PROPOSED MINING RIGHT OVER GROOT GEWAAGD 270 IN, GEMSBOK PAN 309 IN, KOODOOS RAND 321 IN AND PAPIESVLAKTE 323 IN, SITUATED IN THE MAGISTERIAL DISTRICT OF VRYBURG, NORTHWEST PROVINCE

DRAFT SCOPING REPORT

DEPARTMENTAL REFERENCE NUMBER:

NW 30/5/1/2/2/10249 MR

MARCH 2025

PREPARED FOR:

Greenstone Platinum (Pty) Ltd
2nd Floor,
4 Fricker Road
Illovo
Gauteng
2196
Contact Person: Ntokozo Cande/ Dr. Sakhile Ngcobo
Tel: 073 112 5527
E-mail: info@lmeconsultant.co.za

PREPARED BY:

Greenmined Environmental (Pty) Ltd
106 Baker Square
Block 1, Paardevlei
De Beers Avenue, Somerset West
7130

Contact Person: Mrs S Smit
Tel: 021 851 2673
Cell: 084 585 5706
Email: sonette.s@greenmined.co.za

EXECUTIVE SUMMARY

Greenstone Platinum (Pty) Ltd (hereafter referred to as “the applicant”) is in the process of applying for a mining right over 15,867.90 ha of the farms Groot Gewaagd 270 IN, Gemsbok Pan 309 IN, Koodoos Rand 321 IN, and Papiesvlakte 323 IN, situated in the Magisterial District of Vryburg, Northwest Province. The project is referred to as the Vryburg MR Project and is intended to extract platinum group metals (PGMs), gold, copper, cobalt, iron ore, vanadium, nickel, silver, and chrome.

The proposed project triggers listed activities under the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), as well as the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008). Consequently, an Environmental Impact Assessment (EIA) is required to assess project-specific environmental impacts and alternatives, consider public input, and propose mitigation measures, ultimately leading to an environmental management programme that informs the competent authority (Department of Mineral Resources and Energy) when considering the environmental authorisation. This Draft Scoping Report (DSR) forms the first phase of the EIA process and identifies the potential environmental and socio-economic impacts associated with the project. While the project may also trigger the need for a Waste Management Licence and a Water Use Licence, these applications have not yet been submitted. The need for these licences will be confirmed during the EIA phase once the specific activities have been finalised. The report presents a preliminary assessment, with further details to be addressed in the Detailed EIA Report (DEIAR) and Environmental Management Programme (EMPr).

Furthermore, the application area overlaps with an existing prospecting right area (NW30/5/1/1/2/11876PR) for the same minerals. This indicates that the site has already been identified as a viable mining location through prior geological assessments and exploration activities. Following the expiration of this prospecting right, the mining right application was initiated to advance resource development in a regulated and sustainable manner.

Need and Desirability

The Greenstone Platinum mining project in the Vryburg Magisterial District, Northwest Province, aims to extract Chrome, Cobalt, Copper, Gold Ore, Iron Ore, Nickel Ore, PGMs, Silver Ore, and Vanadium over 15,867.90 ha. With a 10-year mine life and a 1.5 Mtpa production rate, the project will generate economic growth, job creation, and foreign exchange earnings while supporting South Africa’s mineral sector. The project aligns with national development goals, addressing market demand for PGMs, Gold, and battery metals. It will implement sustainable water use, sourcing treated sewage effluent via a 98 km pipeline and comply with waste and environmental regulations. The project is economically viable, socially beneficial, and environmentally managed to support responsible mining and regional development.

The assessment of the need and desirability of the proposed operation as contained in this Scoping Report must be seen as *preliminary* to be expanded upon during the environmental impact assessment phase once the specialist studies and public input are available. The National Department of Environmental Affairs' Guideline on Need and Desirability (first version published in terms of section 24J of the NEMA in 2014, and second version in 2017), directs the aspects to be considered and elaborated on during the full EIA process.

Alternative Considered:

a) The property on which, or location where, it is proposed to undertake the activity

Presently, the project proposal entails a mining right application over ± over ±15 867.90 ha of Groot Gewaagd 270 IN, Gemsbok Pan 309 IN, Koodoos Rand 321 IN and Papiesvlakte 323 IN, situated in the Magisterial District of Vryburg, Northwest Province, within the boundaries of the GPS coordinates listed in Table 4 and depicted in Figure 3.

Applicants can only apply for mining rights within areas where such rights are not yet held by other companies/applicants. Furthermore, the mining activities are dependent upon the presence of the desired minerals which are again dependent upon geological formations. Considering this, the proposed footprint of the MR application was founded on the footprint of the prospecting right (NW30/5/1/1/2/11876PR) backed by the prospecting results and available geological information.

The location was chosen due to the presence of a well-defined mineral resource hosted within the Stella Layered Intrusion (SLI) and its proximity to existing infrastructure such as roads and power lines.

Alternatives considered for the location included other sites within the broader mineralized belt; however, these were deemed less viable due to factors such as lower resource grades, less accessibility, and greater environmental sensitivities. The findings of the project team and specialists will be presented and assessed in the DEIAR that will also be available for public input.

b) Type of activity to be undertaken

The Applicant intends to mine Chrome, Cobalt, Copper, Gold Ore, Iron Ore, Nickel Ore, PGMs, Silver Ore and Vanadium of the mining footprint using opencast methods as discussed in *Section 1(d)(ii) Description of the activities to be undertaken – Project Proposal*.

The primary activity proposed is open-pit mining of Platinum Group Metals (PGMs), including platinum, palladium, and gold. The alternative to open-pit mining was underground mining, which was initially explored in feasibility studies but found to be economically unfeasible due to the steeply dipping nature of the ore body and the associated high extraction costs. Should viable activity alternatives be identified it

will be discussed during the EIA process of the application and included in the DEIAR to be distributed for public comments.

c) Design and layout of the activity

The mine design consists of several open pits, a processing plant, a tailings storage facility, and supporting infrastructure. Alternative designs considered included:

- A single, large open pit versus multiple smaller pits—smaller pits were selected to minimize environmental impact and optimize ore extraction efficiency.
- Different placements for the processing plant and tailings storage—locations were chosen to minimize the footprint and distance to ore sources while reducing potential contamination risks.
- The possibility of modular or phased infrastructure development to allow for flexibility in scaling operations.

The final design/layout alternatives will be considered during the EIA process as supplementary information is obtained from the specialist studies, and the stakeholders and I&AP's contribute their knowledge towards the proposed project.

d) Technology to be used in the activity.

Presently it is expected that the mining process will be as described in *Section 1(d)(ii) Description of the activities to be undertaken – Operational Phase*. The project will employ conventional open pit mining methods, including drilling, blasting, loading, and hauling. The ore will be processed using crushing, milling, and flotation to extract PGMs.

Alternatives considered included:

- The use of High-Pressure Grinding Rolls (HPGR) versus conventional crushing circuits—HPGR was not selected due to the ore characteristics favouring conventional crushing and milling.
- Different flotation reagent regimes were tested to maximize recovery while minimizing environmental impacts.

Dry tailings disposal versus wet tailings—wet tailings were chosen due to technical and economic feasibility, but design measures were incorporated to manage water efficiently. No further technology alternatives are considered in the Scoping and EIA process unless a need arises upon receipt of the specialist reports and/or public input.

e) Operational aspects of the activity

The operational plan is designed to balance efficiency with environmental and social considerations. This includes:

- Using contract mining for flexibility in workforce and equipment management.
- A targeted production rate of 1.5 Mtpa, optimized for economic viability.
- Progressive rehabilitation strategies to minimize long-term land disturbance.

Alternatives considered included variations in mining rates, workforce structures (direct employment vs. contractors), and alternative waste disposal methods, with the current approach being selected as the most balanced in terms of cost, sustainability, and compliance. The operational aspects will however be expanded upon once the findings and recommendations of the specialists are available and will be considered during the EIA process as supplementary information is obtained.

f) Option of not implementing the activity (No-go Alternative)

The no-go alternative, which entails no change to the status quo, is a valid and necessary option that must be considered. Under this scenario, the project would not proceed, leaving the area in its current state. While this would prevent environmental disturbances such as land degradation, water resource impacts, and biodiversity loss, it also carries significant socio-economic and strategic consequences.

From an environmental perspective, the no-go alternative would avoid potential disruptions to the landscape and ecosystems. However, responsible mining practices, coupled with stringent mitigation measures, can minimize these impacts, ensuring that biodiversity and natural resources are protected while still allowing for economic development.

On a socio-economic level, the no-go option would mean the loss of substantial employment opportunities, local business development, and infrastructure investments. Given South Africa's high unemployment rates and the need for economic upliftment in rural areas, forgoing such a project would significantly impact livelihoods and economic growth.

From a strategic standpoint, failing to utilize the available mineral resources would result in continued dependence on other sources of PGMs, potentially less sustainable or more environmentally damaging operations elsewhere. It would also mean a loss of revenue that could otherwise contribute to national economic stability, industrial growth, and social development programs.

Therefore, while the no-go alternative offers certain environmental benefits, it is critical to find a balanced approach that allows for responsible resource extraction while minimizing negative impacts. Implementing

best-practice mitigation strategies can ensure that the project proceeds in a way that safeguards the environment while delivering significant socio-economic benefits. The socio-ecological and socio-economic impacts of mining on the current and future land uses of the study area will be compared to the status quo and will be considered as part of the EIA process and discussed in the DEIAR.

Public Participation Process:

The relevant stakeholders and Interested and Affected Parties (I&AP's) will be informed of the mining right application by means of an advertisement in the Stellalander, and on-site notices that will be placed at conspicuous places inviting the public to comment on the project. A notification letter inviting comments on the DSR over a 30-days commenting period (ending 30 April 2025) will also be sent to the landowners, neighbouring landowners, stakeholders, and any other I&AP that may be interested in the project. The comments received on the DSR will be incorporated into the final Scoping Report (FSR) to be submitted to the DMRE for consideration.

Scoping Report:

The scoping report identifies the potential positive and negative impacts that the proposed project may have on the environment and the community as well as the aspects that may impact on the socio-economic conditions of directly affected persons and proposes possible mitigation measures that could be applied to modify / remedy / control / stop the identified impacts.

Plan of Study for the Environmental Impact Assessment Process:

The aspects to be assessed as part of the environmental impact assessment process will include, but not be limited to, the following:

1. Various alternatives will be considered during the EIA process as supplementary information becomes available. Identifying viable alternatives will in turn dictate the design and layout of the proposed project as well as hone the proposed mining method.
2. The need and desirability of the proposed activity will be discussed in detail and weighed against the no-go option of upholding the status quo at the study area.
3. The inputs received during the public participation process (first- and second phase) will be assessed and considered by the project team during the EIA process.
4. The findings, recommendations and management measure proposed in the specialist studies will be assessed during the EIA process and incorporated into the DEIAR.
5. The impact of the proposed project on the physical-, biological-, and human environments will be assessed.
6. Mitigation measures will be proposed to control, modify, remedy, or stop the impacts associated with the proposed activity on the surrounding environment.

7. Any additional requirements submitted by the DMRE will be incorporated into the DEIAR and treated accordingly.

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LIST OF ACRONYMS

AAPS Anglo American Prospecting Services

AQA Air Quality Act

AQIR Air Quality Impact Report

ASTM American Society for Testing and Materials

BIFs Banded Iron Formations

BGIS Biodiversity Geographic Information System

CBA Critical Biodiversity Area

CARA Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)

CBAs Critical Biodiversity Areas

CRR Comments and Response Report

CSR Corporate Social Responsibility

DFFE Department of Forestry, Fisheries and the Environment

DMRE Department of Mineral Resources and Energy

DRPW Department of Roads and Public Works

DSR Draft Scoping Report

DWS Department of Water and Sanitation

EA Environmental Authorisation

EAP Environmental Assessment Practitioner

EAPASA Environmental Assessment Practitioners Association of South Africa

ECO Environmental Control Officer

EIA Environmental Impact Assessment

EIAR Environmental Impact Assessment Report

EIS Ecological Importance and Sensitivity

EMPR Environmental Management Programme Report

ESA (Arch) Early Stone Age

ESA Ecological Support Areas

FEPA Freshwater Ecosystem Priority Area

FET Further Education and Training

GIS Geographic Information System

GN Government Notice

GNR Government Notice Regulation

GPS Global Positioning System

GVA Gross Value Added

HIA Heritage Impact Assessment

HPGR High-Pressure Grinding Rolls

IDP Integrated Development Plan

IFC International Finance Corporation

IOEC Iron Ore Export Channel

IWULA Integrated Water Use Licence Application

IWWMP Integrated Water and Waste Management Plan

LED Local Economic Development

LOM Life of Mine

LSM Late Stone Age

MHSA Mine Health and Safety Act, 1996 (Act No 29 of 1996)

MPRDA Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002)

MR Mining Right

MSA Middle Stone Age

MWP Mining Work Programme

NAAQS National Ambient Air Quality Standards

NEMA National Environmental Management Act, 1998 (Act No 107 of 1998)

NEM:AQA National Environmental Management: Air Quality Act, 2004 (Act No 39 of 2004)

NEM:BA National Environmental Management: Biodiversity Act, 2004 (Act No 10 of 2004)

NEM:WA National Environmental Management: Waste Act, 2008 (Act No 59 of 2008)

NERSA National Energy Regulator of South Africa

NFEPA National Freshwater Ecosystem Priority Areas

NHRA National Heritage Resources Act, 1999 (Act No 25 of 1999)

NLM Naledi Local Municipality

NRTA National Road Traffic Act, 1996 (Act No 93 of 1996)

NT Near Threatened

NWA National Water Act, 1998 (Act No 36 of 1998)

OHSA Occupational Health and Safety Act, 1993 (Act No 85 of 1993)

PCB Polychlorinated Biphenyl

PCO Pest Control Officer

PES Present Ecological State

PIA Palaeontological Impact Assessment

PGM Platinum Group Metals

PPE Personal Protective Equipment

PSM Palaeontological Sensitivity Map

RAHIA Rapid Appraisal Health Impact Assessment

ROM Run of Mine

SAHRA South African Heritage Resources Agency

SAHRIS South African Heritage Resources Information System

SAMBF South African Mining and Biodiversity Forum

SAMRAD South African Mining and Mineral Resources Administration System

SANBI South African National Biodiversity Institute

SANS South African National Standards

SLI Stella Layered Intrusion

SLP Social and Labour Plan

SMEs Small and Medium Enterprises

SWMA Sub-Water Management Area

TBCS Terrestrial Biodiversity Compliance Statement

TBIA Traffic-Based Impact Assessment

TIA Traffic Impact Assessment

TSF Tailings Storage Facility

VU Vulnerable

WA Waste Act

WL Waste Licence

WMA Water Management Area

WML Waste Management Licence

WUL Water Use Licence

mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

SCOPING REPORT

FOR LISTED ACTIVITIES ASSOCIATED WITH MINING RIGHT

AND/OR BULK SAMPLING ACTIVITIES INCLUDING TRENCHING

IN CASES OF ALLUVIAL DIAMOND PROSPECTING

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008, IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

NAME OF APPLICANT: Greenstone Platinum (Pty) Ltd

TEL NO: 073 112 5527
FAX NO: N/A
POSTAL ADDRESS: PO Box 52310, Saxonwold, 2132
PHYSICAL ADDRESS: 2nd Floor, 4 Fricker Road, Illovo, Gauteng, South Africa, 2196
FILE REFERENCE NUMBER SAMRAD: NW30/5/1/2/2/10249 MR

IMPORTANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended), the Minister must grant a prospecting or mining right if among others the mining "will not result in unacceptable pollution, ecological degradation or damage to the environment".

Unless an Environmental Authorisation can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Programme report in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution ecological degradation or damage to the environment.

In terms of section 16(3)(b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of section 17 (1) (c) the competent Authority must check whether the application has taken into account any minimum requirements applicable, or instructions or guidance provided by the competent authority to the submission of applications.

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a right or permit are submitted in the exact format of and provide all the information required in terms of this template. Furthermore, please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet requirements of the Regulation and will lead to the Environmental Authorisation being refused.

It is furthermore an instruction that the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. (Unprocessed supporting information may be attached as appendices). The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the Applicant.

OBJECTIVE OF THE SCOPING PROCESS

1) The objective of the scoping process is to, through a consultative process-

(a) identify the relevant policies and legislation relevant to the activity;
(b) motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
(c) identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process;
(d) identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of 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;
(e) identify the key issues to be addressed in the assessment phase;
(f) 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
(g) 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.

SCOPING REPORT

1. CONTACT PERSON AND CORRESPONDENCE ADDRESS

a) Details of: Greenmined Environmental (Pty) Ltd

In terms of the National Environmental Management Act, 1998 (Act No 107 of 1998) (NEMA) the proponent/applicant must appoint an independent Environmental Assessment Practitioner (EAP) to undertake the environmental impact assessment (EIA) of any activities regulated in terms of the Act. Greenstone Platinum (Pty) Ltd (hereinafter the "Applicant") appointed Greenmined Environmental (Pty) Ltd (hereinafter "Greenmined") to undertake the study needed. Greenmined has no vested interest in Greenstone Platinum (Pty) Ltd or the proposed project and hereby declares its independence as required by the EIA Regulations, 2014 (as amended).

i) The EAP who prepared the report

Name of the Practitioner: Mrs Sonette Smit (Senior Environmental Specialist)

Tel No: 021 851 2673 / 084 585 5706

Fax No: 086 546 0579

E-mail address: sonette.s@greenmined.co.za

ii) Expertise of the EAP

(1) The qualifications of the EAP
(With evidence attached as **Appendix 1**)

Mrs. S Smit has seventeen years of experience in environmental legal compliance audits, (GIS) geographic information system, mining right and permit applications and applications for environmental authorisations & Water use applications. Please find full CV attached in as Appendix 1.

(2) Summary of the EAP's experience
(Attach the EAP's curriculum vitae as **Appendix 2**)

Sonette Smit is an Environmental Consultant with 17 years' experience in the environmental sector. She specialized in the last 12 years in the mining sector where she conducted mining related reports and programs. She has also been involved in a number of other environmental and water use application projects where she compiled environmental management plans, environmental impact assessments, environmental audits, IWULA's/IWWMP's.

Mrs. S Smit is a registered Environmental Assessment Practitioner (registration no: 2020/2467) with EAPASA (Environmental Assessment 19 Practitioners Association of South Africa) since 2020. See a list of past projects attached as Appendix 2.

b) Description of the property

Table 1: Property description

Farm Name:	The mining right application extends across 15 867.90 ha of the farms Groot Gewaagd 270 IN, Gemsbok Pan 309 IN, Koodoos Rand 321 IN and Papiesvlakte 323 IN, situated in the Magisterial District of Vryburg Northwest Province • Portion 16 of Koodoos Rand 321 - (Title Deed: T68/1980) • Portion 13 of Koodoos Rand 321 - (Title Deed: T1957/1974) • The remaining extent of Koodoos Rand 321 - (Title Deed: T1148/1996) • Portion 1 of Koodoos Rand 321 - (Title Deed: T2169/2023) • Portion 2 of Koodoos Rand 321 - (Title Deed: T2919/2003) • Portion 3 of Koodoos Rand 321 - (Title Deed: T2696/2012) • Portion 4 of Koodoos Rand 321 - (Title Deed: T1247/2021) • Portion 5 of Koodoos Rand 321 - (Title Deed: T7019/1913) • Portion 6 of Koodoos Rand 321 - (Title Deed: T7017) • Portion 7 of Koodoos Rand 321 - (Title Deed: T1035/1974) 7/321 • Portion 8 of Koodoos Rand 321 - (Title Deed: T1957/1974) • Portion 10 of Koodoos Rand 321 - (Title Deed: T407/1936) • Portion 11 of Koodoos Rand 321 - (Title Deed: T2696/2012) • Portion 12 of Koodoos Rand 321 - (Title Deed: No info) • Portion 13 of Koodoos Rand 321 - (Title Deed: T1957/1974) • Portion 14 of Koodoos Rand 321 - (Title Deed: T68/1980) • Portion 15 of Koodoos Rand 321 - (Title Deed: T1282/1979) • Portion 16 of Koodoos Rand 321 - (Title Deed: T68/1980) • Portion 17 of Koodoos Rand 321 - (Title Deed: T1957/1974) • Portion 18 of Koodoos Rand 321 - (Title Deed: T745/1953) • Portion 19 of Koodoos Rand 321 - (Title Deed: T1049/1954) • Portion 20 of Koodoos Rand 321 - (Title Deed: T1050/1954) • Portion 21 of Koodoos Rand 321 - (Title Deed: T 1051/1954)

