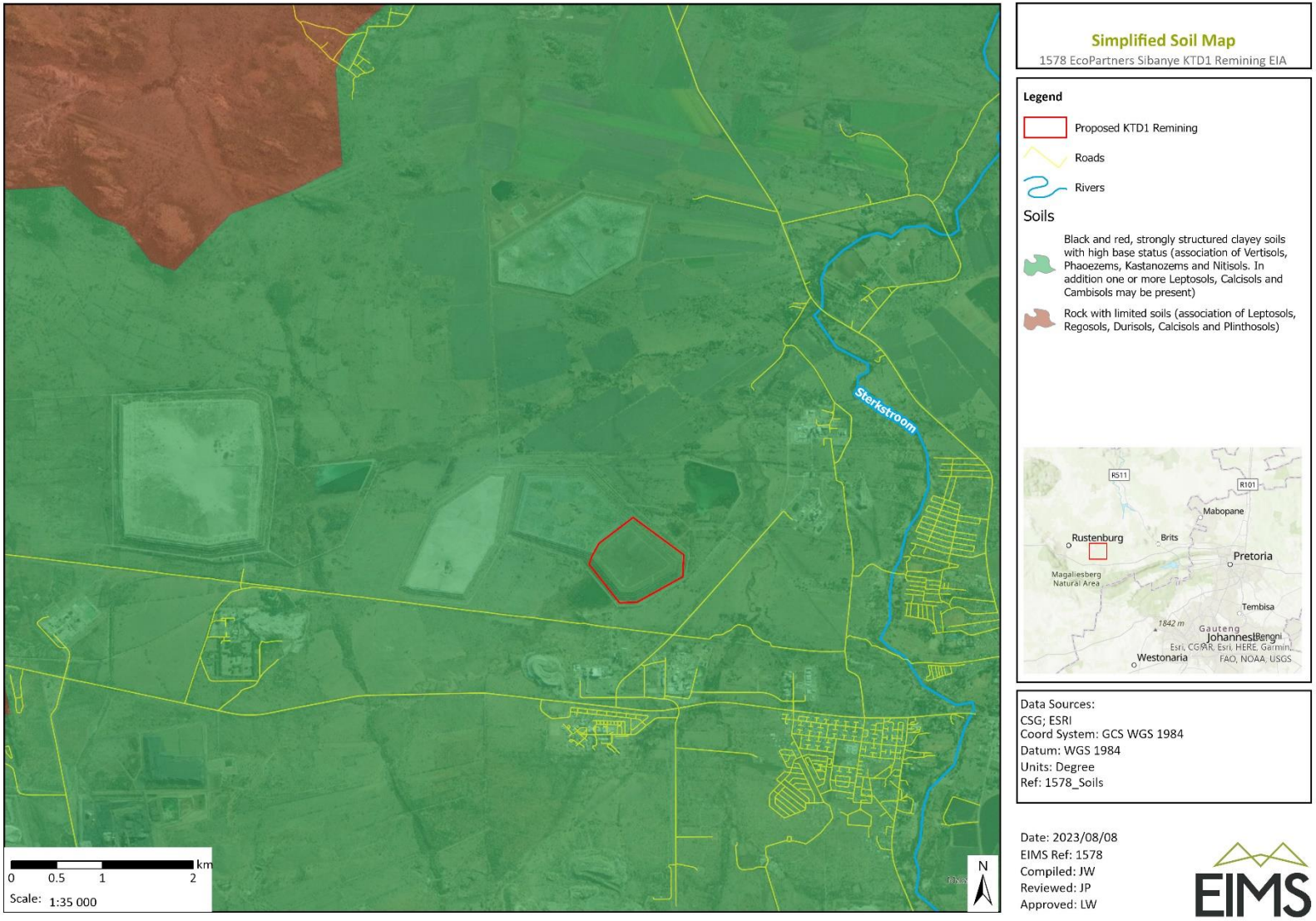

Figure 7: Soils Map

8.3 CLIMATE

The climate of the North West Province is characterized by hot summers and cool sunny winters, with the rainy season usually occurring from October through to March. Temperature and precipitation vary from the eastern and mountainous areas receiving a rainfall of between 600-700 mm per annum to the drier western areas receiving less than 300 mm per annum.

The climate in the region is a Highveld climate, characterized by hot summers during the months of September to March and cold winters starting from April to August, with thunderstorms occurring in the late afternoons of the summers and with frontal rain occurring in the winter months.

The summers are humid and hot, the minimum temperatures are relativity high with high maximums that can reach 39°C (Klipfontein Station). In the summer months there is a low pressure cell over the inland which brings in winds form a South Easterly to Easterly direction (138º - according to the Rustenburg station), and the low pressure cell moves North as the winter months start to arrive, bringing a high pressure cell over the whole country, with a wind speed average of 3 m/s.

The winters are dry and cold with the cold fronts coming over the country, bringing in cold air from the Antarctic. In the interior (Highveld) the air is cold as a cold front move through. The winds come from a South to Westerly direction with average wind speeds of 1.5 m/s. The temperatures are cool during the day and cold at night, the minimum can reach -1°C. The wind speeds increase as spring approaches in September, with wind speeds peaking in the month of August but it decreases as the month passes, and the wind speed stabilizes till the next winter months, arriving in April to May.

In Rustenburg, the summers are long, warm, and mostly clear and the winters are short, cold, dry, and clear. Over the course of the year, the temperature typically varies from 37°F (2,7 °C) to 83°F (28 °C) and is rarely below 31°F (-10,5 °C) or above 91°F (32 °C). The warm season lasts for 6.0 months, from September 24 to March 22, with an average daily high temperature above 80°F. The hottest month of the year in Rustenburg is January, with an average high of 83°F (28 °C) and low of 63°F (17 °C). The cool season lasts for 2.1 months, from May 29 to August 2, with an average daily high temperature below 70°F (21 °C). The coldest month of the year in Rustenburg is July, with an average low of 38°F (3 °C) and high of 68°F (20 °C)– Refer to Figure 8 (weatherspark.com).

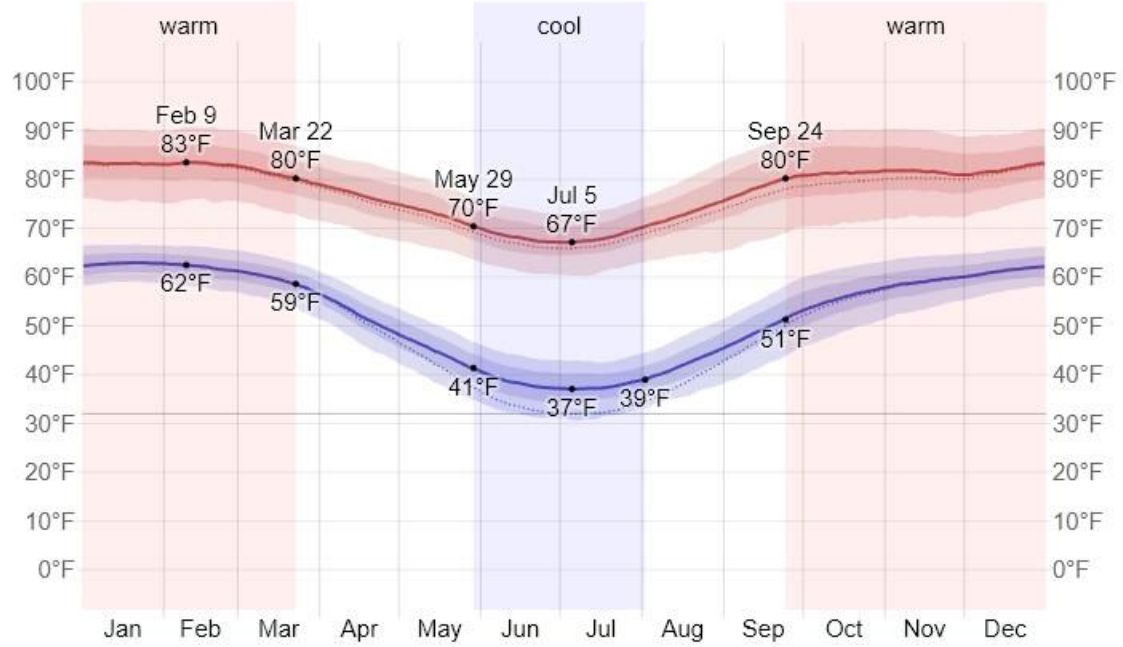

Figure 8: Average monthly temperatures (source: weatherspark.com)

The average hourly wind speed in Rustenburg experiences significant seasonal variation over the course of the year. The windier part of the year lasts for 4.3 months, from July 29 to December 5, with average wind speeds of more than 7.2 miles per hour. The windiest month of the year in Rustenburg is September, with an average hourly wind speed of 8.5 miles per hour – see Figure 9 below.