	• Portion 22 of Koodoos Rand 321 - (Title Deed: T1957/1974)22/321 • Portion 23 of Koodoos Rand 321 - (Title Deed: T282/1992) • Portion 1 of Papiesvlakte 323 - (Title Deed: T347/1980) • The remaining extent of Gemsbok Pan 309 - (Title Deed: T2170/1997) • Portion 1 of the remaining extent of Gemsbok Pan 309 - (Title Deed: T2565/2012) • Portion 2 of Gemsbok Pan 309 - (Title Deed: T1639/1990)2/309 • Portion 3 of Gemsbok Pan 309 - (Title Deed: T161/2001) • Portion 4 of Gemsbok Pan 309 - (Title Deed: T2353/2002) • Portion 8 of Gemsbok Pan 309 - (Title Deed: T1987/2002) • Portion 9 of Gemsbok Pan 309 - (Title Deed: T733/1962) • Portion 10 of Gemsbok Pan 309 - (Title Deed: T228/2022)10/309 • Portion 11 of Gemsbok Pan 309 - (Title Deed: T2353/2002) • Portion 12 of Gemsbok Pan 309 - (Title Deed: T2565/2012) • Portion 14 of Gemsbok Pan 309 - (Title Deed: T246/1973) • Portion 15 of Gemsbok Pan 309 - (Title Deed: T228/2022)15/309 • Portion 16 of Gemsbok Pan 309 - (Title Deed: T2170/2023)16/309 • Portion 0 of Groot Gewaagd 270 - (Title Deed: T2566/2012) • Portion 1 of Groot Gewaagd 270 - (Title Deed: T1409/1981) • Portion 2 of Groot Gewaagd 270 - (Title Deed: T2565/2012) • Portion 3 of Groot Gewaagd 270 - (Title Deed: T1964/2012) • Portion 4 of Groot Gewaagd 270 - (Title Deed: T499/1967) • Portion 5 of Groot Gewaagd 270 - (Title Deed: T1964/2012) • Portion 6 of Groot Gewaagd 270 - (Title Deed: T 2354/2002) • Portion 7 of Groot Gewaagd 270 - (Title Deed: T499/1967)7/270 • Portion 8 of Groot Gewaagd 270 - (Title Deed: T1329/1972) • Portion 9 of Groot Gewaagd 270 -(Title Deed: T499/1967) • Portion 10 of Groot Gewaagd 270

	• Portion 11 of Groot Gewaagd 270 -(Title Deed: T1493/2021);
Application area (Ha)	15 867.90 ha
Magisterial district	Naledi Local Municipality and Ratlou Local Municipality.
Distance and direction from nearest town	The Project is located approximately 350 km west of Johannesburg, within the Northwest Province. It is situated 45 km west of the Kalgold open-pit gold operations on the Kraaipan Greenstone Belt. The project area lies around 25 km north of Stella in a farming region. The site is accessible via the N18/R27 national highway, linking the towns of Mafikeng and Vryburg, which is located to the south of the project.
21 digit Surveyor General Code for each farm portion	• T0IN00000000032100000 • T0IN00000000032100001 • T0IN00000000032100002 • T0IN00000000032100003 • T0IN00000000032100004 • T0IN00000000032100005 • T0IN00000000032100006 • T0IN00000000032100007 • T0IN00000000032100008 • T0IN00000000032100010 • T0IN00000000032100011 • T0IN00000000032100012 • T0IN00000000032100013 • T0IN00000000032100014 • T0IN00000000032100015 • T0IN00000000032100016 • T0IN00000000032100017 • T0IN00000000032100018 • T0IN00000000032100019 • T0IN00000000032100020 • T0IN00000000032100021 • T0IN00000000032100022 • T0IN00000000032100023 • T0IN00000000032300000 • T0IN00000000032300001 • T0IN00000000032300002 • T0IN00000000030900000 • T0IN00000000030900001 • T0IN00000000030900002 • T0IN00000000030900003 • T0IN00000000030900004 • T0IN00000000030900008 • T0IN00000000030900009 • T0IN00000000030900010 • T0IN00000000030900011 • T0IN00000000030900012 • T0IN00000000030900014 • T0IN00000000030900015

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c) Locality map

(show nearest town, scale not smaller that 1:250000 as **Appendix 4**)

The requested map is attached as Appendix 4.

Figure 1: Satellite view of the proposed mining area (black polygon) in relation to the surroundings (Image obtained from Google Earth).

d) Description of the scope of the proposed overall activity

i) Listed and specified activities

Provide a plan drawn to a scale acceptable to the competent authority but not less than 1:10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on site and attach as **Appendix 4**

The Applicant, Greenstone Platinum (Pty) Ltd, applied for a mining right (MR), environmental authorisation (EA) to mine Chrome, Cobalt, Copper, Gold Ore, Iron Ore, Nickel Ore, PGMs, Silver Ore and Vanadium from 15 867.90 ha that extends over Groot Gewaagd 270 IN, Gemsbok Pan 309 IN, Koodoos Rand 321 IN and Papiesvlakte 323 IN, situated in the Magisterial District of

Vryburg, Northwest Province. The project may also trigger the need for a Waste Management Licence and a Water Use Licence, these applications have not yet been submitted. The need for these licences will be confirmed during the EIA phase once the specific activities have been finalised.

Should the relevant authorisations be granted, and the project commence the principal mining activities will entail the following:

- Site Preparation and Infrastructure Development
  - Establishment of access roads and haulage routes.
  - Construction of processing plants, offices, and support facilities.
  - Installation of water and power supply infrastructure.
  - Development of waste management and tailings storage facilities.
- Open-Pit Mining Operations
  - Drilling and Blasting: Controlled blasting to fragment the ore and waste rock.
  - Excavation and Hauling: Use of heavy mining equipment such as excavators, haul trucks, and loaders to remove and transport ore to the processing plant.
  - Waste Rock Management: Overburden and non-mineralized rock will be stored in designated waste dumps.
- Ore Processing and Beneficiation
  - Crushing and Milling: Ore will be reduced in size through primary and secondary crushing, followed by milling to achieve the desired particle size.
  - Flotation Process: Separation of valuable PGMs from the ore using flotation techniques.
  - Concentrate Handling: Collection and drying of PGM concentrate for further refining offsite.
  - Tailings Management: Disposal of flotation tailings in a dedicated tailings storage facility, with water recycling measures in place.
- Closure and Rehabilitation (Long-Term Consideration)
  - Progressive rehabilitation of mined-out areas.
  - Final land use planning for sustainable post-mining activities.
  - Monitoring of environmental conditions post-closure to ensure compliance with closure objectives.

The preliminary layout of the mining area is expected to include at least the following:

- Open-Pit Mining Areas
- Multiple open-pit excavations, including Crater Pit, Vela Pit, Orion Pit, Crux Pit, Serpens North Pit, and Sirius Pit, each varying in depth and dimensions.

- Waste rock dumps adjacent to the pits for storage of overburden and non-mineralized material.
- Processing and Beneficiation Plant
  - The ore treatment plant will be east of the tailings dam and south of the open pits.
  - The plant will include crushing, milling, flotation, concentrate handling, and tailings management facilities.
- Tailings Storage Facility
  - A tailings dam, with the selected site being Option 3 (central western boundary of the mineral lease area), as the first two sites overlapped with an ore body.
  - The tailings facility will include water recovery and management systems.
- Supporting Infrastructure
  - Water Supply: A 98 km pipeline from Vryburg to transport treated sewage effluent at a rate of 3 ML per day.
  - Power Supply: An 89 km 132 kV overhead power line from Bophirima Distribution Substation, with a new 132/11kV Kalplats substation designed for 40MVA.
  - Roads: Haul roads connecting pits, stockpiles, and processing areas, along with external roads linking the site to regional infrastructure.
- Administrative and Operational Facilities
  - Offices, workshops, fuel storage, and vehicle maintenance facilities.
  - Security checkpoints and access control systems.

The proposed project triggers listed activities (see following table) in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) and the Environmental Impact Assessment Regulations 2014 (as amended) and therefore requires an environmental impact assessment (EIA) that assess project specific environmental impacts and alternatives, consider public input, and propose mitigation measures in cooperation with specialists, to ultimately culminate in an environmental management programme (EMPR) that informs the competent authority (Department of Mineral Resources and Energy) when considering the environmental authorisation.

Table 2: Listed and specified activities triggered by the proposed mining activities.

NAME OF ACTIVITY (All activities including activities not listed) (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	AERIAL EXTENT OF THE ACTIVITY Ha or m^2	LISTED ACTIVITY Mark with an X where applicable or affected.	APPLICABLE LISTING NOTICE (EIA Regulations GNR 544, GNR 545 or GNR 546) / Not listed	WASTE MANAGEMENT AUTHORISATION (Authorisation is required in terms of the Waste Management Act (NEM:WA).
				NOTE The project may also trigger the need for a Waste Management Licence and a Water Use Licence, these applications have not yet been submitted. The need for these licences will be confirmed during the EIA phase once the specific activities have been finalised. An application for a waste licence accompanied and amended EA application will then be submitted to the DMRE under Reference number: NW30/5/1/2/2/10249 MR
Excavation (Open-Pit Mining)	Approx. 600 Ha	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 (GNR 983, Activity 21)	Category B, Activity 11 (Residue stockpiles/deposits from mining) – Waste Rock Dumps
Drilling and Blasting	Within pit areas	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 21	Not Applicable
Stockpiles (Ore & Waste)	50 Ha	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 21	Category B, Activity 11 (Residue stockpiles/deposits from mining)

NAME OF ACTIVITY	AERIAL EXTENT OF THE ACTIVITY	LISTED ACTIVITY	APPLICABLE LISTING NOTICE	WASTE MANAGEMENT AUTHORISATION
Tailings Storage Facility	120 Ha	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 21	Category B, Activity 11 (Residue stockpiles/deposits from mining)
Loading, Hauling & Transport	Site-wide	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 21	Not Applicable
Water Supply (Dams & Boreholes) - - all necessary authorizations, approvals, and agreements with relevant authorities, including Eskom and NERSA, must be in place to secure power supply and ensure compliance with regulatory requirements.	Multiple boreholes, 98 km pipeline	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 9	Water Use License may be Required
Processing Plant	30 Ha	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 21	Slurry and Residue Management - Category A, Activity 2 (Crushing, screening, grinding of waste)
Stormwater Control (Berms & Channels)	Site-wide	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 19	Not Applicable
Roads (Haul & Access Roads)	50 Ha	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 19	Not Applicable
Pipelines (Water & Slurry) - - all necessary authorizations, approvals, and agreements with relevant authorities, including Eskom and NERSA, must be in place to secure power supply and ensure compliance with regulatory requirements.	98 km	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 9	Water Contamination Risk to be determined

NAME OF ACTIVITY	AERIAL EXTENT OF THE ACTIVITY	LISTED ACTIVITY	APPLICABLE LISTING NOTICE	WASTE MANAGEMENT AUTHORISATION
Power Supply (Overhead Power Lines) - all necessary authorizations, approvals, and agreements with relevant authorities, including Eskom and NERSA, must be in place to secure power supply and ensure compliance with regulatory requirements.	89 km (132 kV Line)	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 11	Not Applicable
Workshops, Offices, & Accommodation	20 Ha	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 21	General Waste Management
Waste Rock Dumps	80 Ha	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 21	Waste Classification Required - Category B, Activity 9 (Disposal of inert waste > 25,000 tonnes)
Rehabilitation & Closure Activities	Site-wide	X	EIA Regulation GNR 984 of 2014 (as amended) Activity 17 GNR 983, Activity 19	Environmental Liability Management - Category A, Activity 14 (Decommissioning of a waste facility)

ii) Description of the activities to be undertaken

(Describe Methodology or technology to be employed, and for a linear activity, a description of the route of the activity)

The proposed mining operation will utilize open-pit mining techniques with a processing plant designed to handle 1.5 million tonnes per annum (Mtpa) of ore for the extraction of Platinum Group Metals (PGMs), including platinum (Pt), palladium (Pd), and gold (Au). The project will incorporate various technologies and methodologies to ensure efficiency, cost-effectiveness, and environmental compliance.

<u>Mining Methodology</u>

- Open-Pit Mining

Excavation & Haulage: Mining will be conducted using conventional open-pit methods, including drilling, blasting, loading, and hauling.

Bench Design: The pits will have 5-meter bench heights, ensuring effective grade control and slope stability.

Waste Rock Management: Overburden and waste rock will be hauled to designated waste rock dumps near the pits.

Drilling and Blasting

A combination of rotary and percussion drilling will be used to prepare the rock for blasting.

Explosives will be employed to fragment ore and waste material efficiently, with dust suppression techniques to minimize environmental impact.

Material Handling & Ore Transport

Large-capacity 100-tonne haul trucks will be used to transport ore to the processing plant.

Ore will either be processed immediately or stockpiled in designated Run of Mine (ROM) pads based on grade classification.

- Processing Technology

Crushing & Milling

Primary Crushing: Ore is reduced to <150mm using a jaw crusher.

Secondary & Tertiary Crushing: Cone crushers further reduce the material to <10mm.

Milling: The crushed material is milled to a grind size of 80% passing 38 microns, ensuring optimal liberation of PGMs.

Flotation & Concentrate Handling

Rougher Flotation: The milled ore undergoes flotation in a series of flotation cells, where PGMs are separated from gangue material using reagents.

Cleaner & Recleaner Stages: These processes enhance concentrate grade and remove impurities.

Concentrate Drying & Transport: The final PGM-rich concentrate is filtered, dried, and transported to refineries.

Tailings Management

Tailings Thickening: Waste material from flotation is thickened and pumped to a tailings storage facility (TSF).

Water Recovery: Recycled process water from the TSF is reused in milling and flotation to reduce freshwater consumption.

- Environmental & Waste Management Technologies

Water Management

98 km pipeline to transport treated sewage effluent from Vryburg for industrial use, reducing reliance on freshwater sources.

Stormwater Control: Berms, sediment traps, and diversion channels will be constructed to prevent contamination of surface water.

Dust & Air Quality Control

Haul roads and stockpiles will be regularly watered using bowsers to suppress dust.

Dust extraction and suppression systems will be installed at crushers and conveyors.

Waste Management

Hazardous Waste: Hydrocarbon-contaminated waste (e.g., used oils, lubricants) will be stored in bunded areas and disposed of by licensed contractors.

General Waste: Domestic and industrial waste will be managed in accordance with NEM: Waste Act regulations.

- Energy Supply & Power Infrastructure

89 km, 132 kV power line from Bophirima Distribution Substation to supply the processing plant.

Diesel-powered generators will provide backup power for critical operations.

BACKGROUND

The Kalahari Platinum Project, located in the Northwest Province, was initially explored under a prospecting right - NW 30/S/1/1/2/12841 PR. Extensive exploration activities, including 40,000 meters of drilling, metallurgical testing, and geotechnical assessments, confirmed seven key deposits hosted in the Stella Layered Intrusion (SLI). The open-pit mining method was selected,

with a planned 1.5 million tonnes per annum (Mtpa) production rate and an initial 9.5-year mine life.

PROJECT PROPOSAL

Considering the above, the Applicant has applied for environmental authorisation and a mining right to extract Chrome, Cobalt, Copper, Gold Ore, Iron Ore, Nickel Ore, PGMs, Silver Ore, and Vanadium from the above-mentioned properties. While a Waste Management Licence may be required, it has not yet been applied for. The need for this licence will be confirmed during the EIA phase once the specific activities have been finalised. The following table lists the GPS coordinates of the proposed mining area as shown on the mine plan attached as Appendix 3.

NUMBER	DEGREES, MINUTES, SECONDS		DECIMAL DEGREES	
	LAT (S)	LONG (E)	LAT (S)	LONG (E)
A	26°16'5,149"	24°42'38,167"	-26.268405	24.710501
B	26°15'51,134"	24°43'39,029"	-26.264533	24.727242
C	26°14'35,3"	24°47'19,378"	-26.243268	24.788622
D	26°16'36,491"	24°48'15,595"	-26.276885	24.804319
E	26°19'23,866"	24°49'48,889"	-26.323524	24.830100
F	26°18'38,142"	24°52'0,293"	-26.310352	24.866791
G	26°20'9,809"	24°52'39,594"	-26.336133	24.877558
H	26°21'19,897"	24°51'21,618"	-26.355550	24.855932
J	26°21'27,684"	24°51'27,497"	-26.357695	24.857630
K	26°21'27,684"	24°51'32,468"	-26.357195	24.859021
L	26°21'25,866"	24°51'32,468"	-26.353847	24.865457
M	26°21'13,716"	24°51'55,692"	-26.356608	24.866607
N	26°21'23,738"	24°51'59,843"	-26.358934	24.862392
P	26°21'37,13"	24°51'29,207"	-26.360324	24.858105
Q	26°21'29,822"	24°51'26,309"	-26.358305	24.857308
R	26°21'37,976"	24°51'21,992"	-26.360569	24.856114
S	26°21'45,227"	24°51'31,669"	-26.362573	24.858800
T	26°22'4,127"	24°51'34,236"	-26.367843	24.859514
U	26°21'54,414"	24°50'45,978"	-26.365190	24.846073
V	26°22'7,309"	24°50'50,669"	-26.368679	24.847413
W	26°22'16,572"	24°50'8,912"	-26.371330	24.835698
X	26°23'0,316"	24°50'0,154"	-26.383483	24.833370
Y	26°22'58,976"	24°50'14,338"	-26.383162	24.837237
Z	26°23'56,173"	24°50'35,732"	-26.398937	24.843291

NUMBER	DEGREES, MINUTES, SECONDS		DECIMAL DEGREES	
	LAT (S)	LONG (E)	LAT (S)	LONG (E)
A1	26°23'39,311"	24°51'26,154"	-26.394301	24.857248
B1	26°23'42,252	24°51'27,241"	-26.395107	24.857555
C1	26°25'18,696"	24°47'40,315"	-26.422017	24.794560
D1	26°22'27,613"	24°45'57,416"	-26.374448	24.765974
E1	26°18'57,103"	24°44'6,85"	-26.316055	24.735137

Table 3: GPS Coordinates of the proposed mining footprint.

The satellite image below shows the layout of the proposed mining area.

Figure 2: Satellite view showing the proposed mining area (black polygon) in relation to the surrounding landscape. (Image obtained from Google Earth)

Should the relevant authorisations be granted, and the proposed mining be allowed, the project will comprise of activities that can be divided into three key phases (discussed in more detail below) namely the:

(1) *Site establishment/construction phase* the site establishment phase involves the preparation of the mining area and the construction of essential infrastructure. Key activities include clearing vegetation, topsoil stripping and stockpiling, earthworks, and the development of roads, processing plants, and water management systems. Critical infrastructure such as administration buildings, worker accommodations (if needed), power supply connections, and tailings storage facilities will also be installed. Dust suppression, erosion control, and environmental monitoring programs will be implemented to minimize initial environmental

impacts. This phase typically lasts between 12 to 24 months, depending on site conditions and regulatory requirements.

(2) *Operational phase* that will entail opencast mining. The operational phase marks the commencement of full-scale mining and ore processing activities. This includes drilling, blasting, excavation, and hauling of ore, followed by crushing, milling, and metallurgical processing to extract the target minerals, primarily Platinum Group Metals (PGMs), gold, and associated minerals. Continuous monitoring of air quality, water usage, noise levels, and biodiversity impact will be conducted to ensure compliance with environmental regulations. Waste management strategies, including tailings handling, rehabilitation of mined-out areas, and proper disposal of hazardous materials, will be implemented. The project will also support local employment, skills development, and socio-economic initiatives as outlined in the Social and Labour Plan (SLP).

(3) *Decommissioning phase* Once mineral extraction is completed, the decommissioning phase focuses on rehabilitation and environmental restoration of the mining area. Infrastructure no longer needed will be dismantled, waste facilities will be rehabilitated, and topsoil will be redistributed to facilitate vegetation regrowth. Long-term monitoring of groundwater, soil stability, and ecological recovery will be conducted to ensure that environmental and social commitments are met. If viable, certain facilities may be repurposed for alternative economic activities such as agriculture or renewable energy projects, ensuring a sustainable post-mining land use. Once the full mining area is rehabilitated, the mining right holder will be required to submit a closure application to the Department of Mineral Resources and Energy in accordance with section 43(4) of the MPRDA, 2002. The Closure Application will be submitted in terms of Regulation 62 of the MPRDA, 2002, and Government Notice 940 of NEMA, 1998.

PHASES OF THE PROJECT

(1) Site Establishment / Construction Phase

This phase involves the development of essential infrastructure and facilities to prepare the site for mining operations. The construction phase is estimated to take 12 to 18 months, with production expected to commence by March 2027.

Site establishment will entail the demarcation of the mining boundaries and sensitive areas, clearance of vegetation (where necessary), stripping and stockpiling of topsoil to allow the establishment of mining related infrastructure, stockpiles, and the excavation zone as detailed below:

Demarcation of Mining Boundaries

Pursuant to receipt of the relevant authorisations the boundary of the mining area will be demarcated. Project specific and sensitive areas to be demarcated within the boundary of the mining footprint may include, but not be limited to, “no-go” buffer zones identified during the EIA process.

Site Preparation:

Clearing of vegetation and removal of topsoil for stockpiling and later rehabilitation.

Establishment of access roads, haul roads, and drainage systems.

Mine Infrastructure Development:

Construction of processing plant (crushing, milling, flotation, and tailings management).

Development of tailings storage facility (TSF) and waste rock dumps.

Installation of power supply infrastructure, including an 89 km, 132 kV power line (Prior approval from ESKOM and Municipality should be in place for this).

Construction of water infrastructure, including a 98 km pipeline to transport treated sewage effluent (Prior approval from ESKOM and Municipality should be in place for this).

Stormwater and Sediment Control: Implementation of stormwater drainage and pollution control structures.

Operational Facilities:

Establishment of workshops, offices, fuel storage areas, and security checkpoints.

Construction of stormwater control systems and pollution prevention measures.

Environmental monitoring stations for air, noise, and water quality (if required).

Clearing of Vegetation

The clearing of vegetation will be an essential part of the site establishment phase, ensuring access to ore bodies and space for infrastructure development. The proposed mining area is characterized by grasslands interspersed with scattered trees and shrubs. The dominant vegetation type in the footprint area is likely to include Kalahari Thornveld and Shrub Bushveld, which supports a range of indigenous plant species adapted to semi-arid conditions. Clearing will result in the removal of grasses, shrubs, and small trees, with a potential impact on biodiversity, soil stability, and habitat connectivity. To mitigate these impacts, a progressive rehabilitation plan will be implemented, where topsoil will be stockpiled and later used for revegetation efforts. Additionally, protected or sensitive plant species identified during environmental assessments will be relocated or conserved where possible. The project will also integrate erosion control measures to prevent soil degradation in cleared areas.

The draft environmental impact assessment report (DEIAR) will assess and elaborate on the floral component of the study area as part of the EIA process. An ecologist will be commissioned to undertake a detailed Terrestrial and Biodiversity Impact Assessment (TBIA) (including Animal and Plant Species Assessment) to determine the potential impact that the mine may have on the receiving- and greater ecology of the study area. The flora-part of the study will assess the various plant communities, inform on the occurrence of endangered plant communities and red data plant species, identify areas of concern to be excluded (if any) from the mining footprint, instruct on the management of red data species, identify the presence and distribution of threatened plants present in the study area, and propose management and mitigation measures for identified impacts. The findings of the specialist and full TBIA will form part of the draft environmental impact assessment report (DEIAR) to be circulated for public comments.

Topsoil Stripping

It is proposed that topsoil removal will be restricted to the exact footprint of areas to be altered/mined during the site establishment- and operational phase. The topsoil will be

stockpiled at a designated signposted area to be replaced during the rehabilitation of the area. It will be part of the obligations of site management to prevent the mixing of topsoil heaps with overburden/other soil heaps. The complete A-horizon (the top 100 – 200 mm of soil which is generally darker coloured due to high organic matter content) will be removed. If it is unclear where the topsoil layer ends the top 300 mm of soil (if available) will be stripped.

Access and Internal Roads

The development of access and internal roads is a critical component of the site establishment phase, ensuring efficient transportation of materials, equipment, and personnel. The mine will be accessed via existing regional roads, including the N18/R27 national highway, which links Mafikeng and Vryburg. From this highway, upgraded gravel roads will connect the mine site to key operational areas. Internal haul roads will be constructed to link the open pits, processing plant, waste rock dumps, and tailings storage facility.

These roads will be designed to handle heavy payload capacities, with compacted gravel or stabilized surfaces to reduce dust emissions and wear. Drainage systems, culverts, and stormwater controls will be integrated to prevent erosion and waterlogging, particularly in low-lying areas. To minimize environmental impact, roads will follow natural contours where possible, avoiding sensitive habitats and minimizing land disturbance. Regular maintenance and dust suppression measures, such as water spraying and chemical dust palliatives, will be implemented to ensure road durability and reduce air quality impacts.

The mine site will be connected to existing regional roads (D3519, D3520, D3521, and R377) to facilitate the transportation of construction materials, machinery, and personnel. Activities related to access road development include:

- Upgrading of existing dirt roads to accommodate heavy machinery and transport vehicles.
- Widening and grading of roads to ensure safe and efficient vehicle movement.
- Installation of drainage systems (culverts and stormwater channels) to prevent flooding and erosion.
- Signage and safety measures, including speed limits, dust suppression measures (water spraying), and designated truck routes.

<u>Internal Roads</u>

Once on-site, a network of internal roads will be constructed to connect key operational areas, including:

- Haul roads from the mining pit to the processing plant and waste rock dumps.

- Service roads for maintenance vehicles and access to water, power, and storage areas.
- Access routes to tailings storage facilities, allowing for the transport of waste material.
- Emergency routes for quick access to medical and safety facilities.

To ensure durability and minimal environmental impact, internal roads will be:

- Constructed using compacted gravel or stabilized surfaces to withstand heavy vehicle loads.
- Regularly maintained to prevent potholes and excessive dust generation.
- Designed with gentle slopes and curves to accommodate large mining trucks safely.

Road and traffic related detail will be discussed in more detail in the DEIAR on the potential impact that the proposed activity may have on the receiving environment. This will include recommendations to mitigate identified impacts and be included in the DEIAR.

Figure 3: View of the roads that will be used to access the proposed mining area (image obtained from Google Earth).

Electricity Requirements

The mining operation will require a stable and high-capacity power supply to support critical infrastructure, including the processing plant, crushers, flotation circuits, dewatering systems, and administrative facilities. Prior to construction, all necessary authorizations, approvals, and agreements with relevant authorities, including Eskom and NERSA, must be in place to secure power supply and ensure compliance with regulatory requirements.

To meet the project's energy demands, electricity will be supplied via an 89 km, 132 kV overhead power line from the Bophirima Distribution Substation to a new 132/11 kV Kalplats Substation, designed with a 40 MVA capacity. This infrastructure will ensure uninterrupted power supply for mining, beneficiation, and support activities.

In addition, backup diesel generators will be installed to provide emergency power for critical systems in case of grid disruptions. The project will also incorporate energy efficiency measures, including LED lighting, variable speed drives (VSDs), and optimized process control systems, to minimize overall electricity consumption and enhance operational sustainability.

Establishment of Site Infrastructure

The detail regarding site infrastructure and the supporting services will be discussed in more detail in the DEIAR. Currently, the site infrastructure and supporting services to ensure efficient operations and compliance with regulatory requirements of the mining project will require within the mining footprint will include:

- Mining Infrastructure: Open-pit mining areas, waste rock dumps, and a Run of Mine (ROM) pad for ore stockpiling.
- Processing Plant: A crushing, milling, and flotation facility, designed to handle 1.5 Mtpa of ore, along with a tailings storage facility (TSF) for waste management.
- Power Supply: An 89 km, 132 kV overhead power line from Bophirima Distribution Substation to a 132/11 kV Kalplats substation with a 40 MVA capacity.
- Water Supply and Management: A 98 km pipeline from Vryburg to transport treated sewage effluent at a rate of 3 ML per day, along with sediment control and stormwater management systems.
- Access Roads and Haul Roads: Internal roads connecting pits, stockpiles, and the processing plant, as well as upgraded access routes from the N18/R27 highway.
- Supporting Facilities: Administrative offices, workshops for equipment maintenance, fuel storage areas, ablution facilities, security checkpoints, and worker accommodation where required.

(2) Operational Phase

This phase marks the commencement of mining activities and the processing of ore. The mine is designed to operate at a production rate of 1.5 million tonnes per annum (Mtpa), with a projected lifespan of 10 years.

Activities during this phase:

Mining Operations:

- Open-pit mining using drilling, blasting, excavation, and hauling.
- Ore and waste rock management, with an average stripping ratio of 8.5:1.
- Dewatering of pits and water management.
- Progressive rehabilitation of disturbed areas.

Ore Processing:

- Primary and secondary crushing to reduce ore size.
- Milling and flotation to extract PGMs.
- Tailings disposal and water recycling in the TSF.

Run-of-Mine (ROM) Ore Handling

ROM ore will be delivered by 100-tonne haul trucks or transferred from the stockpile by front-end loaders. The ore will be fed into the ROM bin, where a static grizzly (600mm aperture) will control the feed size. The ore will then undergo a three-stage crushing circuit:

- Primary Jaw Crusher: Reduces ore size to <150mm.
- Secondary Cone Crusher: Further crushes ore to <30mm.
- Tertiary Cone Crusher (Closed Circuit): Final reduction to <10mm.

The crushed ore will be transported via conveyors to the mill silos, and the area will be equipped with dust suppression and extraction systems.

Ore Receiving and Primary Crushing

Static Grizzly: Prevents oversized material from entering the bin; oversize will be removed using a mobile grab.

Apron Feeder: Extracts ore from the bin and feeds it to a grizzly feeder.

Primary Crusher: The jaw crusher will process grizzly oversize material, with its discharge joining the grizzly undersize for secondary crushing.

Secondary and Tertiary Crushing Circuits

Secondary Crusher Circuit: The ore will be screened, and oversize will pass through a cone crusher to achieve <30mm size. A belt magnet will remove metal contaminants.

Tertiary Crusher Circuit: The ore will be further crushed to <10mm. A dust extraction system will cover all three cone crushers.

The system allows for future expansion to a 250,000 tonnes per month (ktpm) capacity by adding an additional tertiary crusher feed bin, feeder, and crusher.

Milling Circuit (Primary & Secondary Milling)

The milling circuit consists of one integrated circuit for primary and secondary milling.

Primary Mill: Operates in an open circuit, with discharge passing over a vibrating screen (4mm deck). Oversized material is recycled back to the mill.

Secondary Mills: The cyclone underflow is split evenly between two secondary mills, with discharge combining into the mill discharge sump.

Desliming & Thickening:

The cyclone overflow gravitates to the deslime tank and is pumped to the deslime cyclones before entering the Rougher Feed Thickener.

Additional water is added to improve separation and settling.

The milling discharge is sampled to monitor processing efficiency.

Rougher and Cleaner Flotation

Rougher Flotation:

Utilizes six 40m³ tank-type flotation cells for primary separation.

A high-energy pre-conditioning cell is used to break down flocculant and optimize separation.

Concentrate from the first two rougher cells may be sent for final processing or recleaning.

Cleaner Flotation:

Operates in twin-box flotation mechanisms, ensuring gravity-driven flow.

The recleaner bank consists of a four-mechanism cell unit, with recleaner tailings returning to the cleaner circuit.

Rougher tails are pumped to the final tailings disposal sump.

Tailings Disposal & Water Recovery

Tailings Management:

Rougher tails are pumped to a Final Tails Tank, where they are sampled before being pumped through a three-stage pipeline system to the tailings storage facility (TSF).

Water recovery: Return water from the TSF is collected in a return water pond and pumped back for process use.

Evaporation control: Pump sizing minimizes water storage time to reduce evaporative losses.

Concentrate Dewatering

Thickening & Filtering:

Final concentrate is fed to a concentrate thickener, where thickened underflow is directed to storage tanks.

The concentrate is filtered before being stored in day bunkers for transportation to refineries.

Process Optimization:

The dewatering system is expandable to support future production increases.

A rake lift is installed on the thickener to allow temporary storage flexibility.

Process and Service Water Management

Water Sources:

Recycled process water from the Rougher Surge Thickener overflow, TSF return, stormwater collection, and sewage return.

Bulk fresh water from a 200m³ bulk header tank, which serves as an emergency buffer.

Water Distribution:

Gland service water (GSW): Used for sealing pumps and dust suppression.

Potable & fire water: Cleaned via an ozone water treatment plant and stored in dedicated tanks (60m³ for potable, 2x250m³ for fire water).

The plant will prioritize recycled water usage to minimize freshwater consumption.

Compressed Air and Reagent Systems

Air Reticulation:

High-pressure air for concentrate filter pressing & drying.

Instrument air for control systems with dryers and filtration.

Low-pressure flotation air from Roots-type blowers with silencing enclosures.

Reagent Storage & Distribution:

- Collector Reagents: Dry powder system with a 7m³ make-up tank and 10m³ day tank.
- Flocculant System: Continuous hydration and controlled dosing via VSD pumps.
- Senkol 2 & Frother Storage: Direct dosing via positive displacement pumps.

The proposed processing plant will incorporate crushing, milling, flotation, thickening, tailings disposal, and water recycling. The design allows for future expansion, while energy efficiency, water conservation, and automation will optimize plant performance. Reagent handling, compressed air, and service water systems ensure smooth processing operations.

Environmental Management & Compliance:

- Continuous dust suppression, water conservation, and waste disposal measures.
- Implementation of biodiversity conservation and rehabilitation programs.

Employment & Community Engagement:

- Hiring and training of personnel.
- Ongoing community engagement and socio-economic development initiatives.

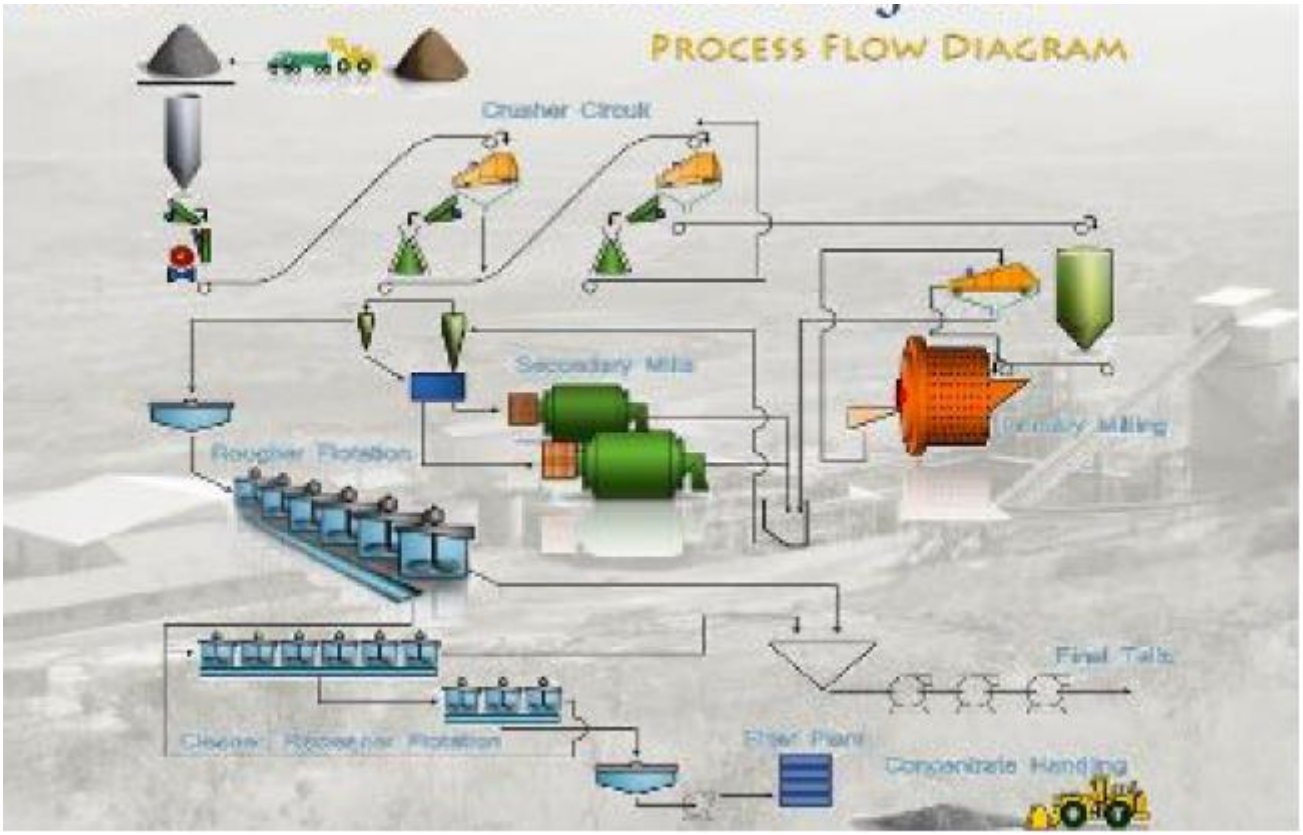

Figure 4: Proposed process flow diagram (image obtained from the obtained from the Kalahari Platinum Project Summary).

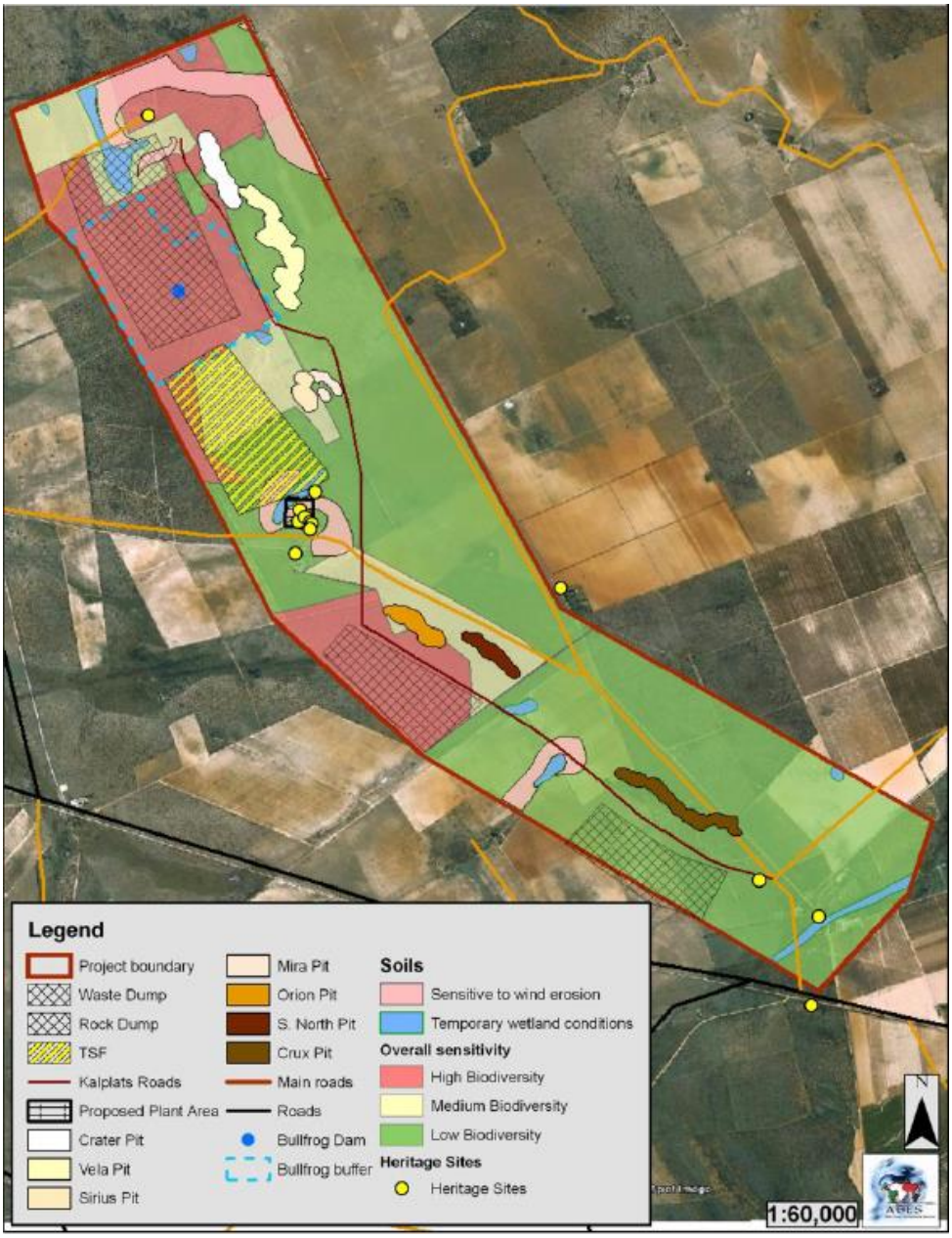

Figure 5: Proposed mine design layout including preliminary sensitivity areas (image obtained from the obtained from the Kalahari Platinum Project Summary).

Dewatering

Dewatering is required for several key activities at the application. Specifically, pit dewatering is necessary to manage groundwater inflow into the seven open pits, preventing flooding and ensuring safe mining operations. Additionally, concentrate dewatering is essential to remove excess water from the final concentrate before transport and processing.

The proposed dewatering strategy includes directing any water seeping into the open pits into sumps, where it will be pumped to the surface. This water will be processed and managed to prevent contamination of clean water systems, natural drainage lines, and underground aquifers. Furthermore, a dirty water system will be implemented to handle decant water from mining operations.

The potential impact that dewatering may have on the groundwater level and the possible formation of a groundwater depression cone will be assessed during the following EIA process by an appropriately qualified specialist whose findings and recommendations will be incorporated into the DEIAR.

NEM:WA Related Activities

The proposed mining operations involve several activities that may trigger the requirement for a Waste Management Licence (WML) under the National Environmental Management: Waste Act (NEM:WA), 2008 (Act No. 59 of 2008). The applicable waste-related activities that could require licensing include:

- Establishment or Reclamation of a Residue Stockpile or Deposit (Category B, Activity 11)

The tailings storage facility (TSF) and waste rock dumps will result in the accumulation of residue stockpiles and deposits from mining operations.

Regulatory Trigger: This activity falls under Category B, Activity 11 of NEM:WA, requiring a Waste Management Licence.

- Disposal of Inert Waste to Land Exceeding 25,000 Tonnes (Category B, Activity 9)

Large volumes of waste rock and overburden generated from open-pit mining will be disposed of on-site.

Regulatory Trigger: Waste rock dumps exceeding 25,000 tonnes require a Waste Management Licence under Category B, Activity 9 of NEM:WA.

- Crushing, Screening, and Processing of Waste (Category A, Activity 2)

The processing plant includes the crushing, screening, and milling of ore, which may involve waste material handling.

Regulatory Trigger: If waste material is processed at a facility exceeding 1,000m², it could require a waste licence under Category A, Activity 2 of NEM:WA.

- Decommissioning of a Facility for a Waste Management Activity (Category A, Activity 14)

Upon mine closure, the TSF, processing plant, waste dumps, and water treatment infrastructure will need to be rehabilitated or decommissioned.

Regulatory Trigger: This activity requires a Waste Management Licence under Category A, Activity 14 of NEM:WA.

Pending Waste Management and Water Use Licence Applications

The project may also trigger the need for a Waste Management Licence (WML) and a Water Use Licence (WUL). These applications have not yet been submitted, as the final design of the project and specific waste-generating activities are still being defined.