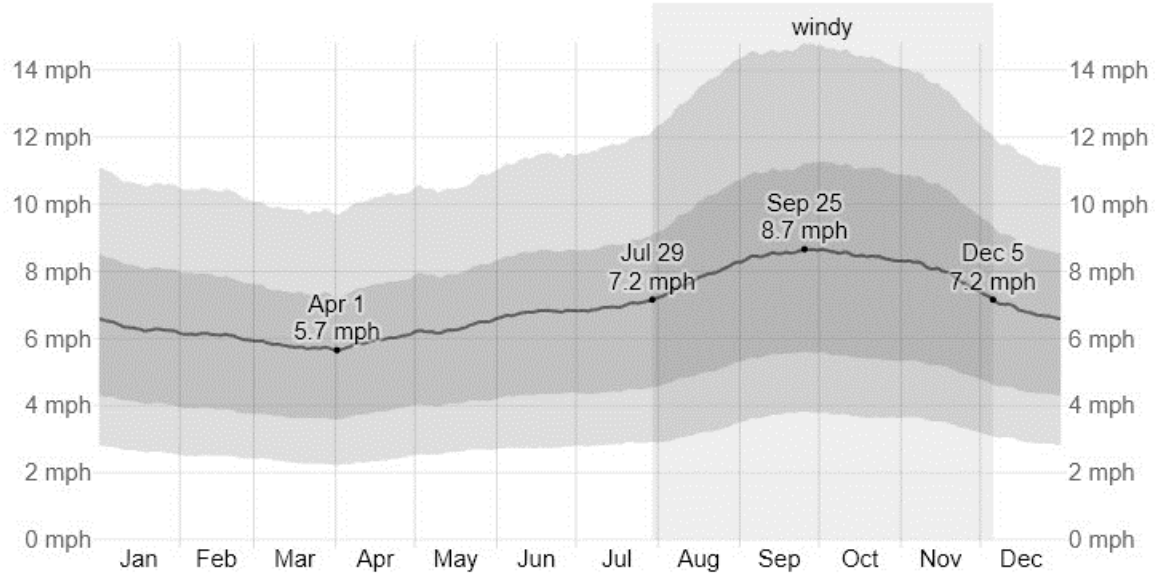

Figure 9: Wind speed in Rustenburg (source: weatherspark.com).

The predominant average hourly wind direction in Rustenburg varies throughout the year. The wind is most often from the east for 3.2 months, from January 14 to April 19 and for 5.0 days, from May 1 to May 6, with a peak percentage of 46% on February 19. The wind is most often from the north for 1.7 weeks, from April 19 to May 1 and for 5.7 months, from July 22 to January 14, with a peak percentage of 28% on April 21. The wind is most often from the south for 2.5 months, from May 6 to July 22, with a peak percentage of 32% on June 5.

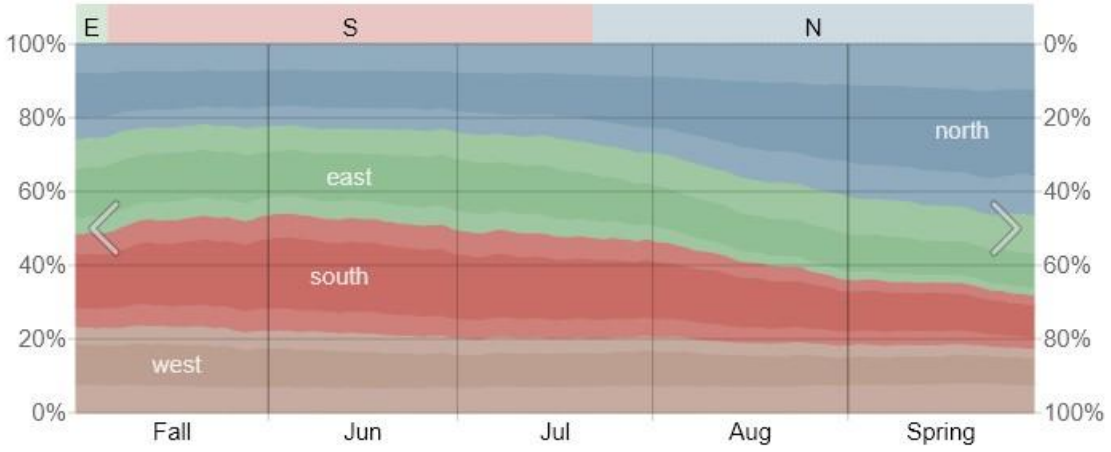

Figure 10: Annual wind direction in Rustenburg (source: weatherspark.com)

8.4 AIR QUALITY

Ambient air quality is determined by the cumulative impact of a variety sources and the meteorological conditions prevalent. Meteorological conditions govern the dispersion, transformation and eventual removal of pollutant from the atmosphere. Ambient concentration levels therefore fluctuate in response to changes in atmospheric stability, variations in the mixing depth, and shifts in the wind field. Spatial variations and diurnal and seasonal changes in the wind field and stability regime are functions of atmospheric processes operating at various temporal and spatial scales. Sources of air pollution for the North West Province and the Rustenburg

Local Municipality (RLM) influencing the ambient environment at the Sibanye-Stillwater Marikana mining operations are depicted in Table 7.

Table 7 Sources of pollutants for NW Province and the Rustenburg area.

Pollutant	Associated Sources
Particulate Matter (PM)	Domestic fuel burning, biomass burning, industrial operations, mining and associated activities, agricultural activities, vehicle entrainment from unpaved roads, informal waste combustion, wind-blown dust from open areas, vehicle tailpipe emissions.
Sulphur Dioxide (SO_2)	Industrial operations, commercial fuel burning appliances, incineration, domestic coal and wood burning, biomass burning, vehicle tailpipe emissions.
Nitrogen Dioxide (NO_2)	Fossil fuel combustion, vehicle tailpipe emissions, industrial processes, biomass burning.
Carbon Monoxide (CO)	Vehicle tailpipe emissions, industrial operations, commercial fuel burning appliances, domestic fuel burning, biomass burning.
Ozone (O_3)	Vehicle tailpipe emissions, domestic fuel burning, biomass burning
Fallout Dust (TSP)	Unpaved roads, agricultural activities (seasonal), mining related activities
Lead (Pb)	Vehicle tailpipe emissions
Benzene (C_6H_6)	Vehicle tailpipe emissions, domestic fuel burning, filling stations,
Methane (CH_4)	Domestic fuel burning, landfills, biomass burning, wastewater treatment

The dust fallout / deposition rate (DFO) is monitored on a monthly basis at a number of locations in and around the sensitive receptors. A total of ninety-seven (97) dustfall monitoring stations form part of the dustfall monitoring programme at Sibanye-Stillwaters's Marikana Operations. The dustfall monitoring stations are divided into three Marikana Operation sections based on the location of the locality. The dustfall monitoring stations are only divided into the different sections as the Marikana Operations span over a large area. The dustfall monitoring stations are divided into the Western, Central and Eastern Marikana Sections. Various monitoring locations are included at the Western Section which is of relevance to the KTD 1 TSF remining project. From the latest AQ monitoring reports it is evident that the residential dustfall monitoring localities complied with the set GNR827: NDCR 2013 Limit for residential dustfall for the current monitoring periods and all the non-residential dustfall monitoring localities also complied with the set GNR827: NDCR 2013 Limit for non-residential dustfall for the recent 2023 monitoring events.

8.5 NOISE AND TRAFFIC

Noise levels at the WPL MRA are expected to range from 40dBA (decibels) to 50dBA in the surrounding agricultural and residential area. In areas where mining-related activities are predominant, the noise level ranges between 60dBA to 70dBA. The main sources of noise at Sibanye-Stillwater Marikana operations include:

- Open pit mining activities;
- Main compressor house;
- Air compressors (shafts);
- Ore transfer points (shafts);
- Pumps (water distribution pumps, tailings pumps etc);
- Vehicular traffic;
- Opencast blasting;
- Crushing and screening; and
- Concentrator plants.

The affected communities are information settlements, formal residential areas, construction village and mine hostels. With the general trend of decreasing sound power levels by 6 dBA with every doubling of distance from

the noise source, it is expected that there will be a significant decrease in noise with an increase of 50m from the noise source.

Vibration and shock from blasting underground is highly reduced once the shaft has reached a depth of 30-40m. This impact is thus more relevant to the opencast operations and is it recognised that most residents live 500m or further away from the mine.

8.6 DEMOGRAPHICS AND EMPLOYMENT STATISTICS

The North West Province's economy is derived from a variety of sectors, of which mining and agriculture are the main contributors. The mining sector is the lead supplier to the Province's economy both financially and by its labour absorption capacity (35.5% contribution to the domestic economy in 1996).

The Bojanala Platinum District Municipality (Bojanala) is one of four district municipalities in the Northwest Province. Bojanala takes up 18 332 square kilometres or 17% of the provinces land area. In Bojanala District, 94% of the population is black African, 5% is white and 1% is coloured. Bojanala Platinum District Municipality's male/female split in population was 111.6 males per 100 females in 2018. In 2008, the unemployment rate for Bojanala Platinum was 25% and increased overtime to 27.6% in 2018 (Bojanala Municipality IDP 2022 – 2027).

Mining and quarrying industry in the province and certainly in the district remains the backbone of the district's economic output. It is said 94% of the country's platinum is found in the Rustenburg and Brits areas which areas are also said to produce more platinum than any other single area in the world. Agricultural activities account for 19% of the district's land area and are mainly geared towards commercial dry-land farming, commercially irrigated farming and subsistence dry-land activities. Mixed-crop farming and in the areas of Rustenburg and Brits, maize and sunflower are in abundance in the district The manufacturing and tourism sectors make up most of the remainder of the district's economic output.

Rustenburg Local Municipality is located in the centre of the Bojanala Platinum District with Madibeng Local Municipality (Brits area) to the east, Moses Kotane Local Municipality (Mankwe/Madikwe area) to the north, Kgetleng River Local Municipality (Swartruggens/Koster area) to the west, and the province of Gauteng to the south. There are 48 towns and settlements situated within Rustenburg Local Municipality. The town of Rustenburg, known as the Platinum Capital, and Thlabane are the main economic centres of the municipality. Mining and agriculture are the predominant land uses within the Rustenburg Local Municipality.

For the Rustenburg local municipal area, 266 471 people are economically active (employed or unemployed but looking for work), and of these, 26,4% are unemployed. 34,7% of the 142 219 economically active youth (15 – 34 years) in the Rustenburg Local Municipality are unemployed.

8.7 CULTURAL AND HERITAGE RESOURCES

The following heritage and cultural resources are applicable to the WPL MRA:

- Graves which are associated with nearby houses and settlements. A number of graves have been moved (exhumed and re-entered) in the past for opencast purposes with permission from the South African Heritage Resource Agency (SAHRA), South African Polices Services in Mooinooi and the Department of Home Affairs;
- Remains of 'traditional' Batswana residential villages have been found along the base of the un-named koppie on the eastern perimeter of WPL's Tailings Dam No 6.

Old cemetery (graved dated between 1949-1972) are associated with the nearby houses and settlements;

- Vaalkop in the Middelkraal area and Jakkalskop at the Rowland Shaft
- Archaeological site is found on Beacon Koppies (circular stone wall dated back to the Late Iron Age period); and
- Wolhuterskop and Pramkop located outside the mine boundary.

A heritage assessment was undertaken in 2005 by Frans Roodt (Cultural Resource Consultants) where heritage sites found at Sibanye-Stillwater Marikana operations were documented. A registry of heritage sites, which denote approximately 80% of the heritage sites within the mining complex, has been developed, identifying the various types of heritage sites and graves on site. These have been marked up on maps and plans of the area (Figure 11). There are no heritage sites in close proximity to the KTD 1 TSF that would be affected by the proposed remining activities.

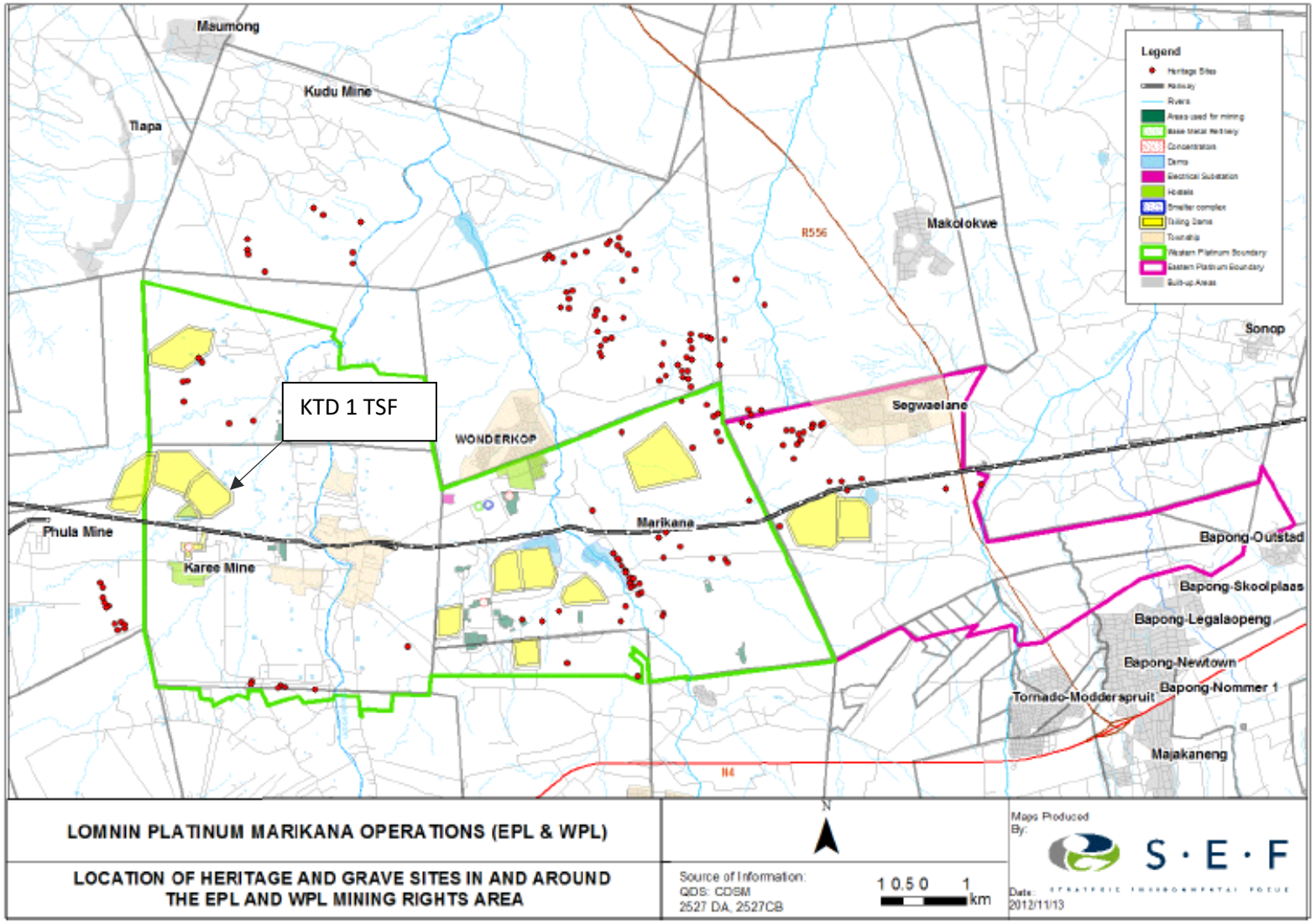

Figure 11: Location of identified heritage sites within the MR area.

8.8 FLORA

The vegetation type at the WPL MRA is identified as Marikana Thornveld (Mucina and Rutherford, 2006). According to the CHEMC Fauna and Flora Report (2005) for the entire mine area four main habitat types are applicable to the WPL area, namely:

- Grassland Habitats: This habitat varies greatly in size and in ecological diversity and is not truly a natural habitat, but has been established through the rehabilitation of disturbed areas, agricultural activities, etc.;
- Turf Thornveld (Bushveld) Habitats: Main habitat type identified within WPL and consists of grassland intercepted with both thorn and other trees. Trees within the area typically identified as velvet bushwillow (*Combretum mole),* Lavender fever berry *(Croton gratissimus),* Large-leaved Rock Fig *(Ficus soldanella),* Pappea *(Pappea capensis), Bridelia mollis,* Turkey-berry' tree *(Canthium huilense),* Smooth Tinderwood *(Clerodendrum glabrum),* Bushwillow *(Combretum apiculatum), Rhodesian Rubber Tree (Diplorhynchus condylocarpon),* Wild Pear *(Dombeya rotundifolia),* Natal Guarri *(Euclea natalensis),* Transvaal candelabra tree *(Euphorbia cooperi),* Hairy Rock Fig *(Ficus sonderi),* Live Long *(Lannea discolor),* Weeping Wattle (*Peltophorum africanum),* Marulsa *Sclerocarya birrea, Shrubs:* Rough-leaved raisin *(Grewia flavescens),* Soap Nettle *(Pouzolzia hypoleuca),* Silver Fingerleaf *(Vitex zeyheri);*
- Aquatic Habitats: The aquatic habitats identified include rivers, streams, wetlands, dams and the associated vegetation of these habitats. Perennial and non-perennial streams are found within WPL; and
- Granite Hills and Outcrops: Within the Turf Thornveld, granite outcrops of varying size are encountered. These outcrops and hills form noticeably different habitats to the Turf Thornveld.

Significant disturbance exists within these habitats in the form of agricultural lands or settlements which have led to the removal of natural vegetation. Some of the areas are characterised by overgrazing where other areas of declared weeds and invader species. According to the (NWDACE, 2003), WPL is situated within an area containing medium hyperdiversity (meaning diversity within a taxon) that contains more species, general or higher ranked groups) and high hyperdiversity for the river systems areas.

In addition to the above-mentioned habitat types, large portions of the mine consist of agricultural lands or settlements. The agricultural lands have resulted in the complete removal of the natural vegetation. The vegetation surrounding the settlement areas is characterized by overgrazing and bush encroachment. A large number of declared weeds and invaders were also identified in these areas, as these plants were originally planted as "garden plants" in many of the areas.

Alien vegetation was recorded in 46% of the 190 surveyed plots (2008). The majority of declared alien vegetation was observed in formal settlements followed by old fields, drainage lines, riparian areas, natural woodlands and mine dumps and pits.

Two protected species listed under the Old Transvaal Ordnance of 1983 (No. 12 of 1983) were identified on site namely, *Eucmos autumnalis* (south eastern section of the site) and *Gladiolus* spp. A permit is needed to remove, replant or transport these plants. No other species of red data or endangered status were observed on site. The descriptions above relate to the broader area around the tailings residue deposit prior to construction of the residue stockpile. At present the site is a tailings residue stockpile and contains no significant natural vegetation.

8.9 FAUNA AND AVIFAUNA

According to the Fauna Survey undertaken by CHEMC in 2005 survey, the WPL MRA is found to have:

- A high bird species diversity occurring due to the presence of aquatic habitats created by mine related activities and natural vegetation. A low number of game birds were noticed at WPL which could be the result of poaching by the local residents or the presence of stray dogs on site (presumable from adjacent township areas); and

- A low mammal and reptile diversity as a result of mining activities, settlements and grazing practices exercised by the surrounding community.

One Red Data species was identified on site, namely the South African Hedgehog (*Alterix frontalis*) which is classified as Near Threatened according to the International Union for Conservation of Nature (IUCN) Red List.

According to SANBI and BirdlifeSA latest dataset the project falls inside an identified Important Bird Areas (IBAs), the Magaliesberg IBA. The most important trigger species in the IBA is the globally threatened Cape Vulture. The number of breeding pairs in the Skeerpoort colony seems to be stable at 200–250. Secretarybird is the other globally threatened species in the IBA. Regionally threatened species are Lanner Falcon *Falco biarmicus*, Half-collared Kingfisher, African Grass Owl, African Finfoot and Verreauxs' Eagle. Biome-restricted species include White-bellied Sunbird *Cinnyris talatala*, Kurrichane Thrush *Turdus libonyanus*, White-throated Robin-chat *Cossypha humeralis*, Kalahari Scrub Robin *Erythropygia paena* and Barred Wren-Warbler. The majority of the site area has been transformed to such an extent that it is unsuitable for a diverse bird community.