The need for these licences will be confirmed during the Environmental Impact Assessment (EIA) phase, once the project's specific activities and waste disposal requirements have been finalised. If a Waste Management Licence is required, an application for a waste licence, accompanied by an amended Environmental Authorisation (EA) application, will be submitted to the Department of Mineral Resources and Energy (DMRE) under Reference Number: NW30/5/1/2/2/10249 MR.

Further assessments may identify additional activities that could require licensing, and these will be incorporated as part of the EIA phase. If necessary, the project scope will be adjusted to ensure full compliance with NEM:WA regulations and other applicable environmental laws.Additional waste management practices (unlisted in terms of the NEM:WA) to be implemented at the mine include the following:

- General waste will mainly consist of paper, plastic, glass, metal and potentially tin that will be contained in sealable refuse bins that will be removed a landfill site when the capacity of the containers is reached.
- Hazardous waste will mainly be the result of accidental spillages/breakdowns. The hazardous waste to be generated will be kept in designated hazardous waste containers to be removed from the site by a registered hazardous waste handling contractor.

- Ablution facilities will be available to the employees at the site camp that is presently expected to drain into a septic tank to be serviced by an appropriately qualified contractor when needed.
- Water that originates from the dewatering of the pits will be contained in a storage dam/s to be reused by the mine for dust suppression purposes. The water generated at the wash bays is presently expected to drain into an oil sump of sufficient size that will be serviced by an appropriately qualified contractor (when needed).

(3) Decommissioning phase

This phase involves the cessation of mining activities and the implementation of rehabilitation and closure measures to restore the site and minimize long-term environmental impacts.

Activities during this phase:

Dismantling and Removal:

- Decommissioning of plant and infrastructure (processing plant, power supply, roads, etc.).
- Removal of equipment and hazardous materials.

Land Rehabilitation:

- Recontouring and stabilizing waste rock dumps and tailings facilities.
- Soil replacement and revegetation with indigenous plant species.

Water Management & Monitoring:

- Continued monitoring of groundwater and surface water quality.
- Closure of TSF and waste storage sites.

Socio-Economic Transition:

- Skills development programs to help employees transition to alternative employment.
- Community development projects to ensure long-term economic sustainability.

Post-Closure Monitoring:

- The site will undergo post-closure monitoring for a minimum of 5-10 years to ensure environmental stability and compliance with regulatory requirements.

The closure objectives will be detailed in the Environmental Impact Assessment Report and Environmental Management Programme, to be submitted as part of the application process

for approval by the Department of Mineral Resources and Energy. At this stage the following baseline rehabilitation actions are proposed from which a detailed Closure Plan will be developed (to be approved as part of the EIA process):

- Rehabilitation of all the disturbed surface areas shall entail landscaping, levelling, sloping, top dressing, land preparation, seeding (if required), and weed / alien clearing.
- All unwanted infrastructures, equipment, and other items used during the mining period will be removed from the site in accordance with section 44 of the MPRDA, 2002.
- Waste material of any description, including receptacles, scrap, rubble, and tyres, will be removed entirely from the mining area and disposed of at a recognized landfill facility. It will not be permitted to be buried or burned on the site.
- The rehabilitation area will be cleared of weeds and invader plant species. Priority will be given to species regarded as Category 1a and 1b invasive species in terms of NEM:BA (National Environmental Management: Biodiversity Act 10 of 2004 and regulations applicable thereto).
- Final rehabilitation shall be completed within a period specified by the Regional Manager.

Once the full mining area was rehabilitated the MR holder is required to submit a closure application to the Department of Mineral Resources and Energy in accordance with section 43(4) of the MPRDA, 2002 that states: *"An application for a closure certificate must be made to the Regional Manager in whose region the land in question is situated within 180 days of the occurrence of the lapsing, abandonment, cancellation, cessation, relinquishment or completion contemplated in subsection (3) and must be accompanied by the prescribed environmental risk report".* The Closure Application will be submitted in terms of Regulation 62 of the MPRDA, 2002, and Government Notice 940 of NEMA, 1998.

e) Policy and Legislative Context

Table 4: Applicable legislation and guidelines consulted during the compilation of the report.

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (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).	**REFERENCE WHERE APPLIED**

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE WHERE APPLIED
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). Subdivision of Agricultural Land Act, 1970 (Act No. 70 of 1970).	Assessment of biophysical environment and current land use.
Hazardous Substances Act, 1973 (Act 15 of 1973)	The mitigation measures proposed for the project consider the HAS, 1973.
Integrated Environmental Management Guideline: Guideline on Need and Desirability (2017).	The need and desirability of the project was assessed in accordance with these guidelines.
Labour Relations Act, 1995 (Act No 66 of 1995) read together with applicable amendments such as the Labour Relations Amendment Act, 2002 (Act No 12 of 2002)	The mitigation measures proposed for the site will consider the Labour Relations Act.
Mine Health and Safety Act, 1996 (Act No. 29 of 1996) read together with applicable amendments and regulations thereto including relevant OHSA regulations.	The mitigation measures proposed for the site consider the MHSA, 1996.
Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) read together with applicable amendments and regulations thereto.	Application for a mining right. Reference number: NW30/5/1/2/2/10249 MR
Mining and Biodiversity Guideline: Mainstreaming Biodiversity into the Mining Sector	Assessment of biophysical environment.
National Development Plan, 2030	Determination of the nature, significance, consequence, extent, duration, and probability of the impacts.
National Environmental Management Act,1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2014 (as amended): δ EIA Regulations GNR 984 of 2014 (as amended) Activity 17	Application for environmental authorisation. Reference number: NW30/5/1/2/2/10249 MR
National Environmental Management: Air Quality Control Act, 2004 (Act No. 39 of 2004) read together with applicable amendments and regulations thereto specifically the National Dust Control Regulations, GN No R827.	The mitigation measures proposed for the project consider the NEM:AQA, 2004

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE WHERE APPLIED
	and the National Dust Control Regulations.
National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) read together with applicable amendments and regulations thereto. NEM:BA: List of terrestrial species and freshwater species that are threatened or protected, restricted activities that are prohibited, and restricted activities that are exempted, 2023.	Assessment of biophysical environment.
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) read together with applicable amendments and regulations thereto: • Category A Activity 2; • Category A Activity 14; • Category B Activity 9; • Category B Activity 10; • Category B Activity 11; NEM:WA, 2008: National norms and standards for the storage of waste (GN 9260).	The project may also trigger the need for a Waste Management Licence and a Water Use Licence, these applications have not yet been submitted. The need for these licences will be confirmed during the EIA phase once the specific activities have been finalised. An application for a waste licence accompanied and amended EA application will then be submitted to the DMRE under Reference number: NW30/5/1/2/2/10249 MR The mitigation measures proposed for the site will consider the NEM:WA, 2008.
National Forest Act, 1998 (Act No 84 of 1998) read together with applicable amendments and regulations thereto.	Assessment of biophysical environment.
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	Assessment of the cultural and heritage environment.
National Road Traffic Act, 1996 (Act No. 93 of 1996)	The mitigation measures proposed for the project consider the NRTA, 1996.
National Water Act, 1998 (Act No. 36 of 1998) read together with applicable amendments and regulations thereto.	A water use licence application will be submitted to the Department of Water

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE WHERE APPLIED
Department of Water Affairs and Forestry Best Practice Guideline Series (2007).	and Sanitation in terms the National Water Act, 1998 (Act No. 36 of 1998).
National Web based Environmental Screening Tool Site Sensitivity Verification Requirements for Specialist Assessment, and all relevant Species Protocols. Appendix 6 of the EIA Regulations, 2014 (as amended)	Assessment of biophysical environment Applicable to the specialists to be appointed on the project.
Northwest Biodiversity Management Act, 2016 (Act No. 4 of 2016) read together with applicable amendments and regulations thereto.	Assessment of biophysical environment
Public Participation Guideline in terms of the NEMA EIA Regulations.	The guidelines were used during the public participation process.
Species Environmental Assessment Guidelines (SANBI, 2020)	Applicable to the specialists to be appointed on the project.
The South African Constitution.	To be upheld throughout the EIA assessment, planning-, construction-, operational- and decommissioning phases.
Naledi Local Municipality's Integrated Development Plan (IDP) for 2024/25	The information of the IDP was used to inform this report.

f) Need and desirability of the proposed activities.

(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location).

(Information obtained from the Mining Work Programme, 2024 - The Kalahari Platinum Project Summary*)*

The proposed mining project is both economically and strategically important, offering significant benefits to the region and the broader South African mining sector.

Economic and Social Justification

The project is expected to generate substantial employment opportunities, both during construction and operational phases, contributing to local socio-economic development.

The extraction of Platinum Group Metals (PGMs), including platinum, palladium, and gold, will support South Africa's mining industry, which is a key contributor to GDP and foreign exchange earnings.

Infrastructure development, such as the 98 km water pipeline and 89 km power line, will improve local service delivery and create additional opportunities for surrounding communities.

The mine's operations will result in increased tax revenues, investment in local businesses, and skills development initiatives, benefiting the regional economy.

Strategic Importance of the Preferred Location

The project is situated within the Stella Layered Intrusion (SLI), an area proven to contain significant PGM mineralization, making it an ideal location for mining activities.

Proximity to the N18/R27 national highway facilitates easy transportation of materials and finished products to processing and export hubs.

The site's geological characteristics, including steeply dipping ore bodies and high-grade mineral deposits, make open-pit mining the most viable extraction method, ensuring cost-effectiveness.

The use of treated sewage effluent for industrial water supply minimizes pressure on freshwater resources, aligning with sustainable mining practices.

Balancing Economic Development and Environmental Responsibility

While mining has environmental impacts, the project will integrate progressive rehabilitation strategies, ensuring that land is restored post-mining.

Advanced dust suppression, water recycling, and biodiversity conservation measures will mitigate adverse effects, striking a balance between development and environmental protection.

Overall, the strategic location, economic benefits, and planned environmental management make this project highly desirable.

The assessment of the need and desirability of the proposed operation as contained in this Scoping Report must be seen as ***preliminary*** to be expanded upon during the environmental impact assessment phase once the specialist studies and public input is available. The National Department

of Environmental Affairs' Guideline on Need and Desirability (first version published in terms of section 24J of the NEMA in 2014, and second version in 2017), as incorporated below, directs the aspects to be considered and elaborated on during the full EIA process.

Table 5: Need and desirability determination.

<table>
<tr><th colspan="3">1. SECURING ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES</th></tr>
<tr><td colspan="3">How will this development impact on the ecological integrity of the area?</td></tr>
<tr><th>Question</th><th>Response</th><th>Level of Desirability</th></tr>
<tr><td>How were ecological integrity considerations considered?

How will this development disturb or enhance ecosystems and/or result in the loss or protection of biological diversity?</td><td>As discussed under Section 1(h)(iv)(1)(a) Type of environment affected by the proposed activity, the Mining and Biodiversity Map shows that the majority of the area is classified as having moderate biodiversity importance, with a corresponding moderate risk rating for mining activities. According to Mucina and Rutherford (2012) the mining right area extends over a vegetation type known as the Mafikeng Bushveld (SVk 1) and is classified as Vulnerable. None conserved in statutory conservation areas, but very small area conserved in the Mmabatho Recreation Area. About 25% already transformed, mainly for cultivation and urban development. Erosion is very low. A conservation target of 16% was set for the vegetation type.

The DFFE Screening Report for Environmental Authorisations as required by the 2014 EIA Regulations highlights the following environmental sensitivities:
• Agricultural Theme: High
• Animal Species Theme: Low
• Aquatic Biodiversity Theme: Very High
• Archaeological and Cultural Heritage Theme: Low
• Civil Aviation Theme: Low
• Defence Theme: Low
• Palaeontology Theme: Medium
• Plant Species Theme: Low
• Terrestrial Biodiversity Theme: Very High

The project area includes sensitive ecological features such as aquifer-dependent ecosystems, protected tree species (Acacia erioloba, Boscia albitrunca), and breeding habitats for the "near-threatened" Giant Bullfrog. The seep zones act as crucial dispersal corridors for fauna, enhancing gene flow and reducing population isolation without the correct mitigation measures in place.

The desirability of the project is high in terms of economic benefits but must be balanced against its ecological footprint. The implementation of ecological buffer zones and habitat conservation will ensure that biodiversity loss is minimized while allowing mining activities to proceed sustainably.</td><td>Desirability to be commented on by the specialist and assessed in the EIAR.</td></tr>
</table>

1. SECURING ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES		
How will this development impact on the ecological integrity of the area?		
Question	**Response**	**Level of Desirability**
	A qualified ecologist will assess the sensitivity, and ground-truth the conservation status of the study area. The findings will be presented in the Terrestrial Biodiversity Impact Assessment that will be inclusive of a Plant- and Animal Species Assessment and discussed in detail in the draft environmental impact assessment report (DEIAR). The discussion will also propose mitigation and management measures to address/minimise identified impacts.	
How will this development pollute and/or degrade the biophysical environment?	The site-specific processes will be discussed in more detail in the DEIAR, and the potential of the proposed activity degrading the biophysical environment will be determined once the findings of the specialists were received. The project will disturb ecosystems by impacting high-biodiversity areas such as koppies and seep zones, which sustain various invertebrate and mammalian species. However, mitigation strategies, including buffer zones and rehabilitation programs, will be implemented to protect key ecological areas. While the project poses biodiversity risks, its desirability stems from the extraction of valuable minerals crucial to the global economy. Ecological monitoring will maintain ecosystem balance. It must be noted that there was a prospecting right (NW30/5/1/1/2/11876PR) over the proposed mining right application area. As such, the entire area was previously approved for prospecting (mining related) activities.	
What waste will be generated by this development?	Waste will be managed through disposal at approved landfills, and hazardous materials will be handled with strict environmental protocols. The general waste will mainly consist of paper, plastic, glass, metal and potentially tin that will be contained in sealable refuse bins that will be removed and disposed at a local landfill site when the capacity of the containers is reached. The hazardous waste to be generated will be kept in designated hazardous waste containers to be removed from the site by a registered hazardous waste handling contractor.	Highly Desirable

1. SECURING ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES		
How will this development impact on the ecological integrity of the area?		
Question	**Response**	**Level of Desirability**
	Despite waste generation, modern waste management strategies will ensure environmental sustainability. While pollution risks are inherent, strict mitigation measures, such as water treatment and erosion control, will be implemented to minimise environmental degradation.	
How will this development disturb or enhance landscapes and/or sites that constitute the nation's cultural heritage?	*Refer to Part 2(h)(iv)(1)(c) Description of specific environmental features and infrastructure on the site – Site Specific Cultural and Heritage Environment.* The cultural and heritage environment with specific reference to archaeological- and palaeontological aspects will be reviewed by appropriately qualified specialists and the findings updated (if necessary) and discussed in the DEIAR.	Desirability to be commented on by the specialist and assessed in the EIAR.
How will this development use and/or impact on non-renewable natural resources?	The Proposed Project aims to extract platinum group metals (PGMs), which are non-renewable resources. The mining process will deplete these finite mineral reserves, reducing the availability of PGMs for future use. Additionally, the extraction and processing activities will consume significant amounts of fossil fuels, contributing to the depletion of other non-renewable resources. The project is economically desirable due to the high market value of PGMs and their critical applications in various industries, including automotive and electronics. However, the environmental costs associated with non-renewable resource depletion necessitate a balanced approach to ensure sustainable development.	Highly Desirable
How will this development use and/or impact on renewable natural resources and the ecosystem of which they are part?	The development will utilise renewable resources such as water for ore processing and dust suppression. However, excessive water withdrawal can strain local aquifers, affecting both the ecosystem and communities dependent on these water sources. The project may also lead to habitat destruction, impacting biodiversity and ecosystem services such as pollination and soil stabilisation.	Desirability to be commented on by the specialist and

1. SECURING ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES		
How will this development impact on the ecological integrity of the area?		
Question	**Response**	**Level of Desirability**
	While the project offers economic benefits, its desirability is tempered by potential adverse effects on renewable resources and ecosystem health. Implementing sustainable water management practices and habitat restoration plans is crucial to mitigate these impacts. Water supply and management will be discussed in more detail in the DEIAR, while the various specialists will comment on the potential impacts applicable to the ecosystem.	assessed in the EIAR.
How were a risk-averse and cautious approach applied in terms of ecological impacts?	A risk-averse approach involves conducting comprehensive Environmental Impact Assessments (EIAs) to identify potential ecological risks. Mitigation strategies, such as establishing conservation areas and implementing biodiversity offsets, are planned to minimize harm. Continuous environmental monitoring will ensure adaptive management practices are employed to address unforeseen ecological impacts. Adopting a cautious approach enhances the project's desirability by demonstrating a commitment to environmental stewardship and compliance with regulatory frameworks. The findings of the specialists will be assessed during the EIA phase and if needed alternatives will be considered to minimise the impact of the mining activity on biological sensitive areas.	
How will the ecological impacts resulting from this development impact on people's environmental right?	Ecological degradation, such as water pollution and habitat loss, can infringe upon communities' rights to a healthy environment. Diminished ecosystem services may affect livelihoods, particularly for those reliant on agriculture and ecotourism, leading to socio-economic challenges. Ensuring that ecological impacts do not violate environmental rights is essential for maintaining the project's social license to operate. Proactive engagement with affected communities and transparent communication can enhance the project's acceptance and desirability.	
Describe the linkages and dependencies between human wellbeing, livelihoods and ecosystem services applicable to the area in	Human well-being in the area is closely tied to ecosystem services such as clean water, fertile soil, and biodiversity, which support agriculture, livestock farming, and tourism. Ecological impacts like water contamination and habitat destruction can reduce agricultural productivity and deter tourism, leading to job losses and decreased income for	Desirability to be commented on during PPP

1. SECURING ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES		
How will this development impact on the ecological integrity of the area?		
Question	**Response**	**Level of Desirability**
question and how the development's ecological impacts will result in socio-economic impacts.	local communities. The project's desirability is contingent upon its ability to safeguard ecosystem services that underpin local livelihoods. Integrating community development programs and environmental conservation efforts can mitigate negative socio-economic impacts.	and assessed in the EIAR.
Based on all of the above, how will this development positively or negatively impact on ecological integrity objectives/targets/considerations of the area?	The development poses risks to ecological integrity through habitat fragmentation, pollution, and resource depletion. However, with stringent environmental management plans, including habitat restoration and pollution control measures, the project can align with ecological objectives by promoting sustainable resource use and biodiversity conservation. Balancing economic development with ecological integrity enhances the project's overall desirability, ensuring long-term environmental health and community well-being.	
Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified, resulted in the selection of the "best practicable environmental option" in terms of ecological considerations	Alternatives such as different mining methods, project scales, and site locations were evaluated for their environmental footprints. The selected option minimizes ecological disruption by choosing areas with lower biodiversity value and implementing less invasive extraction techniques. This approach represents the best practicable environmental option by reducing habitat loss and preserving ecosystem functions. Selecting environmentally considerate alternatives enhances the project's desirability by demonstrating a commitment to sustainable development and regulatory compliance. The findings of the specialists will be assessed and if needed various alternatives will be considered to minimise the impact of the mining activity on biologically sensitive areas. These findings will be collated into the draft EIAR that will be available for public perusal and commenting. Following the commenting period, the project proposal will be finalised.	
2. PROMOTING JUSTIFIABLE ECONOMIC AND SOCIAL DEVELOPMENT		
What is the socio-economic context of the area?		

1. SECURING ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES		
How will this development impact on the ecological integrity of the area?		
Question	**Response**	**Level of Desirability**
Question	**Response**	**Level of Desirability**
What is the socio-economic context of the area?	Please also refer to *Section 1(h)(iv)(1)*(a) Socio-economic Environment. The project is located within the Naledi and Ratlou Local Municipalities, characterized by agriculture-based livelihoods and limited industrial activity. The region faces challenges such as high unemployment rates and inadequate infrastructure, highlighting the need for economic diversification and development initiatives. The project is highly desirable in this socio-economic context, as it promises job creation, infrastructure development, and economic stimulation, addressing critical community needs.	Desirability to be commented on during PPP and assessed in the EIAR.
Considering the socio-economic context, what will the socio-economic impacts be of the development, and specifically also on the socio-economic objectives of the area?	The development is expected to generate employment opportunities, both directly and indirectly, boosting household incomes and reducing poverty levels. It will also enhance local infrastructure, aligning with the socio-economic objectives outlined in the Naledi Local Municipality's Integrated Development Plan (IDP) for 2024/25, which emphasizes economic growth and improved service delivery.	
How will this development address the specific physical, psychological, developmental, cultural, and social needs and interests of the relevant communities?	The project aligns with regional socio-economic goals, enhancing its desirability by contributing to community development and economic resilience. The project plans to engage with local communities to address their specific needs, including infrastructure development, educational programs, and cultural preservation initiatives. Addressing community needs fosters goodwill and supports sustainable development, increasing project desirability.	