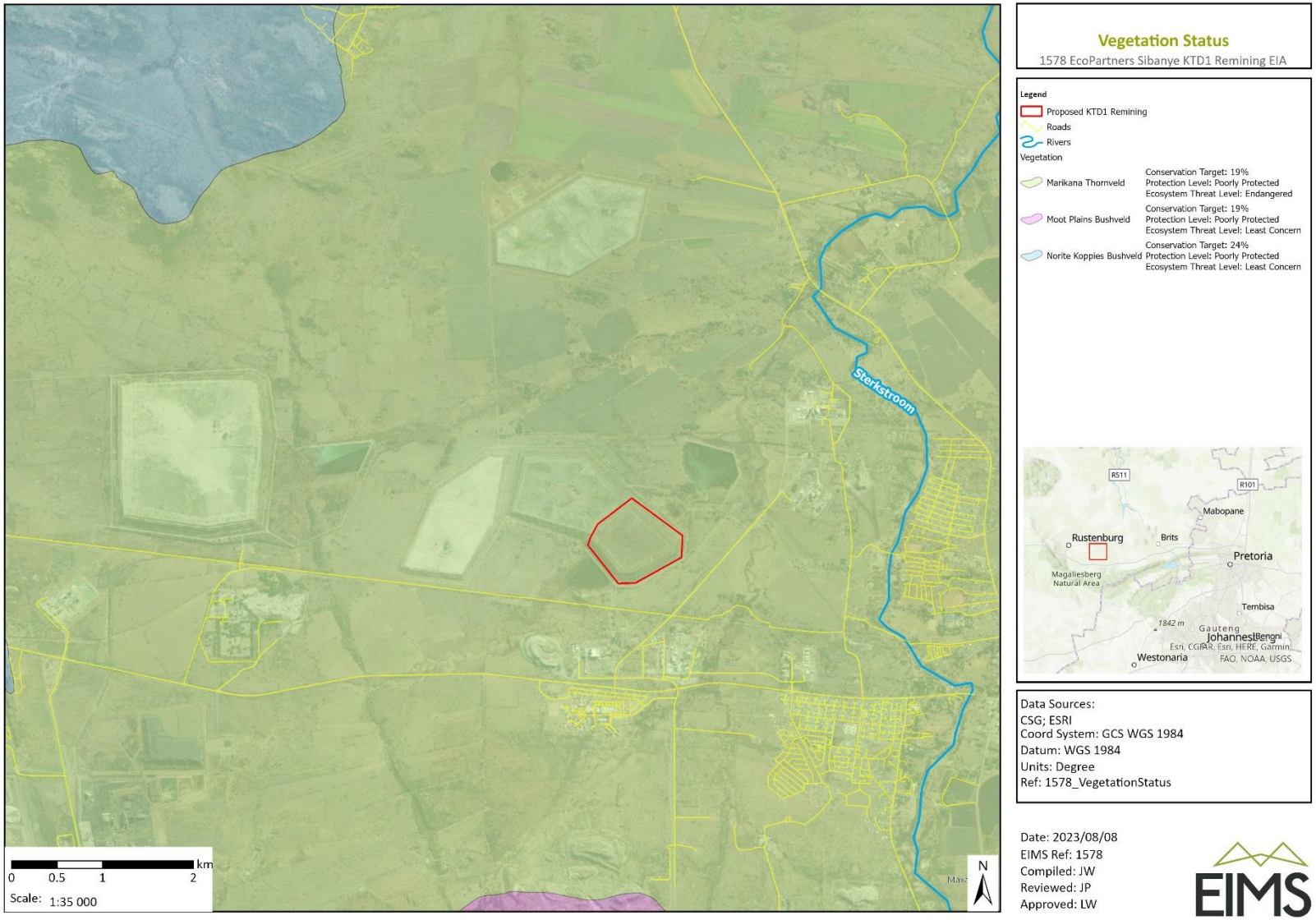

Figure 12: Project area showing the vegetation type based on the Vegetation Map of South Africa, Lesotho & Swaziland (BGIS)

8.10 WETLANDS AND AQUATIC ECOSYSTEMS

The surface water bodies (i.e. perennial and non-perennial streams), and their associated riparian zones are classified as wetland areas which are vital to the water regime of the area.

The following aquatic ecosystems are of relevance to the MR area:

- Maretlwane and Elandskraal Spruit: These streams represented poor fish results which may have been affected by inadequate sampling success. However water quality within these streams is thought to be impacted on by external influences such as farming activities, waste water treatment works (located at Mooinooi and Wonderkop) as well mining activities.
- Sterkstroom and Brakspruit: Studies undertaken indicated that poor fish results could also have been impaired by inadequate sampling success but that the ecological integrity of the streams upstream from the WPL MRA were already affected. Impacts on the water quality that is thought to affect the quality of these streams are associated with farming.

A wetland delineation was previously competed for the mine area by WCS Scientific (October 2022) - see Figure 13 for a map showing these delineated wetlands and surface water features in the study area. As can be seen the KTD1 tailings residue stockpile were constructed over a historical wetland area.

8.11 HYDROGEOLOGY (GROUNDWATER)

Groundwater levels resemble that of the local typography flowing in a northerly direction at an average gradient of less than 5%. Groundwater monitoring boreholes indicate that the WPL is underlain by black silty clay layer varying from 1 m to 3 m in thickness. This layer is followed by an eroded norite-gabbro or weather and fractured anthrosite which is again followed by hard rock norite-gabbro. It is generally expected that the groundwater flow occurs mostly along the fractures of the underlying geology and entering into surface water bodies such as streams (SEF Western Platinum Mine EIA and EMPr, 2012).

The geology of the area consists mainly of norite rock types. There are three regional and three locally distributed components of the groundwater system, which form part of the lower part of the Main Zone and the Critical Zone of the Layered Bushveld Igneous complex. The Bushveld Complex is an ultramafic layered intrusion located in the Transvaal Basin of South Africa. Two reefs in the western and eastern limbs contain economic concentrations of Platinum Group Metals namely the Merensky Reef and the UG2 Chromatite Reef.

Detailed hydrogeological investigations within the mine lease area have been undertaken for many years in accordance with the EMPr and are continually updated towards continual improvement of the groundwater management plan. These investigations have included borehole census of the area, geological, structural and geomorphological mapping, percussion drilling (geological and hydrogeological logging), geophysical investigation (resistivity-tomography; seismic refraction), selected pump testing and hydrogeological modelling.

The groundwater monitoring results show that over a period of time the pH and EC have remained more or less the same. However Nitrates, Chloride, Electrical Conductivity, Sulphate and Sodium Absorption Ratio is of concern. Elevated levels of Cu (copper), Pb (lead), Hg (mercury), Zn (Zinc) have been detected at certain sites and to a lesser extend Mn (Manganese) and Se (Selenium) concentrations (SEF Western Platinum Mine EIA and EMPr, 2012).

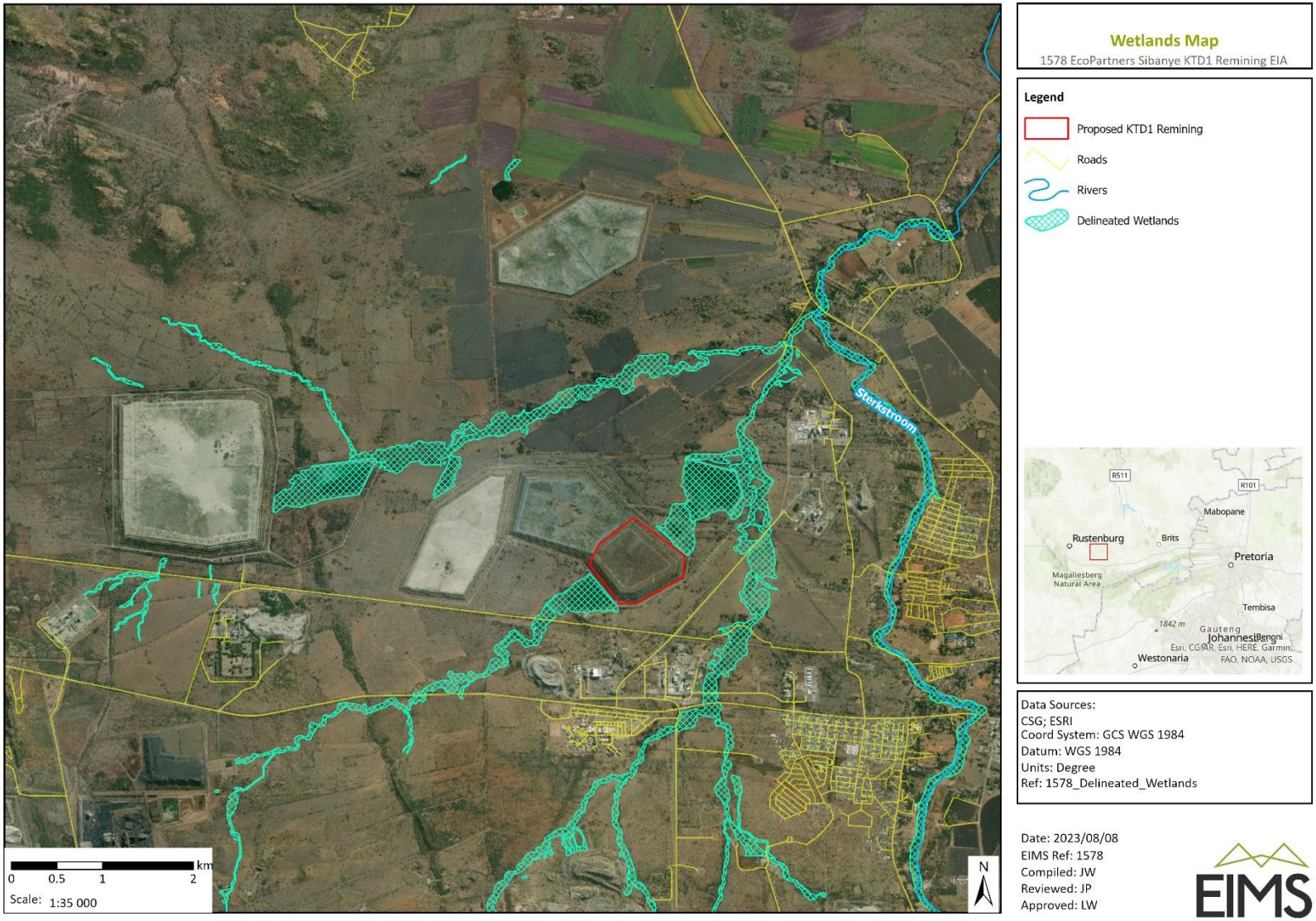

Figure 13 Delineated wetlands and surface water features in the vicinity of the project area

9 ENVIRONMENTAL IMPACT ASSESSMENT

This section aims to identify and preliminarily assess the potential environmental impacts associated with the proposed KTD1 remining project. This impact assessment will be used to guide the identification and selection of preferred alternatives, and management and mitigation measures, applicable to the proposed activities. The preliminary assessment will also serve to focus the subsequent EIA phase on the key issues and impacts.

9.1 APPROACH AND METHODOLOGY

This section presents the proposed approach to assessing the identified potential environmental impacts with the aim of determining the relevant environmental significance.

9.1.1 METHOD OF ASSESSING IMPACTS

The impact assessment methodology is guided by the requirements of the NEMA EIA Regulations. The broad approach to the significance rating methodology is to determine the environmental risk (ER) by considering the consequence (C) of each impact (comprising Nature, Extent, Duration, Magnitude, and Reversibility) and relate this to the probability/likelihood (P) of the impact occurring. This determines the environmental risk. In addition, other factors, including cumulative impacts, public concern, and potential for irreplaceable loss of resources, are used to determine a prioritisation factor (PF) which is applied to the ER to determine the overall significance (S).

The significance (S) of an impact is determined by applying a prioritisation factor (PF) to the environmental risk (ER). The environmental risk is dependent on the consequence (C) of the particular impact and the probability (P) of the impact occurring. Consequence is determined through the consideration of the Nature (N), Extent (E), Duration (D), Magnitude (M), and Reversibility (R) applicable to the specific impact.

For the purpose of this methodology the consequence of the impact is represented by:

$$\boldsymbol{C = \frac{(E + D + M + R) * N}{4}}$$

Each individual aspect in the determination of the consequence is represented by a rating scale as defined in Table 8.

Table 8: Criteria for determining impact consequence.

Aspect	Score	Definition
Nature	- 1	Likely to result in a negative/ detrimental impact
	+1	Likely to result in a positive/ beneficial impact
Extent	1	Activity (i.e. limited to the area applicable to the specific activity)
	2	Site (i.e. within the development property boundary),
	3	Local (i.e. the area within 5 km of the site),
	4	Regional (i.e. extends between 5 and 50 km from the site
	5	Provincial / National (i.e. extends beyond 50 km from the site)
Duration	1	Immediate (<1 year)
	2	Short term (1-5 years),
	3	Medium term (6-15 years),
	4	Long term (the impact will cease after the operational life span of the project),

Aspect	Score	Definition
	5	Permanent (no mitigation measure of natural process will reduce the impact after construction).
Magnitude/ Intensity	1	Minor (where the impact affects the environment in such a way that natural, cultural and social functions and processes are not affected),
	2	Low (where the impact affects the environment in such a way that natural, cultural and social functions and processes are slightly affected),
	3	Moderate (where the affected environment is altered but natural, cultural and social functions and processes continue albeit in a modified way),
	4	High (where natural, cultural or social functions or processes are altered to the extent that it will temporarily cease), or
	5	Very high / don't know (where natural, cultural or social functions or processes are altered to the extent that it will permanently cease).
Reversibility	1	Impact is reversible without any time and cost.
	2	Impact is reversible without incurring significant time and cost.
	3	Impact is reversible only by incurring significant time and cost.
	4	Impact is reversible only by incurring prohibitively high time and cost.
	5	Irreversible Impact

Once the C has been determined, the ER is determined in accordance with the standard risk assessment relationship by multiplying the C and the P. Probability is rated / scored as per Table 9.

Table 9: Probability scoring

Probability	1	Improbable (the possibility of the impact materialising is very low as a result of design, historic experience, or implementation of adequate corrective actions; <25%),
	2	Low probability (there is a possibility that the impact will occur; >25% and <50%),
	3	Medium probability (the impact may occur; >50% and <75%),
	4	High probability (it is most likely that the impact will occur- > 75% probability), or
	5	Definite (the impact will occur),

The result is a qualitative representation of relative ER associated with the impact. ER is therefore calculated as follows:

ER= C x P

Table 10: Determination of environmental risk

C	5	5	10	15	20	25

	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
		1	2	3	4	5
	Probability					

The outcome of the environmental risk assessment will result in a range of scores, ranging from 1 through to 25. These ER scores are then grouped into respective classes as described in Table 11.

Table 11: Significance classes

Environmental Risk Score	
Value	Description
< 9	Low (i.e. where this impact is unlikely to be a significant environmental risk).
≥9 - <17	Medium (i.e. where the impact could have a significant environmental risk),
≥17	High (i.e. where the impact will have a significant environmental risk).

The impact ER will be determined for each impact without relevant management and mitigation measures (pre-mitigation), as well as post implementation of relevant management and mitigation measures (post-mitigation). This allows for a prediction in the degree to which the impact can be managed / mitigated.

9.1.2 IMPACT PRIORITISATION

In accordance with the requirements of Appendix 3(3)(j) of the NEMA 2014 EIA Regulations (GN R. 982), and further to the assessment criteria presented in the Section above it is necessary to assess each potentially significant impact in terms of:

- Cumulative impacts; and
- The degree to which the impact may cause irreplaceable loss of resources.

In addition, it is important that the public opinion and sentiment regarding a prospective development and consequent potential impacts is considered in the decision-making process.

In an effort to ensure that these factors are considered, an impact prioritisation factor (PF) will be applied to each impact ER (post-mitigation). This prioritisation factor does not aim to detract from the risk ratings but rather to focus the attention of the decision-making authority on the higher priority/significance issues and impacts. The PF will be applied to the ER score based on the assumption that relevant suggested management/mitigation impacts are implemented.

Table 12: Criteria for determining prioritisation.

Cumulative Impact (CI)	Low (1)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is unlikely that the impact will result in spatial and temporal cumulative change.
	Medium (2)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is probable that the impact will result in spatial and temporal cumulative change.

	High (3)	Considering the potential incremental, interactive, sequential, and synergistic cumulative impacts, it is highly probable/ definite that the impact will result in spatial and temporal cumulative change.
Irreplaceable Loss of Resources (LR)	Low (1)	Where the impact is unlikely to result in irreplaceable loss of resources.
	Medium (2)	Where the impact may result in the irreplaceable loss (cannot be replaced or substituted) of resources but the value (services and/or functions) of these resources is limited.
	High (3)	Where the impact may result in the irreplaceable loss of resources of high value (services and/or functions).

The value for the final impact priority is represented as a single consolidated priority, determined as the sum of each individual criteria represented in Table 13. The impact priority is therefore determined as follows:

Priority = PR + CI + LR

The result is a priority score which ranges from 3 to 9 and a consequent PF ranging from 1 to 2 (Table 13).

Table 13: Determination of prioritisation factor

Priority	Ranking	Prioritisation Factor
2	Low	**1**
3	Medium	**1.125**
4	Medium	**1.25**
5	Medium	**1.375**
6	High	**1.5**

In order to determine the final impact significance, the PF is multiplied by the ER of the post mitigation scoring. The ultimate aim of the PF is to be able to increase the post mitigation environmental risk rating by a full ranking class, if all the priority attributes are high (i.e. if an impact comes out with a medium environmental risk after the conventional impact rating, but there is significant cumulative impact potential, significant public response, and significant potential for irreplaceable loss of resources, then the net result would be to upscale the impact to a high significance).

Table 14: Final environmental significance rating

Significance Rating	Description
<-17	High negative (i.e. where the impact must have an influence on the decision process to develop in the area).
≥-17, ≤-9	Medium negative (i.e. where the impact could influence the decision to develop in the area).
>-9, < 0	Low negative (i.e. where this impact would not have a direct influence on the decision to develop in the area).
0	No impact

Significance Rating	Description
>0, <9	Low positive (i.e. where this impact would not have a direct influence on the decision to develop in the area).
≥9, ≤17	Medium positive (i.e. where the impact could influence the decision to develop in the area).
>17	High positive (i.e. where the impact must have an influence on the decision process to develop in the area).

9.2 IDENTIFICATION OF IMPACTS

Potential environmental impacts were identified during the Scoping phase. These impacts were identified by the EAP as well as information sought or received from the public. Table 15 provides the list of preliminary impacts identified during scoping, some of which will be further assessed in the EIA phase. Moreover Appendix E presents the combined details of the preliminary impact assessment calculations undertaken towards determining the pre- and post-mitigation impact significance, as well as the final significance scores.

Without proper mitigation measures and continual environmental management, most of the identified impacts may potentially become cumulative, affecting areas outside of their originally identified zone of impact. The potential cumulative impacts have been identified, evaluated, and mitigation measures suggested which will be updated during the detailed EIA phase level of investigation. When considering cumulative impacts, it is vitally important to bear in mind the scale at which different impacts occur. There is potential for a cumulative effect at a broad scale, such as regional deterioration of air quality, as well as finer scale effects occurring in the area surrounding the activity. The main impacts which have a cumulative effect on a regional scale are related to the transportation vectors that they act upon. For example, air movement patterns result in localised air quality impacts having a cumulative effect on air quality in the region. Similarly, water acts as a vector for distribution of impacts such as contamination across a much wider area than the localised extent of the impact source. At a finer scale, there are also impacts that have the potential to result in a cumulative effect, although due to the smaller scale at which these operate, the significance of the cumulative impact is lower in the broader context.

Note that no new infrastructure is proposed as part of this application and therefore there are no construction or decommissioning phase impacts applicable.