1. SECURING ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES		
How will this development impact on the ecological integrity of the area?		
Question	**Response**	**Level of Desirability**
Will the development result in equitable impact distribution, in the short- and long-term?	Efforts are being made to ensure that both positive and negative impacts are equitably distributed, with particular attention to vulnerable groups. Further to this, the mine will operate in accordance with the provisions of the Mining Charter, 2018 as well as the Employment Equity Act, 1998 giving preference to historically disadvantaged employees from within the local area in terms of employment.	Highly Desirable
In terms of location, describe how the placement of the proposed development will contribute to the area.	The project's location was selected to maximize resource extraction.	Highly Desirable
How were a risk-averse and cautious approach applied in terms of socio-economic impacts?	By conducting comprehensive public engagement that involve engaging with local communities to identify potential adverse effects and developing strategies to mitigate them. By proactively addressing potential socio-economic risks, the project aims to foster community trust and support, enhancing its overall desirability.	Desirability to be commented on during PPP and assessed in the EIAR.
How will the socio-economic impacts resulting from this development impact on people's environmental right?	Positive socio-economic impacts, such as job creation and infrastructure development, can enhance the quality of life and support the realisation of environmental rights. Conversely, if not properly managed, negative impacts like environmental degradation could infringe upon these rights. Ensuring that socio-economic benefits do not come at the expense of environmental rights is crucial for maintaining community well-being and project legitimacy.	
Considering the linkages and dependencies between human wellbeing, livelihoods and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development's socio-economic impacts will result in ecological impacts?	Communities rely on ecosystem services such as clean water and fertile soil for agriculture and daily living. Socio-economic activities from the mining project could lead to ecological impacts like water contamination and soil degradation, which in turn affect human well-being and livelihoods. Recognizing and mitigating these interdependencies is vital for sustainable development and community resilience.	

<table>
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<tr><td>What measures were taken to pursue the selection of the “best practicable environmental option” in terms of socio-economic considerations?</td><td rowspan="2">Various operational methods will be evaluated and those that balance economic viability with minimal socio-economic disruption will be selected, such as choosing mining techniques that reduce environmental footprints and preserve local livelihoods.

Selecting the best practicable environmental option demonstrates a commitment to sustainable practices, enhancing project desirability.

The findings of the specialists will be assessed and if needed various alternatives will be considered to minimise the impact of the mining activity on socio-economic matters. These findings will be collated into the draft EIAR that will be available for public perusal and commenting. Following the commenting period, the project proposal will be finalised.</td><td rowspan="2"></td></tr>
<tr><td>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?</td></tr>
<tr><td>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?</td><td rowspan="2">The mine will have to operate in accordance with, amongst others, the following:
• CARA, 1983 – to ensure agriculture related compliance;
• Financial Provision Regulations, 2015 – to ensure compliance in terms of rehabilitation;
• Mine Health and Safety Act, 1996 (as amended) – to ensure employee safety;
• MPRDA, 2002 (as amended) – to ensure mining related compliance;
• NEM:AQA, 2004 – to ensure air quality related compliance;
• NEM:BA, 2004 – to ensure biodiversity related compliance;
• NEM:WA, 2008 – to ensure waste related compliance;
• NEMA, 1998 (as amended) – to ensure environmental related compliance;
• NWA, 1998 – to ensure water related compliance.

Should the proposed application be approved the mining area will also be subject to compliance with the above listed legislation.</td><td rowspan="2">Highly Desirable</td></tr>
<tr><td>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?</td></tr>
</table>

1. SECURING ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES		
How will this development impact on the ecological integrity of the area?		
Question	**Response**	**Level of Desirability**
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 that is consistent with the priority needs of the local area.	The project will engage in extensive stakeholder consultations to identify community priorities and has developed programs that align with these needs, such as local employment opportunities, skills development, and infrastructure improvements. Aligning project initiatives with community priorities fosters local support and enhances the project's positive impact.	Highly Desirable
What measures have been taken to ensure that current and/or future workers will be informed of work that potentially might be harmful to human health or the environment or of dangers associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected.	The mine must operate in accordance with the specifications of the Mine Health and Safety Act, 1996 (MHSA). Site management will have daily discussions with the staff regarding the work to be performed and the environment in which the work will take place. Grievances/concerns can be lodged during the daily site meetings. The MHSA further requires the submission of quarterly occupational hygiene reports that record site specific occupational hygiene exposure assessments. Comprehensive health and safety training programs should be in place to inform workers of potential hazards. Additionally, policies should be in place to protect workers' rights to refuse unsafe work without fear of retaliation. Ensuring worker safety and rights contributes to a positive work environment and community trust.	Highly Desirable
Describe how the development will impact on job creation in terms of, amongst other aspects?	The proposed mine may create numerous jobs during both the construction and operational phases, contributing to local employment and economic growth. Job creation aligns with local socio-economic objectives, enhancing community livelihoods and project support.	Highly Desirable
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	The proposed mine will operate in accordance with a valid EA, MR, and WL to be issued by the DMRE. Compliance of the site with the approved EMPR, EA- and any other conditions will be reported on as per departmental specification. Considering this, the proposed activity will take place in an environmentally sustainable manner with the least possible impact on the receiving environment. The Applicant will also have to comply with the conditions/requirements of all authorisations to be issued by the other departments. The project has committed	Highly Desirable

1. SECURING ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES		
How will this development impact on the ecological integrity of the area?		
Question	**Response**	**Level of Desirability**
be protected as the people's common heritage.	to sustainable environmental practices and compliance with national environmental regulations to ensure that natural resources are preserved for public benefit.	
Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left.	It is believed that the preliminary list of mitigation measures proposed in this document is realistic and can be implemented (when needed) by the mine. This list will be expanded upon receipt of the specialist reports. Effective mitigation and management of environmental impacts ensure the project's sustainability and community acceptance.	Desirable
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.	In terms of Section 41 of the MPRDA, 2002 a mining right holder must submit a financial provision to the DMRE that is sufficient to rehabilitate or manage the negative environmental impacts related to the mining activity. Upon approval of this application, Greenstone Platinum (Pty) Ltd will lodge a financial guarantee with the DMRE that will be deemed sufficient to cover the financial provision amount needed to rehabilitate the mining footprint. The environmental liability of the operation will annually be reviewed and if a shortfall is indicated, the guarantee will be accordingly adjusted.	Highly Desirable
Considering the need to secure ecological integrity and a healthy bio-physical environment, describe how the alternatives identified, resulted in the selection of the best practicable environmental option in terms of socio-economic considerations.	The findings of the specialists will be assessed and if needed various alternatives will be considered to minimise the impact of the mining activity on the socio-economic environment. These findings will be collated into the draft EIAR that will be available for public perusal and commenting. Following the commenting period, the project proposal will be finalised.	Desirability to be commented on by the specialist and assessed in the EIAR.
Describe the positive and negative cumulative socio-economic impacts bearing in mind the size, scale, scope and nature of		

1. SECURING ECOLOGICAL SUSTAINABLE DEVELOPMENT AND USE OF NATURAL RESOURCES		
How will this development impact on the ecological integrity of the area?		
Question	**Response**	**Level of Desirability**
the project in relation to its location and other planned developments in the area.		

g) Period for which the environmental authorization is required

The Applicant requests that the Environmental Authorisation (EA) be valid for at least the duration of the mining right.

h) Description of the process followed to reach the proposed preferred site.

NB!! This section is not about the impact assessment itself, It is about the determination of the specific site layout having taken into consideration (1) the comparison of the originally proposed site plan, the comparison of that plan with the plan of environmental features and current land uses, the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout as a result.

i) Details of all alternatives considered

With reference to the site plan provided as Appendix 4 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

(a) the property on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity

A) THE PROPERTY ON WHICH, OR LOCATION WHERE, IT IS PROPOSED TO UNDERTAKE THE ACTIVITY

Applicants can only apply for mining rights within areas where such rights are not yet held by other companies/applicants. Furthermore, the mining activities are dependent upon the presence of the desired minerals which are again dependent upon geological formations. The MWP for this application notes that the proposed open pit mining operations were looked at in terms of primary ore for the operation, with the aim to support a sustainable mining approach that considers optimised extraction of the resources. Considering this, the proposed footprint of the MR application was founded on the footprint of the prospecting right (NW30/5/1/1/2/11876PR) backed by the prospecting results and available geological information.

The proposed mining project is located in the Magisterial District of Vryburg, Northwest Province, South Africa. The mining area spans ±15,867.90 hectares and covers portions of the following farms within the boundaries of the GPS coordinates listed in Table 4 and depicted in Figure 3:

- Groot Gewaagd 270 IN
- Gemsbok Pan 309 IN
- Koodoos Rand 321 IN
- Papiesvlakte 323 IN

Geographical and Accessibility Details

The project area is situated approximately 350 km west of Johannesburg and 45 km west of the Kalgold open-pit gold operations on the Kraaipan Greenstone Belt.

It is located 25 km north of Stella, in a predominantly farming region.

The site is accessible via the N18/R27 national highway, which connects Mafikeng and Vryburg, facilitating the transport of personnel, materials, and ore.

Geological Context

The proposed mining area is within the Stella Layered Intrusion (SLI), a 3-billion-year-old geological formation known to host high-grade Platinum Group Metals (PGMs).

The ore deposits are steeply dipping (+/- 70 degrees) and extend beyond 400m depth, making them well-suited for open-pit mining methods.

This location was selected due to its rich mineral deposits, accessibility, and proximity to existing infrastructure, ensuring the feasibility of mining operations while balancing environmental considerations.

B) TYPE OF ACTIVITY TO BE UNDERTAKEN

The Applicant intends to mine Chrome, Cobalt, Copper, Gold Ore, Iron Ore, Nickel Ore, PGMs, Silver Ore and Vanadium of the mining footprint using opencast methods as discussed in Section 1(d)(ii) Description of the activities to be undertaken – Project Proposal.

The primary activity proposed is open-pit mining of Platinum Group Metals (PGMs), including platinum, palladium, and gold. The alternative to open-pit mining was underground mining, which was initially explored in feasibility studies but found to be economically unfeasible due to the steeply dipping nature of the ore body and the associated high extraction costs. Should viable activity alternatives be identified it will be discussed during the EIA process of the application and included in the DEIAR to be distributed for public comments.

C) DESIGN AND LAYOUT OF THE ACTIVITY

The mine design consists of several open pits, a processing plant, a tailings storage facility, and supporting infrastructure. Alternative designs considered included:

A single, large open pit versus multiple smaller pits—smaller pits were selected to minimize environmental impact and optimize ore extraction efficiency.

Different placements for the processing plant and tailings storage—locations were chosen to minimize the footprint and distance to ore sources while reducing potential contamination risks.

The possibility of modular or phased infrastructure development to allow for flexibility in scaling operations.

It is expected that the present mine design/layout may have to be altered upon receipt of the specialist reports.

The final design/layout alternatives will be considered during the EIA process as supplementary information is obtained from the specialist studies, and the stakeholders and I&AP's contribute their knowledge towards the proposed project.

D) TECHNOLOGY TO BE USED IN THE ACTIVITY

Presently it is expected that the mining process will be as described in *Section 1(d)(ii) Description of the activities to be undertaken – Operational Phase*. Presently it is expected that the mining process will be as described in Section 1(d)(ii) Description of the activities to be undertaken – Operational Phase. The project will employ conventional open pit mining methods, including drilling, blasting, loading, and hauling. The ore will be processed using crushing, milling, and flotation to extract PGMs.

Alternatives considered included:

- The use of High-Pressure Grinding Rolls (HPGR) versus conventional crushing circuits—HPGR was not selected due to the ore characteristics favouring conventional crushing and milling.
- Different flotation reagent regimes were tested to maximize recovery while minimizing environmental impacts.

Dry tailings disposal versus wet tailings—wet tailings were chosen due to technical and economic feasibility, but design measures were incorporated to manage water efficiently.

No further technology alternatives are considered in the Scoping and EIA process unless a need arises upon receipt of the specialist reports and/or public input.

E) OPERATIONAL ASPECTS OF THE ACTIVITY

The operational plan is designed to balance efficiency with environmental and social considerations. This includes:

- Using contract mining for flexibility in workforce and equipment management.
- A targeted production rate of 1.5 Mtpa, optimized for economic viability.

- Progressive rehabilitation strategies to minimize long-term land disturbance.

Alternatives considered included variations in mining rates, workforce structures (direct employment vs. contractors), and alternative waste disposal methods, with the current approach being selected as the most balanced in terms of cost, sustainability, and compliance. The operational aspects will however be expanded upon once the findings and recommendations of the specialists are available and will be considered during the EIA process as supplementary information is obtained. The present operational aspects of the activity were based on the prospecting results and the optimisation of the proposed mining activity. The operational aspects will however be expanded upon once the findings and recommendations of the specialists are available and will be considered during the EIA process as supplementary information is obtained.

F) OPTION OF NOT IMPLEMENTING THE ACTIVITY (NO-GO ALTERNATIVE)

The no-go alternative, which entails no change to the status quo, is a valid and necessary option that must be considered. Under this scenario, the project would not proceed, leaving the area in its current state. While this would prevent environmental disturbances such as land degradation, water resource impacts, and biodiversity loss, it also carries significant socio-economic and strategic consequences.

From an environmental perspective, the no-go alternative would avoid potential disruptions to the landscape and ecosystems. However, responsible mining practices, coupled with stringent mitigation measures, can minimize these impacts, ensuring that biodiversity and natural resources are protected while still allowing for economic development.

On a socio-economic level, the no-go option would mean the loss of substantial employment opportunities, local business development, and infrastructure investments. Given South Africa's high unemployment rates and the need for economic upliftment in rural areas, forgoing such a project would significantly impact livelihoods and economic growth.

From a strategic standpoint, failing to utilize the available mineral resources would result in continued dependence on other sources of PGMs, potentially less sustainable or more environmentally damaging operations elsewhere. It would also mean a loss of revenue that could otherwise contribute to national economic stability, industrial growth, and social development programs.

Therefore, while the no-go alternative offers certain environmental benefits, it is critical to find a balanced approach that allows for responsible resource extraction while minimizing negative impacts. Implementing best-practice mitigation strategies can ensure that the project proceeds in a way that safeguards the environment while delivering significant socio-economic benefits. The

socio-ecological and socio-economic impacts of mining on the current and future land uses of the study area will be compared to the status quo and will be considered as part of the EIA process and discussed in the DEIAR.

ii) Details of the Public Participation Process Followed

Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. (Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.

The relevant stakeholders and I&AP's will be informed of the mining right application by means of an advertisement in the Stellalander, and on-site notices that will be placed at conspicuous places inviting the public to comment on the project. A notification letter inviting comments on the DSR over a 30-days commenting period (ending 30 April 2025) will also be sent to the landowners, neighbouring landowners, stakeholders, and any other I&AP that may be interested in the project. The comments received on the DSR will be incorporated into the final Scoping Report (FSR) to be submitted to the DMRE for consideration. The following table provides a list of the I&AP's and stakeholders that will be informed of the project.

Upon approval of the Final Scoping Report the Draft Environmental Impact Assessment Report will be compiled and circulated for public comment for a 30-day commenting period. The comments received on the draft EIA & EMPR will be incorporated into the final EIA & EMPR to be submitted for decision making to DMRE.

Table 6: List of the landowners, I&AP's and stakeholders that will be informed of the project and availability of the DSR.

LANDOWNERS & INTERESTED AND AFFECTED PARTIES	STAKEHOLDERS
Landowner: • Portion 16 of Koodoos Rand 321 (Title Deed: T68/1980) Gert Johannes Nel • Portion 13 of Koodoos Rand 321 (Title Deed: T1957/1974) Gert Johannes Nel • The remaining extent of Koodoos Rand 321 (Title Deed: T1148/1996) Aletta Johanna van Heerden • Portion 1 of Koodoos Rand 321 (Title Deed: T2169/2023) Gert Johannes Nel • Portion 2 of Koodoos Rand 321 (Title Deed: T2919/2003) Gert Johannes Nel • Portion 3 of Koodoos Rand 321 (Title Deed: T2696/2012) Blinkklip Trust • Portion 4 of Koodoos Rand 321 (Title Deed: T1247/2021) Johan Phillip Scholtz, Maria Sophia Magdalena Scholtz	• Department of Economic Development, Environment, Conservation and Tourism; • Department of Agriculture, Land Reform; • Department of Economic Development and Tourism; • Department of Labour; • Department of Public Works, Roads and Transport; • Department of Social Development; • Department of Human Settlements; • Department of Water and Sanitation (DWS); • Eskom; • South African Heritage Resources Agency (SAHRA); • Naledi Local Municipality (NLM); • Naledi Local Municipality (Ward 1); • Ratlou Local Municipality • Ratlou Local Municipality (Ward 13) • Dr Ruth Segomotsi Mompati District Municipality. • Ngaka Modiri Molema District Municipality

LANDOWNERS & INTERESTED AND AFFECTED PARTIES	STAKEHOLDERS
• Portion 5 of Koodoos Rand 321 (Title Deed: T7019/1913) Gert Johannes Nel • Portion 6 of Koodoos Rand 321 (Title Deed: T7017) Gert Johannes Nel • Portion 7 of Koodoos Rand 321 (Title Deed: T1035/1974) 7/321 Hendrik Jacobus Scholtz, Casparus Johannes Marthinus van Niekerk (deceased), Casparus Johannes van Niekerk, Johan Phillip Scholtz • Portion 8 of Koodoos Rand 321 (Title Deed: T1957/1974) Feedtron Trading CC • Portion 10 of Koodoos Rand 321 (Title Deed: T407/1936) Gert Johannes Nel • Portion 11 of Koodoos Rand 321 (Title Deed: T2696/2012) Blinkklip Trust • Portion 12 of Koodoos Rand 321 (Title Deed: No info) no info - refer to registrar of deeds • Portion 13 of Koodoos Rand 321 (Title Deed: T1957/1974) Gert Johannes Nel • Portion 14 of Koodoos Rand 321 (Title Deed: T68/1980) Gert Johannes Nel • Portion 15 of Koodoos Rand 321 (Title Deed: T1282/1979) Gert Johannes Nel • Portion 16 of Koodoos Rand 321 (Title Deed: T68/1980) Gert Johannes Nel • Portion 17 of Koodoos Rand 321 (Title Deed: T1957/1974) Gert Johannes Nel • Portion 18 of Koodoos Rand 321 • (Title Deed: T745/1953) Gert Johannes Nel • Portion 19 of Koodoos Rand 321 (Title Deed: T1049/1954) Gert Johannes Nel • Portion 20 of Koodoos Rand 321 (Title Deed: T1050/1954) Dankbaar Boerdery CC • Portion 21 of Koodoos Rand 321 (Title Deed: T 1051/1954) Gert Johannes Nel • Portion 22 of Koodoos Rand 321 (Title Deed: T1957/1974)22/321 Blinkklip Trust • Portion 23 of Koodoos Rand 321 (Title Deed: T282/1992) Dankbaar Boerdery CC • Portion 1 of Papiesvlakte 323 (Title Deed: T347/1980) Nonen Ranch CC • The remaining extent of Gemsbok Pan 309 (Title Deed: T2170/1997) Jacobus Gene de Villiers • Portion 1 of the remaining extent of Gemsbok Pan 309 (Title Deed: T2565/2012) Poggenpoel Familie Trust • Portion 2 of Gemsbok Pan 309	

LANDOWNERS & INTERESTED AND AFFECTED PARTIES	STAKEHOLDERS
(Title Deed: T1639/1990)2/309 Johanna Adriana Le Roux (deceased) Johanna Adriana De Villiers • Portion 3 of Gemsbok Pan 309 (Title Deed: T161/2001) Johanna Adriana De Villiers • Portion 4 of Gemsbok Pan 309 (Title Deed: T2353/2002) Johanna Adriana De Villiers • Portion 8 of Gemsbok Pan 309 (Title Deed: T1987/2002) Pieter Christiaan Scholtz • Portion 9 of Gemsbok Pan 309 (Title Deed: T733/1962) Bartholomeus Cilliers • Portion 10 of Gemsbok Pan 309 (Title Deed: T228/2022)10/309 Joostenberg Trust • Portion 11 of Gemsbok Pan 309 (Title Deed: T2353/2002) Johanna Adriana De Villiers • Portion 12 of Gemsbok Pan 309 (Title Deed: T2565/2012) Poggenpoel Familie Trust • Portion 14 of Gemsbok Pan 309 • (Title Deed: T246/1973) Bartholomeus Cilliers • Portion 15 of Gemsbok Pan 309 (Title Deed: T228/2022)15/309 Joostenberg Trust • Portion 16 of Gemsbok Pan 309 (Title Deed: T2170/2023)16/309 Gert Johannes Nel • Portion 0 of Groot Gewaagd 270 (Title Deed: T2566/2012) Poggenpoel Familie Trust • Portion 1 of Groot Gewaagd 270 (Title Deed: T1409/1981) Le Roux Boerdery CC • Portion 2 of Groot Gewaagd 270 (Title Deed: T2565/2012) Poggenpoel Familie Trust • Portion 3 of Groot Gewaagd 270 (Title Deed: T1964/2012) Henry John Smith (deceased), Pieter Christiaan Le Roux • Portion 4 of Groot Gewaagd 270 (Title Deed: T499/1967) Jacoba Smith, Henry John Smith (deceased), Pieter Christiaan Le Roux • Portion 5 of Groot Gewaagd 270 (Title Deed: T1964/2012) Henry John Smith (deceased), Pieter Christiaan Le Roux • Portion 6 of Groot Gewaagd 270	