Table 15: Identified environmental impacts.

Main Activity/ Action/ Process	Ancillary Activity	Geo-physical (geology, topography, air, water, etc.)	Biological	Socio-economic	Heritage and Cultural
Human Resources Management (Planning)	• Employment / recruitment • Skills development programmes				
Remining (Operation)	• Remining • Water management	• Decline in air quality (dust) • Impacts on existing stormwater infrastructure		• Increase in noise levels at surrounding receptors due to operational mining activities • Increase in traffic. • Impacts on health and safety. • Employment and income creation and social investment in the local community	
Rehabilitation (Closure)	• Removal of alien/invasive vegetation • Re-vegetation (if required) • Reinstating wetland	• Improvement in air quality • Improvement in ground quality (removal of potential contamination source) • Restoring wetland areas	• Proliferation of alien vegetation	• Increase in noise levels at surrounding receptors due to closure activities. • Net employment impacts • Conversion of land use	
Maintenance (Post-closure)	• Environmental aspect monitoring • Monitoring of rehabilitation				

9.3 DESCRIPTION AND ASSESSMENT OF IMPACTS

The following potential impacts were identified during the scoping phase assessment. As a result of the scoping phase assessment and the sensitivity mapping exercise, a preferred layout alternative will be identified to be assessed further in the EIA phase. These preliminary impact significance ratings will be subject to amendment based on the detailed impact assessment to be undertaken by the project specialists, input from the EAP, as well as results of public and key stakeholder consultations to be undertaken during the EIA phase. There is no construction or decommissioning phase associated with the remining application and therefore the impacts are limited to the remining activity itself.

9.3.1 PRELIMINARY IMPACTS ON AIR QUALITY

The following preliminary impacts on the air quality within the project area were identified and assessed for the various project phases.

A. Decline in air quality (dust)

Remining activities will generate dust, however the eventual remining of the tailing residue stockpile will remove a potential source of dust and allow the site to be used for other purposes in the future.

Impact	Project Phase	Pre-Mitigation Score	Post-Mitigation Score	Final Significance
Decline in air quality (dust)	Operation	-12.00	-10.00	-10.00
	Rehab and Closure	+11.00	+11.00	+11.00

Proposed Preliminary Mitigation

- Regular water sprays and chemical suppression on unpaved roads and remining areas during remining;
- Monthly physical inspection of road surface, daily visual observation of entrained dust emissions from unpaved road surfaces during remining;
- Tipping onto storage piles to be controlled through water sprays, should significant amounts of dust be generated;
- Regular clean-up at loading areas; and
- Revegetation is recommended, unless land is to be used for additional mine infrastructure.
- Loads to be covered during the transportation of the tailings via trucks.

9.3.2 PRELIMINARY IMPACTS ON EXISTING INFRASTRUCTURE

The following preliminary impacts on existing infrastructure within the project area were identified and assessed for the various project phases.

A. Impacts on existing infrastructure, particularly stormwater management infrastructure.

Impacts on existing stormwater infrastructure and other existing infrastructure at the mine area could result from the remining activities.

Impact	Project Phase	Pre-Mitigation Score	Post-Mitigation Score	Final Significance
Impacts on existing infrastructure	Operation	-5.00	-4.00	-4.00

Proposed Preliminary General Mitigation

- Ensure stormwater management infrastructure is not damaged or impacted as a result of the remining activities.

9.3.3 PRELIMINARY BIODIVERSITY IMPACTS

The following preliminary impacts on biodiversity within the project area were identified and assessed for the various project phases.

A. Proliferation of alien species

Alien plant species in the vicinity of the remining activities must be controlled, particularly during the operation and rehabilitation phases of the project.

Impact	Project Phase	Pre-Mitigation Score	Post-Mitigation Score	Final Significance
Spread of aliens	Operation, Rehab and closure	6.75	-4.00	--4.00

Proposed Preliminary General Mitigation

- Removal of alien vegetation in line with current invasive species management plan and EMPr requirements.

9.3.4 PRELIMINARY IMPACTS ON HEALTH AND SAFETY

The following preliminary impacts on health and safety within the project area were identified and assessed for the various project phases.

A. Health and safety impacts

Safety is a key issue on all mines. The stability of the existing tailing residue deposit is key. A recent geotechnical investigation (SLR, 2023) has demonstrated that the tailing residue deposit is relatively dry with a low phreatic surface. It is therefore not anticipated that re-mining will destabilise the tailing residue deposit or increase the risk posed.

Overtopping is another potential impact which can either be slurry or water related. Slurry overtopping would potentially occur due to mismanagement during deposition as a result of “rat-holing”, over-deposition in a specific area and build-up of tailings in front of the deposition point or pipe bursts. Slurry overtopping leads to erosion gullies but would have to be significant and over a long period for it to impact the stability of the TSF. Minor water overtopping can also occur during deposition. This is similar to above but only involves water. Overtopping may occur due to mismanagement of the pool, especially during a large storm event, and if there is insufficient freeboard.

Impact	Project Phase	Pre-Mitigation Score	Post-Mitigation Score	Final Significance
Health and Safety impacts	Operation	-9.00	-2.25	-2.25

Proposed Preliminary Mitigation

A mining plan must be developed to ensure that sufficient freeboard is available during the process to prevent any overtopping of water or slurry into the surrounding environment. Prevention of slurry overtopping is done by ensuring the contractor has the correct operational procedures in place as detailed in the OMS Manuals as well as maintenance. Controls for water overtopping include centrally located penstock intakes to keep the pool as far from the outer crest as possible, zero storage of water, maximum pool depth limited to 300mm above which it has to be decanted regardless of whether it results in a spill or not, set freeboard limits and constant monitoring of freeboard and pool location and depth.

9.3.5 PRELIMINARY SOCIAL IMPACTS

The following preliminary social impacts within the project area were identified and assessed for the various project phases.

A. Nuisance factors

Various factors that are perceived to be a nuisance by the any communities in the vicinity of the project may arise, and these may include pests from insufficient waste management, dust from the remining activities and vehicle movement, noise from the operation of machinery and other remining equipment etc.

Impact	Project Phase	Pre-Mitigation Score	Post-Mitigation Score	Final Significance
Nuisance factors	Construction	-8.25	-7.50	-7.50

Proposed Preliminary Mitigation

- Implement a grievance mechanism.

B. Employment retention

It is estimated that this project will increase life of mine by 15 years and maintain a contribution of approximately R2BN per annum The proposed remining project will result in the continued employment of approximately 92 permanent employees and approximately 346 permanent contractors. 6 new employment opportunities will be created (cleaning crew). Employment from the surrounding communities is recommended where possible, such that there will be no significant influx of additional workers to the area as a direct result of the proposed project.

Impact	Project Phase	Pre-Enhancement Score	Post-Enhancement Score	Final Significance

Employment retention	Operation	+15.00	+15.00	+15.00

Proposed Preliminary Mitigation

- No mitigation required.

C. Conversion of land use

The remining of the TSF will allow the space to be reused or rehabilitated as required. The project could give rise to a change in the way in which the land is utilised and remove a potential source of dust and groundwater contamination. There is likely to be residual contamination on the footprint once demolished however and this must be managed accordingly.

Impact	Project Phase	Pre-Mitigation Score	Post-Mitigation Score	Final Significance
Conversion of land use	Operation	+16.25	+16.25	+16.25

Proposed Preliminary Mitigation

- Radiological assessment of the TSF area should be undertaken after remining to determine the safety of the site and if there is any residual contamination as a result of the previous TSF activities. Once radiological clearance is received the site can then be utilized for new infrastructure etc.

9.3.6 PRELIMINARY NOISE IMPACTS

The following preliminary noise impacts within the project area were identified and assessed for the various project phases.

A. Increase in noise levels at surrounding receptors due to remining activities.

Noise levels are likely to increase as a result of the remining activities thereby disturbing the surrounding communities or workers.

Impact	Project Phase	Pre-Mitigation Score	Post-Mitigation Score	Final Significance
Increase in noise levels at surrounding receptors due to operational remining activities	Operation	-7.00	-3.50	-3.50

Proposed Preliminary Mitigation

- Minimize night-time activities as far as possible;
- Drivers to adhere to speed limits; and
- Environmental awareness training for employees/drivers.

9.3.7 PRELIMINARY TRAFFIC IMPACTS

The following preliminary traffic impacts within the project area were identified and assessed for the various project phases.

A. Increase traffic in and around KTD1 site due to remining activities.

The remining activities will increase traffic in the area around the KTD1 TSF. The tailing residue stockpile is however within the mine area and no impact on public roads will result.

Impact	Project Phase	Pre-Mitigation Score	Post-Mitigation Score	Final Significance
Increase in traffic	Operation	-9.00	-4.50	-4.50

Proposed Preliminary Mitigation

- Use existing access roads.
- Internal Gravel Access Roads should be maintained to support heavy vehicle movement.
- Limit heavy vehicle speed to 40km/h along internal site roads.
- Water down gravel roads on a regular basis to reduce dust.

9.3.8 PRELIMINARY IMPACTS ON GROUNDWATER

The following preliminary impacts on groundwater within the project area were identified and assessed for the various project phases.

A. Groundwater impacts

Remining and removal of tailing residue stockpile will remove a potential groundwater contamination source.

Impact	Project Phase	Pre-Mitigation Score	Post-Mitigation Score	Final Significance
Groundwater impacts	Rehab and Closure	+12.00	+12.00	+12.00

Proposed Preliminary Mitigation

- None required. .

9.4 SUMMARY OF PRELIMINARY IMPACTS

A summary of all the identified preliminary impact, their associated phase, as well as their impact calculations and significance are included as Appendix E.

10 PLAN OF STUDY FOR THE IMPACT ASSESSMENT

The section below outlines the proposed plan of study which will be conducted for the various environmental aspects during the EIA phase. It is also important to note that the plan of study will also be guided by comment obtained from I&APs and other stakeholders during the Scoping Report public review period.