LANDOWNERS & INTERESTED AND AFFECTED PARTIES	STAKEHOLDERS
(Title Deed: T 2354/2002) Hester Susanna Badenhorst • Portion 7 of Groot Gewaagd 270 (Title Deed: T499/1967)7/270 Jacoba Smith, Henry John Smith (deceased), Pieter Christiaan Le Roux • Portion 8 of Groot Gewaagd 270 (Title Deed: T1329/1972) John Samuel Smith, Magdalena Alberta Smith • Portion 9 of Groot Gewaagd 270 (Title Deed: T499/1967) Jacoba Smith, Henry John Smith (deceased), Pieter Christiaan Le Roux • Portion 11 of Groot Gewaagd 270 (Title Deed: T1493/2021) Stella Platinum Pty Ltd **Surrounding Landowners and I&AP's:** • Farm Blaauw Krans 256 Remaining extent of Portion 0 - Keeley Graham • Farm Klip Pan 257 Portion 1 - Sandheuwel Boerdery Pty Ltd • Farm Klip Pan 257 Portion 4 - Verbreed Feedlot Pty Ltd • Farm Kinde Estate 269 Portion 28, 29, 30 and 31 - Cindi Communal Property Association • Farm Kinde Estate 269 Portion 32 - Stalla Ndikandika Family Trust • Farm Kinde Estate 269 Portion 33 - Richard Cindi Family Trust • Farm Kinde Estate 269 Portion 34 - Cindi Communal Property Association • Farm Kinde Estate 269 Portion 35 - Cindi Communal Property Association • Farm Kinde Estate 269 Portion 36 - Shine Wood Family Trust • Farm Kinde Estate 269 Portion 37 - Gilbert Cindi Trust • Farm Kinde Estate 269 Portion 38 - David Cindi Family Trust • Farm Kinde Estate 269 Portion 39 - Albert Cindi Family Trust • Farm Vogelstruis Kop 271 Portion 1 - • Henry John Smith • Farm Vogelstruis Kop 271 Portion 2 - Johan Retief Familie Trust • Farm Hartebeest Pan 308 Remaining extent of Portion 1 - Martha Maria Nel • Farm Hartebeest Pan 308 Portion 4 - Belinda Loudon CC • Farm Hartebeest Pan 308 Portion 5 - Martha Maria Nel	

LANDOWNERS & INTERESTED AND AFFECTED PARTIES	STAKEHOLDERS
• Farm Hartebeest Pan 308 Portion 7 - Elizabeth Maria Cilliers • Farm Groot Verdriet 310 Portion 0 - Withakpan Familie Trust • Farm Groot Verdriet 310 Portion 6 - Withakpan Familie Trust • Farm Groot Verdriet 310 Portion 7 - Elias Weyers du Plessis • Farm Groot Verdriet 310 Portion 11 - Naledi Local Municipality • Farm Blink Klip 319 Portion 3 - Feedtron Trading CC • Farm Blink Klip 319 Portion 5 - Blinkklip Trust • Farm Blink Klip 319 Portion 6 - Gold Wing Traders CC • Farm Blink Klip 319 Portion 7 - Blinkklip Trust • Farm Kodoos Rand 321 Remaining extent of Portion 0 - Aletta Johanna van Heerden • Farm Koodoos Rand 321 Portion 8 - Feedtron Trading CC • Farm Papies Vlakte A Portion 0 Remaining Extent - No info refer to registrar of deeds • Farm Donkerhoek 324 Portion 4a – Petrus Stephanus Wessels • Farm Donkerhoek 324 Portion 6 - Theunissen Trust • Farm Donkerhoek 324 Portion 8 - Martha Maria Nel • Farm Regen Vlakte 338 Portion 6 - • Wesgraan Beleggings Pty Ltd • Farm Wonder Klip 339 Remaining Extent - Hendrik Jacobus Scholtz • Farm Wonder Klip 339 Portion 4 - Jan Dirk Heyns Hattingh • Farm Koodoos Dam 340 Portion 1 - Feedtron Trading CC • Farm Wonder Klip 339 Portion 4 - Jan Dirk Heyns Hattingh • Farm Koodoos Dam 340 Portion 7 - Feedtron Trading CC	

iii) Summary of issues raised by I&Aps

(Complete the table summarizing comments and issues raised, and reaction to those responses)

Table 7: Summary of issues raised by I&AP's and stakeholders.

Interested and Affected Parties **List the names of persons consulted in this column, and** **Mark with an X where those must be consulted were in fact consulted**		**Date Comments Received**	**Issues raised**	**EAP's response to issues raised by the Applicant**
AFFECTED PARTIES				
Landowner/s	**X**			
• Portion 13 of Koodoos Rand 321 (Title Deed: T1957/1974) Gert Johannes Nel	X	Any comments received on the draft scoping report will be incorporated into the final scoping report.		
• The remaining extent of Koodoos Rand 321 (Title Deed: T1148/1996) Aletta Johanna van Heerden	X			
• Portion 1 of Koodoos Rand 321 (Title Deed: T2169/2023) Gert Johannes Nel)	X			
• Portion 2 of Koodoos Rand 321 (Title Deed: T2919/2003) Gert Johannes Nel	X			
• Portion 3 of Koodoos Rand 321 (Title Deed: T2696/2012) Blinkklip Trust	X			
• Portion 4 of Koodoos Rand 321	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
(Title Deed: T1247/2021) Johan Phillip Scholtz, Maria Sophia Magdalena Scholtz				
Portion 5 of Koodoos Rand 321 (Title Deed: T7019/1913) Gert Johannes Nel	X			
Portion 6 of Koodoos Rand 321 (Title Deed: T7017) Gert Johannes Nel	X			
Portion 7 of Koodoos Rand 321 (Title Deed: T1035/1974) 7/321 Hendrik Jacobus Scholtz, Casparus Johannes Marthinus van Niekerk (deceased), Casparus Johannes van Niekerk, Johan Phillip Scholtz	X			
Portion 8 of Koodoos Rand 321 (Title Deed: T1957/1974) Feedtron Trading CC	X			
Portion 10 of Koodoos Rand 321	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
(Title Deed: T407/1936) Gert Johannes Nel				
Portion 11 of Koodoos Rand 321 (Title Deed: T2696/2012) Blinkklip Trust	X	Any comments received on the draft scoping report will be incorporated into the final scoping report.		
Portion 12 of Koodoos Rand 321 (Title Deed: No info) no info - refer to registrar of deeds	X			
Portion 13 of Koodoos Rand 321 (Title Deed: T1957/1974) Gert Johannes Nel	X			
Portion 14 of Koodoos Rand 321 (Title Deed: T68/1980) Gert Johannes Nel	X			
Portion 15 of Koodoos Rand 321 (Title Deed: T1282/1979) Gert Johannes Nel	X			
Portion 16 of Koodoos Rand 321	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
(Title Deed: T68/1980) Gert Johannes Nel				
Portion 17 of Koodoos Rand 321 (Title Deed: T1957/1974) Gert Johannes Nel	X	Any comments received on the draft scoping report will be incorporated into the final scoping report.		
Portion 18 of Koodoos Rand 321 (Title Deed: T745/1953) Gert Johannes Nel	X			
Portion 19 of Koodoos Rand 321 (Title Deed: T1049/1954) Gert Johannes Nel	X			
Portion 20 of Koodoos Rand 321 (Title Deed: T1050/1954) Dankbaar Boerdery CC	X			
Portion 21 of Koodoos Rand 321 (Title Deed: T 1051/1954) Gert Johannes Nel	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
• Portion 22 of Koodoos Rand 321 (Title Deed: T1957/1974)22/321 Blinkklip Trust	X			
• Portion 23 of Koodoos Rand 321 (Title Deed: T282/1992) Dankbaar Boerdery CC	X			
• Portion 1 of Papiesvlakte 323 (Title Deed: T347/1980) Nonen Ranch CC	X			
• The remaining extent of Gemsbok Pan 309 (Title Deed: T2170/1997) Jacobus Gene de Villiers	X			
• Portion 1 of the remaining extent of Gemsbok Pan 309 (Title Deed: T2565/2012) Poggenpoel Familie Trust	X			
• Portion 2 of Gemsbok Pan 309	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
(Title Deed: T1639/1990)2/309 Johanna Adriana Le Roux (deceased) Johanna Adriana De Villiers				
Portion 3 of Gemsbok Pan 309 (Title Deed: T161/2001) Johanna Adriana De Villiers	X			
Portion 4 of Gemsbok Pan 309 (Title Deed: T2353/2002) Johanna Adriana De Villiers	X			
Portion 8 of Gemsbok Pan 309 (Title Deed: T1987/2002) Pieter Christiaan Scholtz	X			
Portion 9 of Gemsbok Pan 309 (Title Deed: T733/1962) Bartholomeus Cilliers	X			
Portion 10 of Gemsbok Pan 309 (Title Deed: T228/2022)10/309 Joostenberg Trust	X			
Portion 11 of Gemsbok Pan 309 (Title Deed: T2353/2002) Johanna Adriana De Villiers	X			
Portion 12 of Gemsbok Pan 309	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
(Title Deed: T2565/2012) Poggenpoel Familie Trust				
Portion 14 of Gemsbok Pan 309 (Title Deed: T246/1973) Bartholomeus Cilliers	X			
Portion 15 of Gemsbok Pan 309 (Title Deed: T228/2022)15/309 Joostenberg Trust	X			
Portion 16 of Gemsbok Pan 309 (Title Deed: T2170/2023)16/309 Gert Johannes Nel	X			
Portion 0 of Groot Gewaagd 270 (Title Deed: T2566/2012) Poggenpoel Familie Trust	X			
Portion 1 of Groot Gewaagd 270 (Title Deed: T1409/1981) Le Roux Boerdery CC	X			
Portion 2 of Groot Gewaagd 270 (Title Deed: T2565/2012) Poggenpoel Familie Trust	X			
Portion 3 of Groot Gewaagd 270	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
(Title Deed: T1964/2012) Henry John Smith (deceased), Pieter Christiaan Le Roux				
Portion 4 of Groot Gewaagd 270 (Title Deed: T499/1967) Jacoba Smith, Henry John Smith (deceased), Pieter Christiaan Le Roux	X			
Portion 5 of Groot Gewaagd 270 (Title Deed: T1964/2012) Henry John Smith (deceased), Pieter Christiaan Le Roux	X			
Portion 6 of Groot Gewaagd 270 (Title Deed: T 2354/2002) Hester Susanna Badenhorst	X			
Portion 7 of Groot Gewaagd 270 (Title Deed: T499/1967)7/270 Jacoba Smith, Henry John Smith (deceased), Pieter Christiaan Le Roux	X			
Portion 8 of Groot Gewaagd 270 (Title Deed: T1329/1972) John Samuel Smith, Magdalena Alberta Smith	X			
Portion 16 of Koodoos Rand 321	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
(Title Deed: T68/1980) Gert Johannes Nel				
Portion 9 of Groot Gewaagd 270 (Title Deed: T499/1967) Jacoba Smith, Henry John Smith (deceased), Pieter Christiaan Le Roux	X			
Portion 11 of Groot Gewaagd 270 (Title Deed: T1493/2021) Stella Platinum Pty Ltd	X			
Lawful occupier/s of the land	**N/A**	-	-	-
Landowners or lawful on adjacent properties	**X**	**-**	**-**	**-**
Farm Blaauw Krans 256 Remaining extent of Portion 0 - Keeley Graham	X	Any comments received on the draft scoping report will be incorporated into the final scoping report.		
Farm Klip Pan 257 Portion 1 - Sandheuwel Boerdery Pty Ltd	X			
Farm Klip Pan 257 Portion 4 - Verbreed Feedlot Pty Ltd	X			
Farm Kinde Estate 269 Portion 28, 29, 30 and 31 - Cindi Communal Property Association	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
• Farm Kinde Estate 269 Portion 32 - Stalla Ndikandika Family Trust	X			
• Farm Kinde Estate 269 Portion 33 - Richard Cindi Family Trust	X			
• Farm Kinde Estate 269 Portion 34 - Cindi Communal Property Association	X			
• Farm Kinde Estate 269 Portion 35 - Cindi Communal Property Association	X			
• Farm Kinde Estate 269 Portion 36 - Shine Wood Family Trust	X			
• Farm Kinde Estate 269 Portion 37 - Gilbert Cindi Trust	X			
• Farm Kinde Estate 269 Portion 38 - David Cindi Family Trust	X			
• Farm Kinde Estate 269 Portion 39 - Albert Cindi Family Trust	X			
• Farm Vogelstruis Kop 271 Portion 1 - Henry John Smith	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
Farm Vogelstruis Kop 271 Portion 2 - Johan Retief Familie Trust	X			
Farm Hartebeest Pan 308 Remaining extent of Portion 1 - Martha Maria Nel	X			
Farm Hartebeest Pan 308 Portion 4 - Belinda Loudon CC	X			
Farm Hartebeest Pan 308 Portion 5 - Martha Maria Nel	X			
Farm Hartebeest Pan 308 Portion 7 - Elizabeth Maria Cilliers	X			
Farm Groot Verdriet 310 Portion 0 - Withakpan Familie Trust	X			
Farm Groot Verdriet 310 Portion 6 - Withakpan Familie Trust	X			
Farm Groot Verdriet 310 Portion 7 - Elias Weyers du Plessis	X			
Farm Groot Verdriet 310 Portion 11 - Naledi Local Municipality	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
Farm Blink Klip 319 Portion 3 - Feedtron Trading CC	X			
Farm Blink Klip 319 Portion 5 - Blinkklip Trust	X			
Farm Blink Klip 319 Portion 6 - Gold Wing Traders CC	X			
Farm Blink Klip 319 Portion 7 - Blinkklip Trust	X			
Farm Kodoos Rand 321 Remaining extent of Portion 0 - Aletta Johanna van Heerden	X			
Farm Koodoos Rand 321 Portion 8 - Feedtron Trading CC	X			
Farm Papies Vlakte A Portion 0 Remaining Extent - No info refer to registrar of deeds	X			
Farm Donkerhoek 324 Portion 4a – Petrus Stephanus Wessels	X			
Farm Donkerhoek 324 Portion 6 - Theunissen Trust	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
• Farm Donkerhoek 324 Portion 8 - Martha Maria Nel	X			
• Farm Regen Vlakte 338 Portion 6 - Wesgraan Beleggings Pty Ltd	X			
• Farm Wonder Klip 339 Remaining Extent - Hendrik Jacobus Scholtz	X			
• Farm Wonder Klip 339 Portion 4 - Jan Dirk Heyns Hattingh	X			
• Farm Koodoos Dam 340 Portion 1 - Feedtron Trading CC	X			
• Farm Wonder Klip 339 Portion 4 - Jan Dirk Heyns Hattingh	X			
• Farm Koodoos Dam 340 Portion 7 - Feedtron Trading CC	X			
Municipal councillor Naledi Local Municipality Ward 1	**X**	Any comments received on the draft scoping report will be incorporated into the final scoping report.		
Municipal councillor Ratlou Local Municipality Ward 13				
Municipality	**X**			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
Naledi Local Municipality				
Ratlou Local Municipality				
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA etc	**X**	**-**	**-**	**-**
Department of Public Works, Roads and Transport	X	Any comments received on the draft scoping report will be incorporated into the final scoping report.		
Department of Water and Sanitation	X			
Department of Public Works	X			
Department of Social Development	X			
Department of Human Settlements	X			
Eskom	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
Communities		No communities border the mining area or were identified within 100 m from the site.		
-	**-**	**-**	**-**	**-**
Dept. Land Affairs	**-**	Any comments received on the draft scoping report will be incorporated into the final scoping report.		
-	**-**	**-**	**-**	**-**
Traditional Leaders		No tradition leaders border the mining area or were identified within 100 m from the site.		
-	**-**	**-**	**-**	**-**
Dept. Environmental Affairs	**X**	-		
Department of Economic Development, Environment, Conservation and Tourism	X	Any comments received on the draft scoping report will be incorporated into the final scoping report.		
Other Competent Authorities affected		**-**	**-**	**-**
Department of Agriculture and Rural Development	X	Any comments received on the draft scoping report will be incorporated into the final scoping report.		
Department of Labour	X			

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those must be consulted were in fact consulted		Date Comments Received	Issues raised	EAP's response to issues raised by the Applicant
South African Heritage Resources Agency (SAHRA)	X			
Northwest Provincial heritage Resources Authority				
Dr Ruth Segomotsi Mompati District Municipality	X			
Ngaka Modiri Molema District Municipality	X			
OTHER AFFECTED PARTIES		-	-	-
Faruga (Pty) Ltd - prospecting right holder over same area	X	**-**	**-**	**-**
INTERESTED PARTIES		-	-	-

iv) The Environmental attributes associated with the sites.

(1) Baseline Environment

(a) Type of environment affected by the proposed activity.

(its current geographical, physical, biological, socio-economic, and cultural character)

This section describes the general biophysical, cultural, and socio-economic environment as well as baseline conditions that may be affected by the proposed project. The information provided here was obtained from desktop studies and must be treated as preliminary. More detailed information based on site specific conditions, obtained during site assessments, and focussed investigations will be collected during the EIA process and elaborated on in the DEIAR.

PHYSICAL ENVIRONMENT

CLIMATE

The climate of the proposed mining right area, covering approximately 15,867.90 hectares across the farms Groot Gewaagd 270 IN, Gemsbok Pan 309 IN, Koodoos Rand 321 IN, and Papiesvlakte 323 IN, situated in the Magisterial District of Vryburg, Northwest Province, is characterised by semi-arid conditions. The following key climatic parameters are relevant to the assessment of potential environmental impacts and mitigation measures:

Temperature

These averages indicate that Vryburg's warmest months are December and January, with average high temperatures around (31-32°C). The coolest months are June and July, with average lows around (5-6°C). Rainfall is relatively low throughout the year, peaking during the summer months, particularly in January and December.

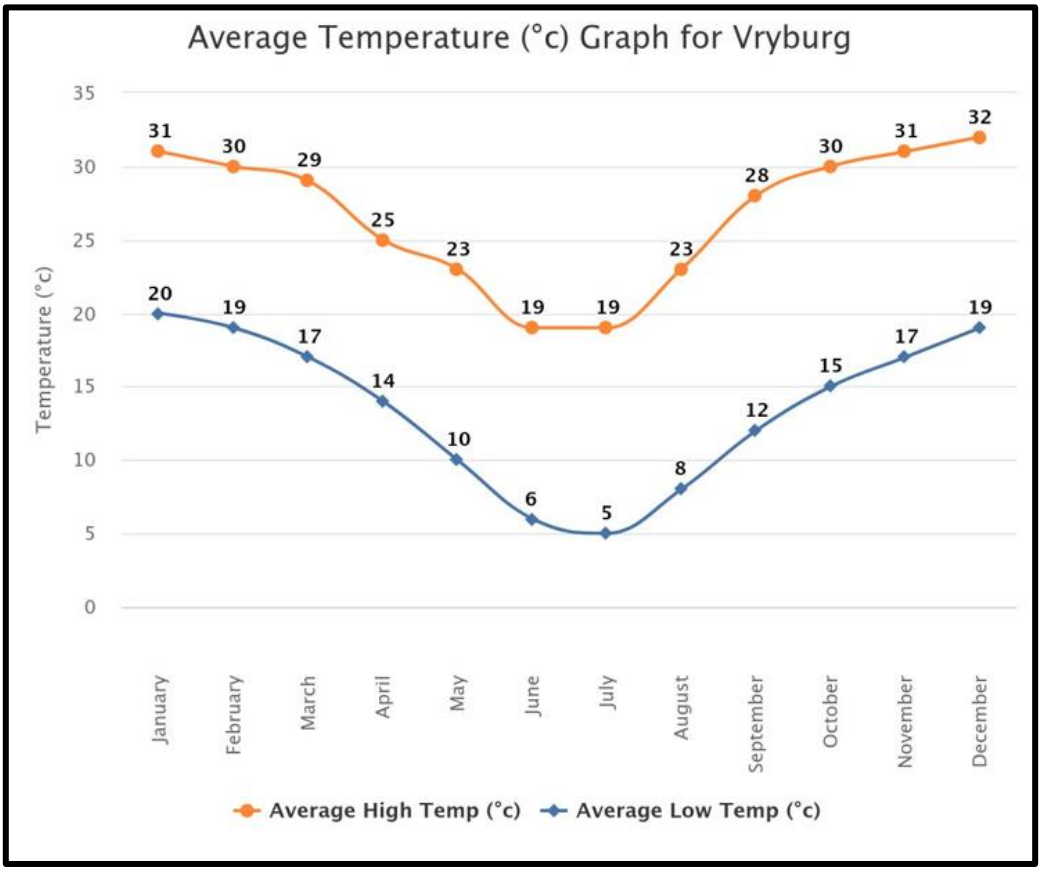


Figure 6: Average monthly temperatures for the Vryburg area (www.worldweatheronline.com/vryburg-weather-averages/north-west)

Rainfall

Vryburg, located in South Africa's Northwest province, experiences a semi-arid climate characterized by hot summers and mild winters. The town receives an average annual rainfall of approximately 520 millimeters, with the majority occurring between October and April, peaking in December and January.

In contrast, the region experiences high evaporation rates, exceeding annual precipitation. Monthly average evaporation rates range from approximately 96.7 millimeters in June to 232.6 millimeters in December.

This disparity between rainfall and evaporation contributes to the area's characteristic water deficit, impacting local agriculture and water resource management.

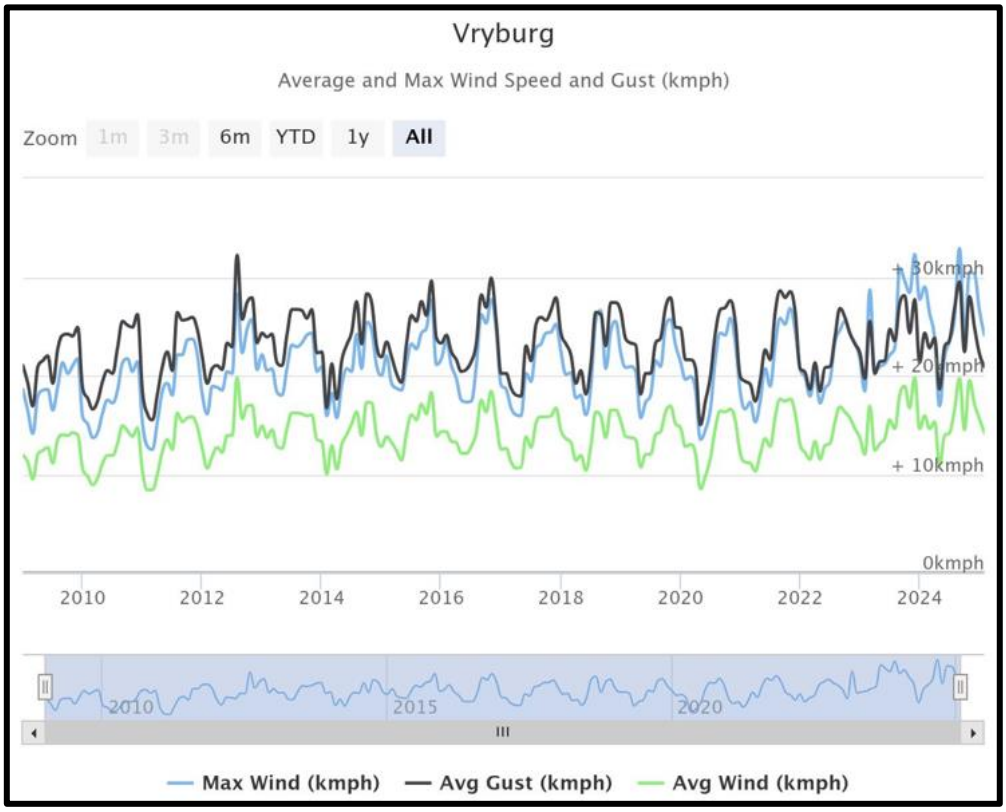


Figure 7: Mean annual rainfall and evaporation for the project area (www.worldweatheronline.com/vryburg-weather-averages/north-west).

Evaporation and Humidity

Vryburg, situated in South Africa's Northwest province, experiences a semi-arid climate characterised by specific patterns in evaporation and humidity.

The region experiences high evaporation rates, exceeding annual precipitation. Monthly average evaporation rates range from approximately 96.7 millimeters in June to 232.6 millimeters in December. This high evaporation rate contributes to the area's characteristic water deficit, impacting local agriculture and water resource management.

While specific monthly humidity data for Vryburg is limited, semi-arid regions typically experience moderate to low relative humidity levels. Humidity tends to be higher during the summer months (December to February) when temperatures are elevated and precipitation peaks, and lower during the winter months (June to August) when conditions are cooler and drier.

Understanding these patterns is crucial for effective water resource management, agricultural planning, and assessing potential evaporation rates in the Vryburg area.

Wind Patterns

Vryburg experiences relatively consistent wind patterns throughout the year, with dominant winds coming from the northwest (NW) and north-northwest (NNW). The monthly breakdown of wind direction shows that:

- From January to March, the wind direction is primarily from the north-northwest (NNW).
- From April onwards, the wind shifts slightly to the northwest (NW), which remains the dominant direction until December.

Wind Speeds:

- Wind speeds in Vryburg vary between **5 to 8 knots** on average throughout the year.
- The lowest average wind speeds occur in May (**5 knots**), while the highest are recorded between September and December (**8 knots**).
- Wind speeds gradually increase from June onwards, peaking in the last quarter of the year.

This pattern suggests that Vryburg experiences stronger winds during the spring and summer months, which may influence local weather conditions, including temperature and evaporation rates..

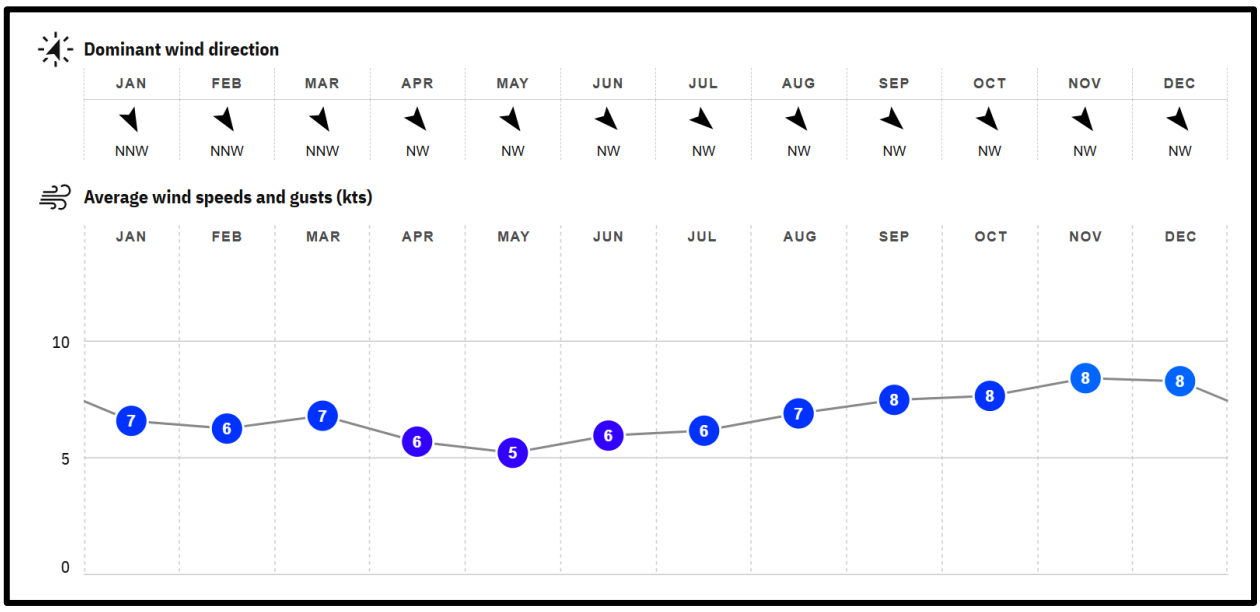


Figure 8: Image showing the dominant wind direction and average wind speed over a 12-month period for the Vryburg area. (Image obtained from www.windfinder.com/windstatistics/Vryburg)

TOPOGRAPHY

The topography of this area is characterized by a slightly undulating to flat-lying landscape, with an average surface elevation ranging from approximately 1,245m to 1,275m above mean sea level.

The terrain consists of sandy plains associated with Kalahari deposits and deep soils, primarily of the Clovelly and Hutton soil forms, which contribute to the flatness of the region. Although the majority of the area is relatively level, there are minor variations in elevation, which can influence surface water drainage patterns. The presence of ephemeral pans and seep zones further defines the local landscape, particularly in low-lying areas.

Additionally, the region falls within the Kalahari Thornveld and Shrub Bushveld biome, with well-developed tree and shrub layers dominating the vegetation. This natural setting is interspersed with human activities such as cattle farming and other agricultural land uses.

The overall topographical setting presents minimal constraints for mining development, given its generally flat nature, which is favourable for open-pit mining operations. However, localized undulations and the presence of water seep zones must be considered in the mine planning and environmental impact assessment process.

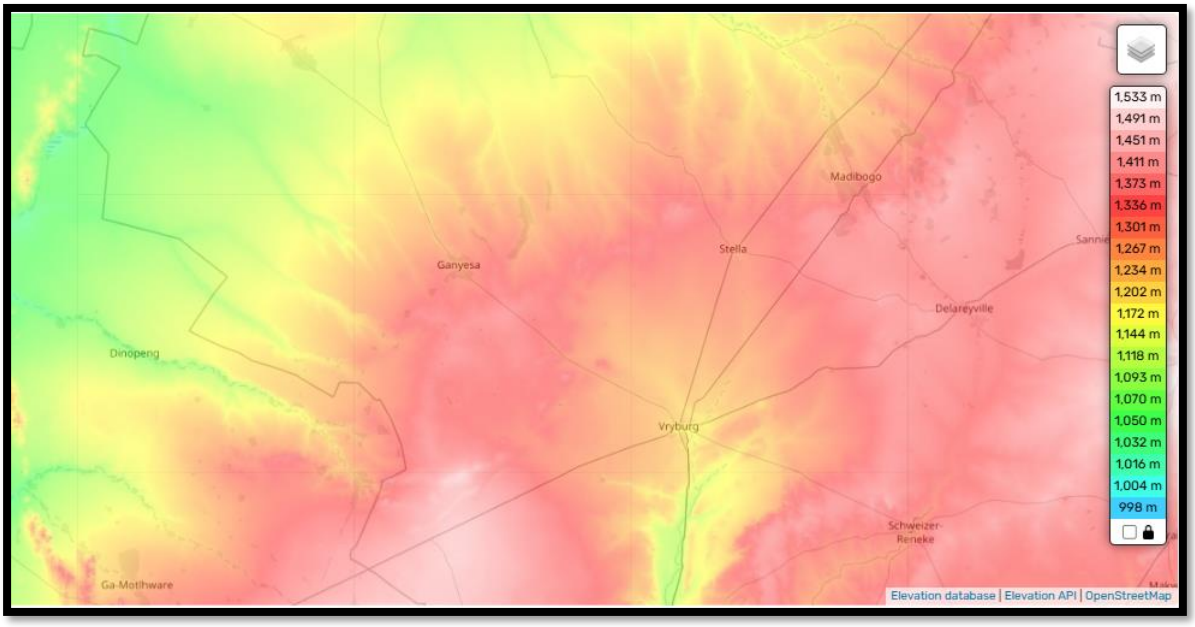


Figure 9: Map showing the topography of the greater Stella – Vryburg area (image obtained from https://en-gb.topographic-map.com/map-mjfw1h/Vryburg/?center=-26.69001%2C24.40745&zoom=9).

Also refer to *Section 1(h)(iv)(1)(c) Description of specific environmental features and infrastructure on site – Site Specific Topography.*

VISUAL CHARACTERISTICS

The visual character of the greater study area is largely defined by its open, semi-arid landscape with a mix of natural and agricultural elements.

The terrain is predominantly flat to gently undulating, characteristic of the Kalahari Thornveld and Shrub Bushveld biome. This openness allows for long, unobstructed views across the landscape, with minimal natural topographical features providing visual enclosure. The vast expanses of grasslands and scattered trees, including Acacia species and Terminalia sericea, create a sense of openness and rural tranquillity.

Human-modified elements within the landscape include livestock farming infrastructure, such as fenced grazing areas, dirt roads, and small-scale settlements. The presence of agricultural activity contributes to a semi-rural visual character, with relatively low levels of visual clutter. The lack of large urban development's ensures that the natural aesthetic of the region remains largely intact.

From a visual sensitivity perspective, the introduction of mining activities, including excavation, stockpiles, and associated infrastructure, may alter the current scenic quality by introducing industrial elements into the otherwise rural and natural setting. However, due to the vastness of the area and the absence of significant elevated viewpoints, the visual impact is expected to be localized and primarily noticeable from nearby farms and roads.

Also refer to *Part A(1)(h)(iv)(c) Description of specific environmental features and infrastructure on the site – Site Specific Visual Characteristics.*

GEOLOGY AND SOILS

(Information extracted from the Mining Work Programme, 2024)

Summary of the Regional Geology

The proposed area is geologically situated within the western limb of the Kraaipan Greenstone Belt. This belt is part of the larger Kaapvaal Craton, one of the oldest and most stable geological formations in South Africa.

The Kraaipan Greenstone Belt consists primarily of Archaean-aged metamorphosed volcanic and sedimentary rocks, with associated intrusions of granitoids. It is subdivided into three main units:

The Lower Ultramafic Sequence, composed of komatiitic basalts and ultramafic schists.

The Middle Mafic Volcanic Sequence, consisting of tholeiitic basalts and interbedded cherts.

The Upper Sedimentary Sequence, made up of banded iron formations (BIFs), quartzites, and shale.

The mineralization within the study area is hosted by the Stella Layered Intrusion (SLI), a mafic-ultramafic complex that has been structurally deformed along with the surrounding Kraaipan Greenstone Belt. The SLI hosts significant Platinum Group Metals (PGMs), as well as deposits of Chrome, Cobalt, Nickel, Vanadium, and Gold. These mineralized zones are typically found in magnetite-rich gabbros, with mineralization occurring in distinct reef-like horizons.

Structurally, the region has undergone multiple deformation events, including folding, thrust faulting, and brittle faulting. The presence of north-northwest trending shear zones has influenced both the geological structure and mineralization patterns. These structures are critical in controlling the distribution and concentration of economically valuable minerals.

The regional geology indicates that the study area has high mineral potential, particularly for PGM-bearing deposits, and is geologically well-suited for mining operations. Further geophysical and geochemical exploration will refine the understanding of mineral distribution and aid in the development of an effective extraction strategy.

Also refer to *Section 1(h)(iv)(1)(c) Description of specific environmental features and infrastructure on site – Site Specific Geology.*

HYDROLOGY

(Information obtained from the Kalahari Platinum Project Summary)

Surface Water

The study area is located within the D41B quaternary catchment, which forms part of the Bo-Molopo drainage region. The Mosita-se-Laagte non-perennial river is situated to the west of the site and flows into the Setlagoli River, approximately 30 km to the north. The Setlagoli River subsequently joins the Molopo River, which flows in an east-west direction about 47 km north of the project site.

Several small dams and ephemeral pans are present within and around the study area. These water bodies are seasonally inundated, depending on rainfall patterns. A non-perennial seep zone crosses the central section of the study site, draining in a northerly direction. The seep zone is an ecologically sensitive feature, serving as a dispersal corridor for fauna and providing seasonal water availability.

Groundwater

The project area is underlain by an aquifer classified as a sole source aquifer, according to Parsons (1995). This classification is due to the absence of any bulk water supply infrastructure, making groundwater the primary source of water in the region.

Average Borehole Yield: Between 1.5 L/s and 3 L/s.

Groundwater Quality: Based on a hydrocensus survey of five boreholes, the groundwater is classified as Class III (poor quality), posing a risk of chronic health effects for sensitive groups. It is unsuitable for direct potable use without treatment.

Key Contaminants: Elevated fluoride and nitrate nitrogen levels may have adverse effects on human health and livestock, including potential tooth and joint deformities.

A groundwater model was developed using data from six boreholes and an existing open pit, indicating a total sustainable yield of 6.6 L/s (570 m^3/day). The potential impacts of the mining activities on groundwater levels and quality will require further assessment, with mitigation strategies such as controlled water abstraction and potential borehole rehabilitation to be considered.

According to the National Freshwater Ecosystem Priority Areas (NFEPA) map as presented by SANBI, various NFEPA wetlands and rivers of conservation importance extends over the study area (see figure below). The western NFEPA river passes through

the greater study area while the eastern NFEPA river branches towards south-east corner of the proposed mining area as shown in the figure below.

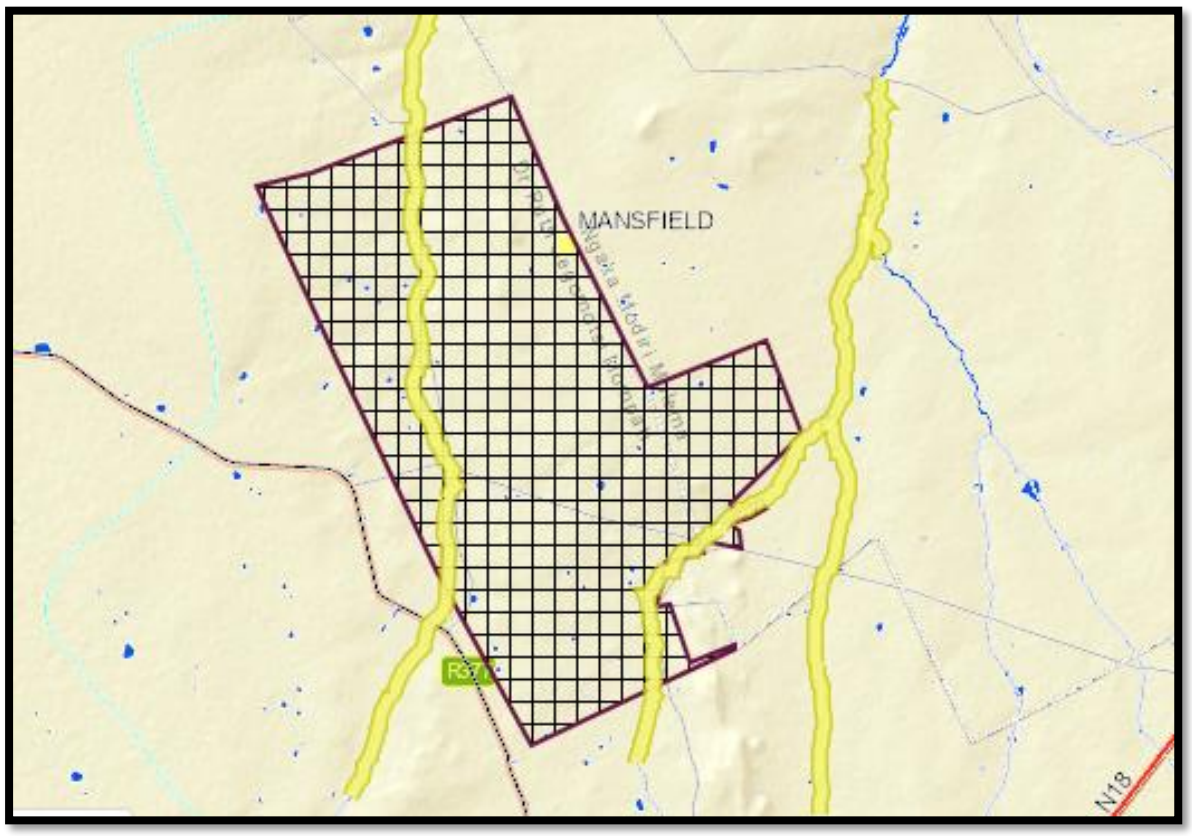


Figure 10: National Wetlands and NFEPA BGIS Map Viewer showing the position of two NEFPA rivers passing through the proposed area. (Image obtained from the BGIS Map Viewer – National Wetlands and NFEPA).

Also refer to *Section 1(h)(iv)(1)(c) Description of specific environmental features and infrastructure on site – Site Specific Hydrology.*

AIR QUALITY AND NOISE AMBIANCE

Air Quality

The existing air quality in the study area is influenced by natural and human activities. Given the semi-arid nature of the region, dust generation is a significant concern, particularly during dry seasons and strong winds. The primary sources of airborne particulates in the area include:

- Agricultural activities, including cattle farming and soil disturbance.
- Vehicular traffic on unpaved roads (D3519, D3520, D3521, and R377), contributing to dust and emissions.
- Seasonal wildfires, which may temporarily degrade air quality.

- Potential air quality impacts from mining activities include:
- Increased dust and particulate matter (PM10 and PM2.5) from excavation, drilling, and hauling.
- Emissions of nitrogen oxides (NOx) and sulfur dioxide (SO2) from heavy machinery and transport vehicles.
- Wind-blown dust from exposed surfaces and stockpiles.

Noise Ambiance

The current ambient noise levels in the study area are characteristic of a rural environment, with background noise levels primarily influenced by:

- Traffic noise from nearby roads (D3519, D3520, D3521, and R377).
- Agricultural operations, including livestock movements and machinery.
- Natural sounds, such as birds, insects, and wind.

Also refer to *Section 1(h)(iv)(1)(c) Description of specific environmental features and infrastructure on site – Site Specific Air Quality and Noise Ambiance.*

BIOLOGICAL ENVIRONMENT

MINING AND BIODIVERSITY

(Information extracted from the Mining and Biodiversity Guideline: Mainstreaming Biodiversity into the Mining Sector, Department of Environmental Affairs, Department of Mineral Resources, Chamber of Mines, 2013)

The Mining and Biodiversity Guideline, compiled by the South African Mining and Biodiversity Forum (SAMBF) provides the mining sector with a practical, user-friendly manual for integrating biodiversity considerations into planning processes and managing biodiversity during the developmental and operational phases of a mine, from exploration through to closure.

The integration of biodiversity considerations into mining operations is vital for sustainable development. The Mining and Biodiversity Guideline: Mainstreaming Biodiversity into the Mining Sector (2013), developed by the Department of Environmental Affairs, Department of Mineral Resources, Chamber of Mines, South African Mining and Biodiversity Forum, and the South African National Biodiversity Institute, provides a framework for this integration.

This guideline emphasizes that South Africa's rich biodiversity and mineral wealth are both critical to the country's socio-economic development. It advocates for a balanced

approach where mining activities are planned and executed in a manner that minimizes adverse impacts on biodiversity and ecosystem services. Key aspects include:

Biodiversity Priority Areas: The guideline identifies regions of high biodiversity importance, advising that mining in these areas should be carefully assessed and managed to avoid significant biodiversity loss.

Mitigation Hierarchy: It promotes a structured approach to managing biodiversity impacts through avoidance, minimization, rehabilitation, and offsetting.

Informed Decision-Making: The guideline encourages the use of comprehensive biodiversity information in the planning and approval processes of mining projects.

In the context of the current mining right application, it is noteworthy that the proposed area overlaps with an existing prospecting right (NW30/5/1/1/2/11876PR). This overlap indicates that the entire area, including sections marked as highest risk, had previously been approved for prospecting activities. While prospecting typically has a lower environmental footprint compared to full-scale mining, the historical approval underscores the necessity for rigorous environmental assessments and the implementation of the mitigation hierarchy to address potential biodiversity impacts in subsequent mining phases.