10.1 DESCRIPTION OF ALTERNATIVES TO BE CONSIDERED

As described in Section 6, no alternatives are applicable (aside from the no-go activity alternative) as the project is for the remining of an existing tailings residue stockpile and no infrastructure is proposed as part of this application.

10.1.1 ACTIVITY ALTERNATIVES

The no-go or 'do nothing' option is the same as keeping the current *status quo* of the site, i.e. keep the tailings residue stockpile in place without remining, and therefore provides the baseline against which the impacts of other alternatives should be compared.

10.2 DESCRIPTION OF THE ASPECTS TO BE ASSESSED AS PART OF THE ENVIRONMENTAL IMPACT ASSESSMENT PHASE

The following aspects will be assessed further during the EIA phase investigations to be undertaken:

- Dust impacts during remining;
- Impacts on existing infrastructure during remining;
- Health and safety impacts;
- Traffic impacts;
- Biodiversity impacts (spread of alien vegetation);
- Noise impacts; and
- Positive Social, Land Use and Groundwater / Air Quality Impacts.

At this stage no specialist studies are deemed to be required, however compliance statements are required for the following aspects, as identified in the DFFE screening tool report (Appendix D):

- Aquatic ecology
- Terrestrial biodiversity

These compliance statements are included in Appendix F.

10.3 PROPOSED METHOD OF ASSESSING ENVIRONMENTAL ASPECTS

The same method of assessing impact significance as was used during the Scoping phase will be applied during the EIA phase. This methodology is described in detail in Section 9.1 of this Scoping Report.

10.4 PROPOSED METHOD FOR ASSESSING DURATION SIGNIFICANCE

The significance of environmental impacts will be rated before and after the implementation of mitigation measures. These mitigation measures may be existing measures or additional measures that may arise from the impact assessment. The impact rating system considers the confidence level that can be placed on the successful implementation of the mitigation. The proposed method for the assessment of environmental issues is set out in the Section 9.1. This assessment methodology enables the assessment of environmental issues including: the severity of impacts (including the nature of impacts and the degree to which impacts may cause irreplaceable loss of resources), the extent of the impacts, the duration and reversibility of impacts, the probability of the impact occurring, and the degree to which the impacts can be mitigated.

10.5 STAGES AT WHICH COMPETENT AUTHORITIES WILL BE CONSULTED

Competent authorities were consulted during the initial notification period, the scoping phase, and will further be consulted during the EIA phase. A pre-application meeting was held with the DMRE on 23 May 2023. No additional authority meetings are scheduled during the scoping phase. However, if and / or when an authority requires a meeting, one will be arranged. Should a meeting be required, the date, time, and venue of the meeting will be scheduled post dissemination of the project notification documents. The purpose of the authority meeting would be to explain the project in detail to authorities and clarify the process going forward.

10.6 PROPOSED METHOD OF PUBLIC PARTICIPATION

An overview of the proposed public participation process to be followed for the EIA phase is provided below. The commenting periods that will be provided to the I&APs (and the competent authorities) will be thirty (30) days long. Two commenting periods are provided for during this EIA process, these will be during the review period of the:

- Scoping Report; and
- EIA Report and associated EMPr.

All comments received during the initial notification and call to register have been included in this Scoping Report, and comments received during the Scoping Report comment period will be included in the finalised Scoping Report for submission to the competent authority. The details pertaining to the review of the EIA Report and EMPr, the venue where the report will be placed for review, as well as the duration of the comment period, will be determined at a later date and communicated to all registered I&APs.

10.6.1 STEPS TO BE TAKEN TO NOTIFY INTERESTED AND AFFECTED PARTIES

I&APs were notified of the proposed application via registered letters, emails and facsimiles. The Public Participation Process has been and will continue to be undertaken in accordance with the NEMA EIA Regulations (2014, as amended). A minimum of 30 days was provided to the public to register as I&APs and provide initial comments on the project, a further 30 days was provided for to comment on the Scoping Report. The information submitted by I&APs will be utilised during the Impact Assessment and compilation of the EIA Report and associated EMPr. Upon acceptance of the Scoping Report by the competent authority, the EIA phase will commence. An EIA Report will be compiled presenting the findings of the EIA phase, this report will be made available for public review and comment for a further 30 days.

Feedback from I&APs has been and will be solicited through the following means:

- Advertisements (already placed during initial notification);
- Site notices and posters (already placed during initial notification);
- Registered letters;
- Facsimile and e-mails; and
- Any other communication with EIMS, which includes SMS's.

10.6.2 DETAILS OF ENGAGEMENT PROCESS TO BE FOLLOWED

I&APs will be afforded the following opportunities to participate in the project:

- I&APs have been requested via written notifications distributed to provide their views, queries and / or comments on the project;
- The EIA Report and EMPr will be available for comment for a period of 30 days at the same public places in the project area that the Scoping Report was made available. Furthermore, copies of the said report sent to stakeholders who request a copy, and placed on the EIMS website: www.eims.co.za; and

- No public meetings are proposed at this stage.

All comments and issues raised during the Scoping Report 30-day public comment period will be incorporated into the Final Scoping Report, and the comments from the EIA Report and EMPr review period will be included in the finalised EIA Report and EMPr to be submitted to the competent authority for decision-making.

10.7 DESCRIPTION OF TASKS THAT WILL BE UNDERTAKEN DURING THE EIA PROCESS

The plan of study in terms of certain aspects is detailed in the above sections and is summarised below. The following tasks will be undertaken as part of the EIA phase of the project:

- Public consultation:
    - Notification of the availability of the EIA Report for review and comment to all registered I&APs;
    - Informing registered I&APs of the project progress; and
    - Public and focus group meetings, if required.
- Authority consultation:
    - Consultation with DMRE and the commenting authorities; and
    - Other relevant / commenting authorities' consultation (including meetings where necessary) to provide authorities with project related information and obtain their feedback.
- Document compilation:
    - The EIA Report and associated EMPr will be compiled in line with the requirements of Appendix 3 and 4 of the NEMA EIA Regulations (2014, as amended);
    - The EIA Report and EMPr will be made available for public comment for a period of 30 days; and
    - The EIA Report and EMPr will be finalised and submitted to the DMRE.

10.8 MEASURES TO AVOID, REVERSE, MITIGATE, OR MANAGE IMPACTS

All comments received by I&APs will be taken into consideration and will inform the high-level mitigation measures. Detailed mitigation measures will be further developed as part of the EIA phase. The potential impacts identified during the Scoping phase will further be assessed in terms of the mitigation potential, taking into consideration the following:

- Reversibility of impact:
    - Reversible;
    - Partially reversible.; and
    - Irreversible.
- Irreplaceable loss of resources:
    - Replaceable;
    - Partially replaceable; and
    - Irreplaceable.
- Potential of impacts to be mitigated:
    - High;
    - Medium; and

- Low.

The assessment findings for each identified impact taking the above into consideration will be provided in the EIA Report and associated EMPr.

11 SENSITIVITY MAPPING

Environmental sensitivity mapping provides a strategic overview of the environmental, cultural and social assets in a region. The sensitivity mapping technique integrates numerous datasets (base maps and shapefiles) into a single consolidated layer making use of Geographic Information System (GIS) software and analysis tools. Environmental sensitivity mapping is a rapid and objective method applied to identify areas which may be particularly sensitive to development based on environmental, cultural and social sensitivity weightings – which is determined by specialists' input within each respective field based on aerial or ground-surveys. Therefore, the sensitivity mapping exercise assists in the identification of low, medium and highly sensitive areas within the project area, towards selecting the preferred location, design and layout, and process or technology alternatives for the proposed activities and infrastructure.

This sensitivity mapping approach allows for the proposed activities to be undertaken whilst protecting identified sensitive environmental areas / features. Furthermore, environmental sensitivity is used to aid in decision-making during consultation processes, forming a strategic part of Environmental Assessment processes. Table 16 below provides a breakdown of the sensitivity rating and weightings applied to determine the sensitivity score of each aspect, and Figure 14 below presents how the sensitivity mapping technique integrates numerous datasets into a single consolidated sensitivity layer, and Figure 15 presents the preliminary combined sensitivity map according to identified sensitivities in and around the proposed project area.

The preliminary combined sensitivity map includes individual sensitivities according to various sensitive environmental features in and around the project area. As the project involves remining of an existing tailing residue deposit there are no sensitivities on the site itself. Only wetlands and heritage sites in close proximity to the KTD1 TSF were identified as potential sensitivities on the sensitivity map, and these were assigned as medium and high sensitivity areas respectively. The identified preliminary sensitivities will be further assessed during the EIA phase, and a final combined sensitivity map produced.

Table 16: Sensitivity rating and weighting

Sensitivity Rating	Description	Weighting
Least concern	The inherent feature status and sensitivity is already degraded or contain no inherent sensitivities. The proposed development will not affect the current status and/or may result in a positive impact. These features would be the preferred alternative for mining or infrastructure placement.	-1
Low/Poor	The proposed development will not have a significant effect on the inherent feature status and sensitivity.	0
High	The proposed development will moderately negatively influence the current status of the feature.	1
Very high	The proposed development will have a significantly negative influence on the current status of the feature.	2

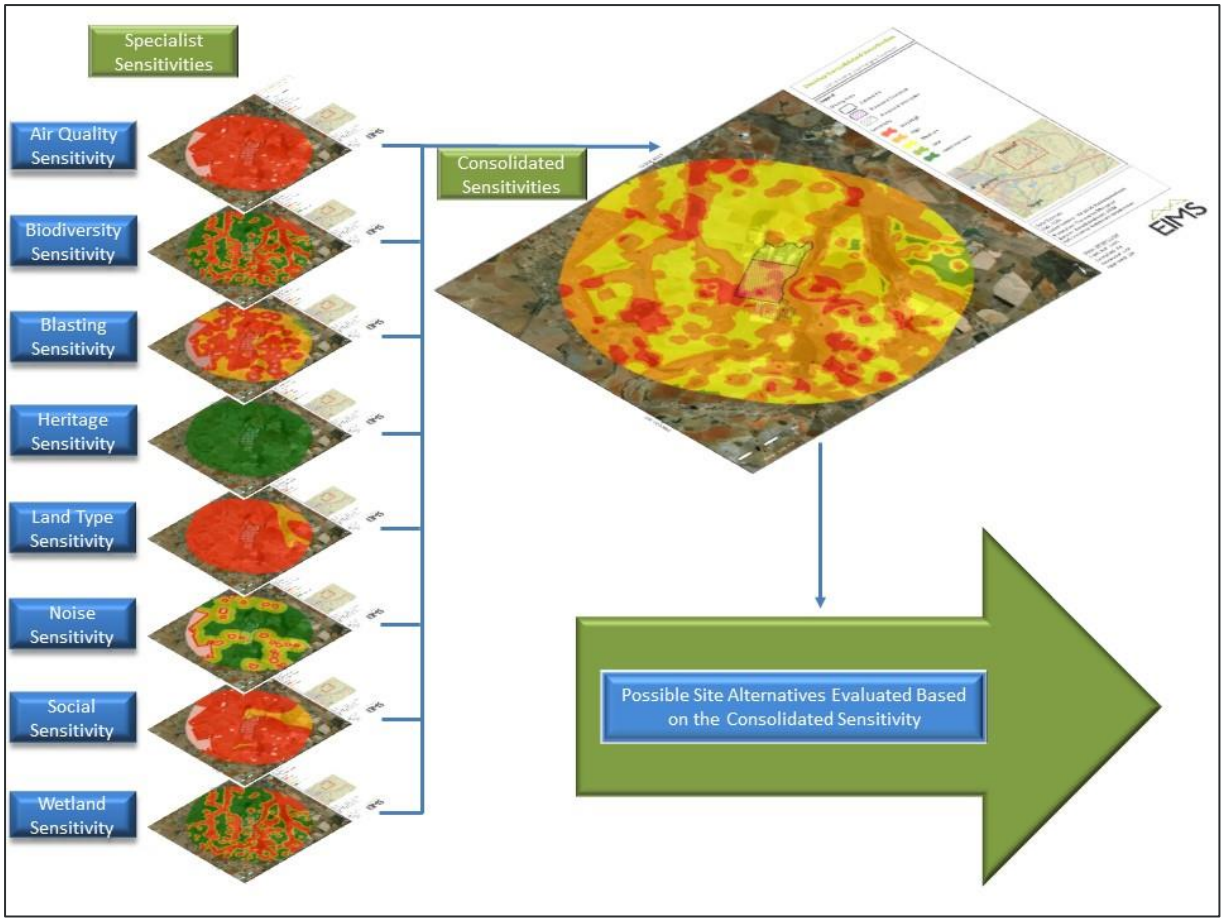

Figure 14: Sensitivity mapping approach

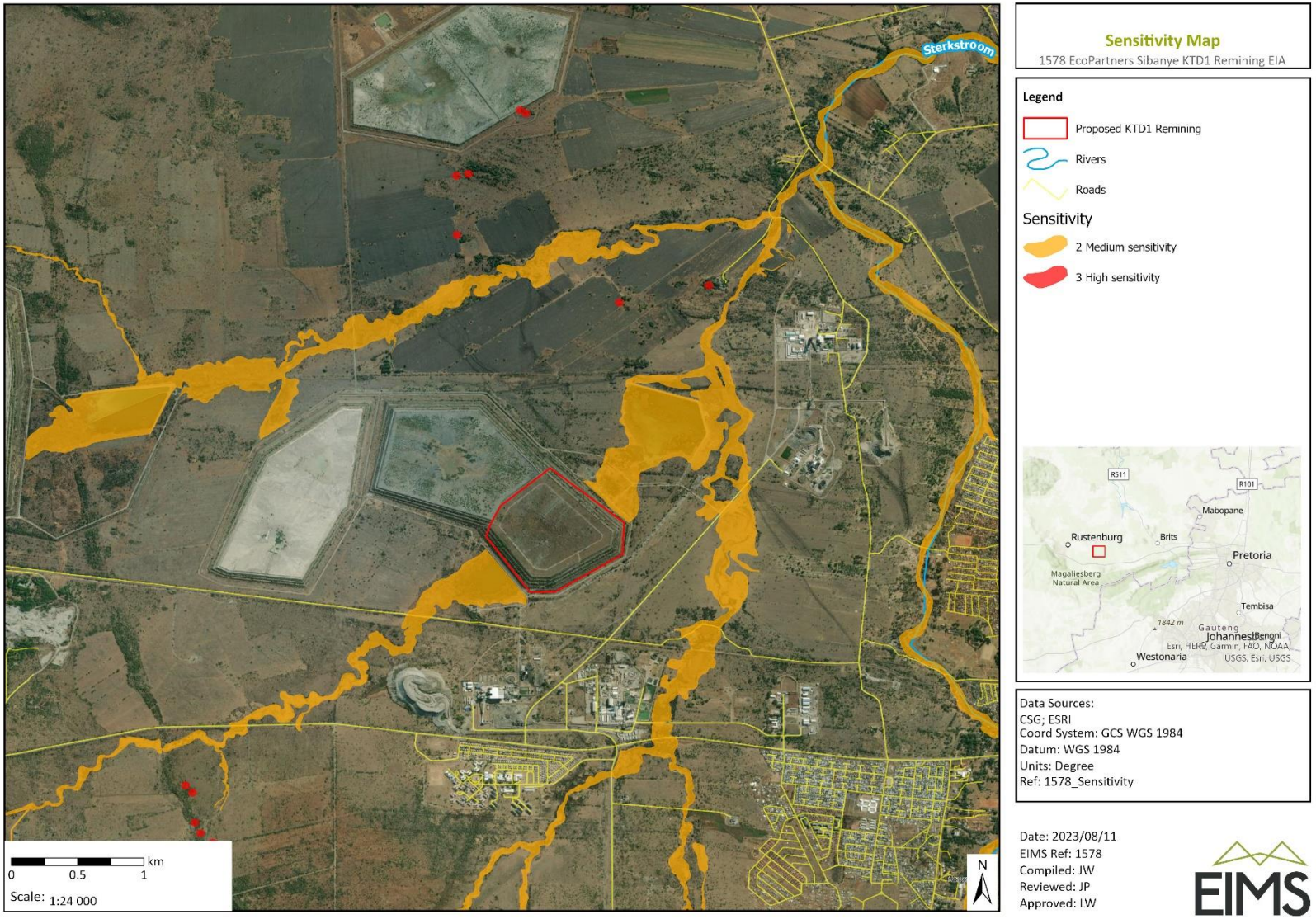

Figure 15: Preliminary sensitivity map

12 ASSUMPTIONS, LIMITATIONS AND UNCERTAINTIES

Certain assumptions, limitations, and uncertainties are associated with the Scoping Phase. This report is based on information that is currently available and, as a result, the following limitations and assumptions are applicable:

- The Scoping Report is based on project information and descriptions provided by the client; and
- No specialist studies have been undertaken as part of this scoping report. The description of the baseline environment has been obtained from available baseline data and existing studies and reports as referenced.

13 UNDERTAKINGS

I __**San Oosthuizen**__ herewith undertake that the information provided in the foregoing report is correct to the best of my knowledge, and that the comments and inputs from stakeholders and Interested and Affected Parties has been correctly recorded in the report where applicable.

Note: No comments and inputs received from stakeholders and I&APs yet. The Scoping Report will be made available for 30 days.

Signature of the EAP –

Date: 4/10/2023

14 REFERENCES

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- SEF, Western Platinum Mine Final Environmental Impact Assessment and Environmental Management Programme, November 2012.
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- SMEC Rustenburg Municipality Draft Spatial Development Framework and Human Settlement Housing Plan project , 2023.
- Vegetation Map of South Africa, Lesotho & Swaziland (BGIS)
- WCS Scientific - SA Platinum Operations Ecologically Sensitive Areas Delineation – Wetlands (Sibanye-Stillwater Marikana (Big) Operations), October 2022
- www.weatherspark.com

15 APPENDICES

Appendix A: Environmental Assessment Practitioner (EAP) Curriculum Vitae

Appendix B: Maps

Appendix C: Public Participation

Appendix D: Copy of Application form and Site Screening Report

Appendix E: Impact Assessment Matrix

Appendix F: Specialist Compliance Statement

Document Review:

Document Title:	SCOPING REPORT - PROPOSED WESTERN PLATINUM KTD1 TAILINGS STORAGE FACILITY REMINING IN NORTH WEST PROVINCE

Document Number:	1578	Version:	Original Document	Revision:	2023/08/28

Is a CV attached?	Yes	X	No	

Peer Review:

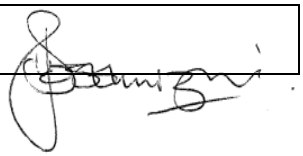
Review Reason:	Peer reviews ensure an additional layer of independence, and an additional verification of information. It also reduces the occurrence of irrelevant or harsh findings, unjustified claims, objectional interpretations, and subjective views, it focusses on the facts and reduce bias.
Recommendations:	In this review it was found that the information was objectively represented. The Scope of the project was adequately defined. Interpretations were in line with the information provided and obtained from the applicant and online databases provided by relevant authorities. The conclusion reflected an accurate picture, and it is proposed that the recommendations for the Plan of Study for the EIA be followed.

Submitted for Review:	11 September 2023	Reviewed:	11 September 2023

Document Writer:

Name:	John von Mayer	Title:	Environmental Impact Management Services (Pty) Ltd
Signature:		Date:	28 September 2023

Document Reviewers:

Name:	San Oosthuizen	Title:	Snr Environmental Consultant - EcoPartners
Signature:		Date:	28 September 2023