By adhering to the principles outlined in the Mining and Biodiversity Guideline, mining operations can contribute to economic growth while ensuring the preservation of South Africa's invaluable biodiversity.

The Mining and Biodiversity Guideline's definition for areas of highest biodiversity importance stipulates that: "*these areas are viewed as necessary to ensure protection of biodiversity, environmental sustainability, and human well-being"*. The guidelines note that environmental screening, the EIA, and specialists should focus on confirming the presence and significance of biodiversity features and provide a site-specific basis on which to apply the mitigation hierarchy to inform regulatory decision-making.

When the study area is placed on the Mining and Biodiversity Map, as shown in the figure below, the majority of the area is classified as having moderate biodiversity importance, with a corresponding moderate risk rating for mining activities.

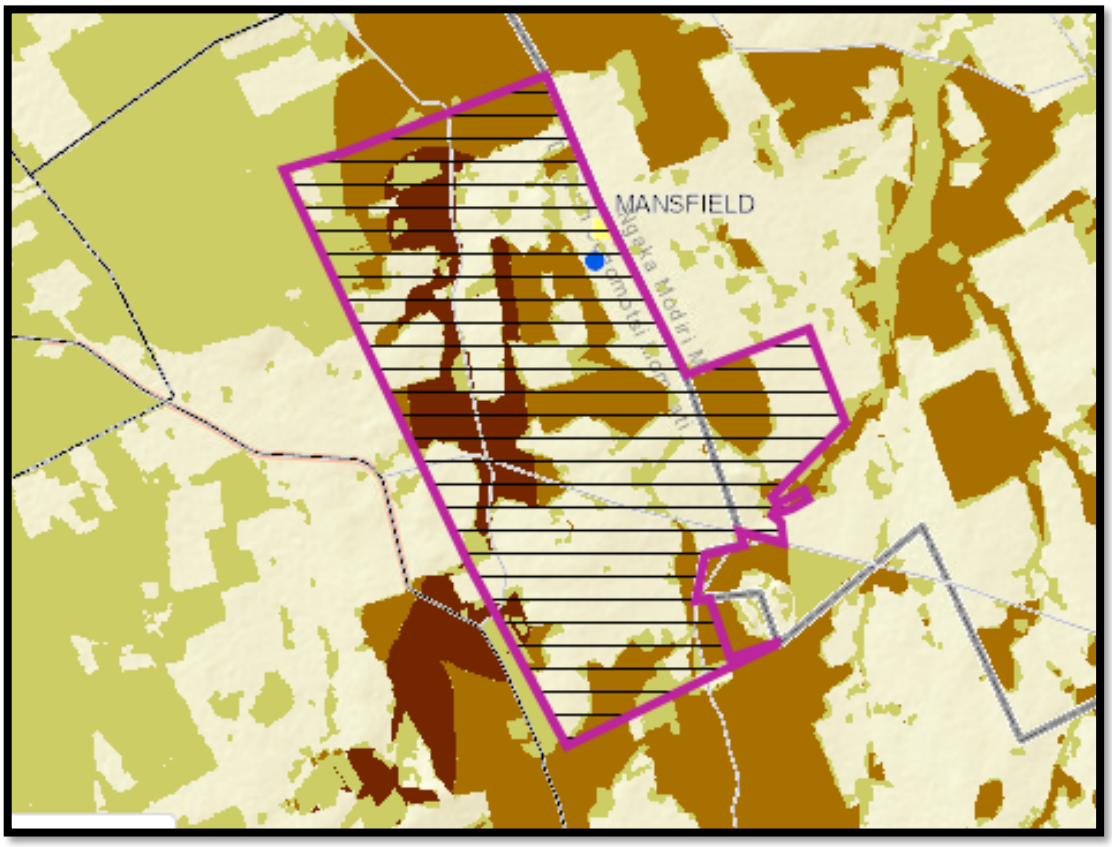


Figure 11: The Mining and Biodiversity importance map with the proposed mining footprint shown by the purple polygon. The light dark brown shows an area of moderate biodiversity importance with a moderate risk for mining while the dark brown area shows an area of highest biodiversity importance with highest risk for mining (image obtained from the BGIS Map Viewer – Mining Guidelines).

It must be noted that there is a prospecting right (NW30/5/1/1/2/11876PR) over the proposed mining right application area that expires in November 2024. As such, the entire area (including the area marked as highest risk) was previously approved for prospecting related activities.

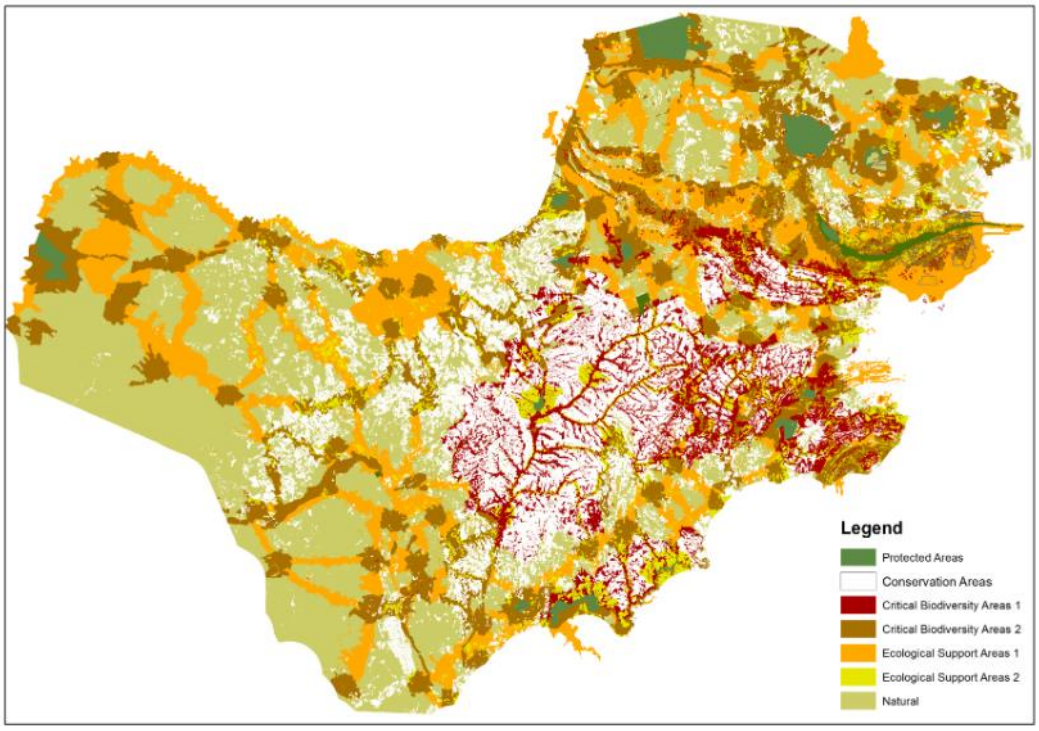
Also refer to *Section 1(h)(iv)(1)(c) Description of specific environmental features and infrastructure on site – Site Specific Terrestrial Biodiversity, Conservation Areas, Groundcover and Fauna.*

BIODIVERSITY CONSERVATION AREAS

According to the 2015 North West Biodiversity Sector Plan BGIS Map Viewer, the proposed mining footprint extends across an area classified as Critical Biodiversity Area 2 (CBA2) and an Ecological Support Area 2 (ESA 2)

The Lexicon of Biodiversity Planning in South Africa provides the following definition for a CBA:

- Critical Biodiversity Area (CBA): *"an area that must be maintained in a good ecological condition in order to meet biodiversity targets. CBA's collectively meet biodiversity targets for all ecosystem types as well as for species and ecological processes that depend on natural or near-natural habitat, that have not already been met in the protected area network."*



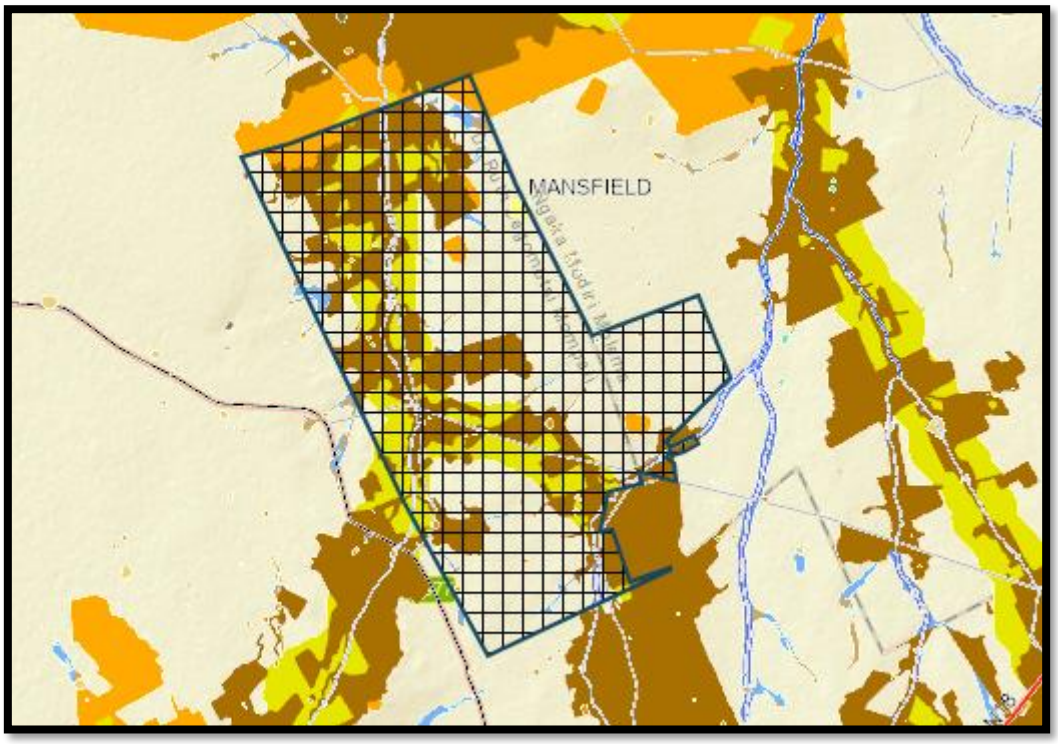


Figure 12: 2015 North West Biodiversity Sector Plan BGIS Map Viewer showing the proposed mining area over the CBA 2 (blue polygon).

Also refer to *Section 1(h)(iv)(1)(c) Description of specific environmental features and infrastructure on site – Site Specific Terrestrial Biodiversity, Conservation Areas, Groundcover and Fauna.*

GROUNDCOVER

According to Mucina and Rutherford (2012) the mining right area extends over a vegetation type known as the Mafikeng Bushveld (SVk 1) and is classified as Vulnerable. None conserved in statutory conservation areas, but very small area conserved in the Mmabatho Recreation Area. About 25% already transformed, mainly for cultivation and urban development. Erosion is very low. A conservation target of 16% was set for the vegetation type.

Some of the important taxa found in this vegetation type include *Acacia karroo* (d), *A. mellifera* subsp. *detinens* (d), *Terminalia sericea* (d), *Ziziphus mucronata* (d). Tall Shrubs: *Dichrostachys cinerea* (d), *Grewia flava* (d), *Rhus tenuinervis* (d), *Diospyros austro-africana*, *Ehretia rigida* subsp. *rigida*, *Rhigozum obovatum*, *Tarchonanthus camphoratus*. Low Shrubs: *Acacia hebeclada* subsp. *hebeclada* (d), *Grewia retinervis* (d), *Aptosimum procumbens*, *Felicia muricata*, *Gnidia polycephala*, *Helichrysum zeyheri*, *Hoffmannseggia burchellii*, *Lantana rugosa*, *Talinum arnotii*. Geoxylic Suffrutex: *Elephantorrhiza elephantina*. Succulent Shrub: *Lycium cinereum*. Woody Climber: *Asparagus africanus*. Graminoids: *Anthephora pubescens* (d), *Cymbopogon pospischilii* (d), *Digitaria eriantha* subsp. *eriantha* (d), *Eragrostis lehmanniana* (d), *E. pallens* (d), *Schmidtia pappophoroides* (d), *Stipagrostis uniplumis* (d), *Aristida congesta*, *A. meridionalis*, *A. mollissima* subsp. *argentea*, *A. stipitata* subsp. *stipitata*, *Brachiaria nigropedata*, *B. serrata*, *Cynodon dactylon*, *Digitaria argyrograpta*, *Eragrostis superba*, *E. trichophora*, *Melinis repens*, *Tragus racemosus*, *Urochloa panicoides*. Herbs: *Barleria macrostegia*, *Erlangea misera*, *Harpagophytum procumbens* subsp. *procumbens*, *Hermannia tomentosa*, *Hermbstaedtia odorata*, *Indigofera daleoides*, *Limeum fenestratum*, *Nidorella resedifolia*, *Oxygonum dregeanum* subsp. *canescens* var. *canescens*, *Senna italica* subsp. *arachoides*. Geophytic Herb: *Ledebouria marginata*.

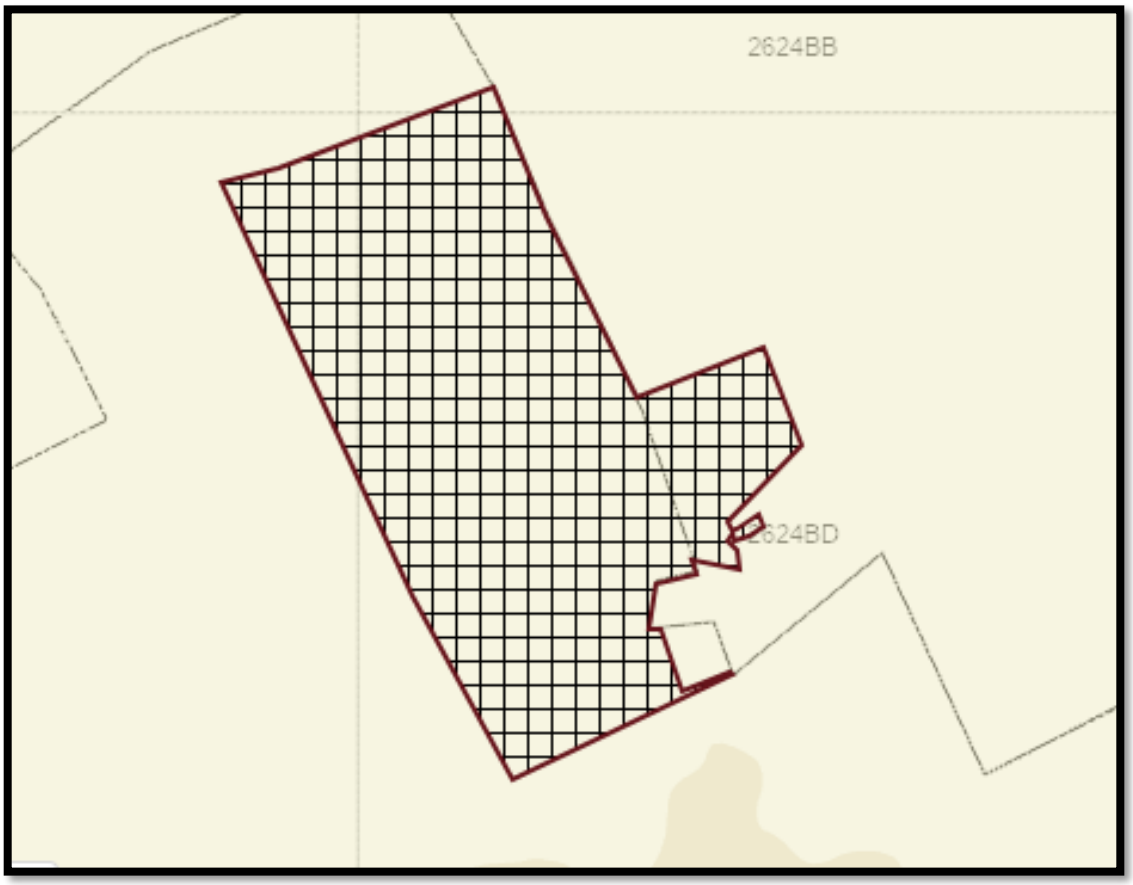


Figure 13: National vegetation cover map showing the proposed mining area within Mafikeng Bushveld (SVk 1) (light sandy colour), (Image obtained from BGIS Map Viewer – National Vegetation Map).

Also refer to *Section 1(h)(iv)(1)(c) Description of specific environmental features and infrastructure on site – Site Specific Terrestrial Biodiversity, Conservation Areas, Groundcover, and Fauna.*

FAUNA

The study area supports a diverse range of faunal species, including mammals, amphibians, and invertebrates. Several species of conservation concern have been identified, emphasizing the ecological significance of the area.

Mammals

The only Red Data mammal species confirmed within the study area is the Brown Hyena (Hyaena brunnea), which is classified as Near Threatened. The presence of this species highlights the need for conservation considerations during mining activities.

Other mammals in the area include small carnivores, rodents, and ungulates, which utilize the surrounding bushveld and open plains for foraging and shelter. The local outcrops provide important ecological niches for various mammal species.

Amphibians

The study area provides breeding and foraging habitat for the Giant Bullfrog (*Pyxicephalus adspersus*), which is also classified as Near Threatened. This species was confirmed to be present in the project area, with evidence of a breeding population sustained by seasonal water bodies. The proposed mining activities could potentially disrupt this species' habitat, necessitating the inclusion of conservation measures.

Invertebrates

The study site supports a rich diversity of invertebrate species, particularly within the Scarabaeidae family (dung beetles). The presence of diverse invertebrate taxa is an indication of a functionally healthy ecosystem. Rocky outcrops within the site serve as ecological functional units that support various invertebrate populations.

Habitat Sensitivity and Conservation Considerations

Seep Zones and Outcrops: These areas serve as crucial dispersal corridors for fauna, facilitating movement and genetic diversity among species. Juvenile animals use these corridors during territorial behavior, enhancing gene flow and reducing genetic isolation.

Protected Tree Species: The site contains *Acacia erioloba* (Camel Thorn) and *Boscia albitrunca* (Shepherd's Tree), both of which are legally protected. These trees provide important habitat for birds, insects, and small mammals.

Given the ecological sensitivity of certain habitats within the study area, mitigation measures such as buffer zones around seep zones and regulated tree clearing should be implemented. Additionally, the creation of artificial wetland areas could help offset habitat loss for amphibians like the Giant Bullfrog.

Mining activities must adhere to environmental regulations to minimize negative impacts on local wildlife, ensuring that critical habitats are preserved, and biodiversity is maintained.

Also refer to *Section 1(h)(iv)(1)(c) Description of specific environmental features and infrastructure on site – Site Specific Terrestrial Biodiversity, Conservation Areas, Groundcover, and Fauna.*

HUMAN ENVIRONMENT

CULTURAL AND HERITAGE ENVIRONMENT

(Information obtained from the Kalahari Platinum Project Summary)

Historical Background

The historical significance of the study area is closely tied to mineral exploration and early settlement activities.

The Kraaipan Greenstone Belt has been a key area for mineral exploration since the early 1990s, with Anglo American Prospecting Services (AAPS) conducting initial investigations.

The land has historically been used for agriculture and livestock grazing, with many farm homesteads, outbuildings, and worker accommodations recorded in the study area. However, most structures are less than 60 years old and are therefore not protected under heritage legislation.

The PGM potential of the region was identified during gold-focused exploration in the late 1990s, leading to extensive drilling programs and feasibility studies. The archaeological record of the application area has been evaluated through various previous heritage assessments. While the DFFE Screening Report classifies the Archaeological and Cultural Heritage sensitivity of the area as Low, it rates the palaeontological sensitivity as Medium. This contrasts with the SAHRA palaeontological sensitivity map, which categorizes the area as being of low concern.

Despite these assessments, the project area contains several sites of cultural and heritage interest that might include:

A historic house older than 60 years, protected under the National Heritage Resources Act (NHRA) (Act 25 of 1999). Any modification or relocation requires formal assessment and permits.

Grave sites, some of which are located near proposed mining infrastructure. These must be handled according to heritage legislation and require consultation with affected families.

Rock outcrops and seep zones, which may hold archaeological significance, as such landscapes were often utilized by past communities for shelter and resource gathering.

To ensure responsible heritage management, the following measures will be implemented:

Heritage and Palaeontological Impact Assessments (HIA and PIA) before construction.

Grave relocations must comply with the NHRA, the Removal of Graves and Dead Bodies Ordinance (Ordinance 7 of 1925), and the Human Tissues Act (Act 65 of 1983), with full consultation of descendants.

Engagement with SAHRA and local communities before any site disturbance.

While broader heritage and palaeontological sensitivity is generally low to medium, the presence of specific heritage sites and historical elements requires site-specific management and mitigation to ensure compliance with heritage regulations.

Palaeontology

The palaeontological record of the region is of medium sensitivity, according to the DFFE Screening Report. However, the SAHRA palaeontological sensitivity map contradicts this, classifying the area as low concern. Given this discrepancy, a Palaeontological Impact Assessment (PIA) may be necessary to clarify the significance of any fossil-bearing formations.

The South African Heritage Resources Agency (SAHRA) compiled the Palaeontological (fossil) Sensitivity Map (PSM) to guide developers, heritage officers and practitioners in screening paleontologically sensitive areas at the onset of a project. When the footprint of the earmarked properties is placed on the PSM, it shows that the farms extend over moderate (green) areas of concern as presented in the following figure.

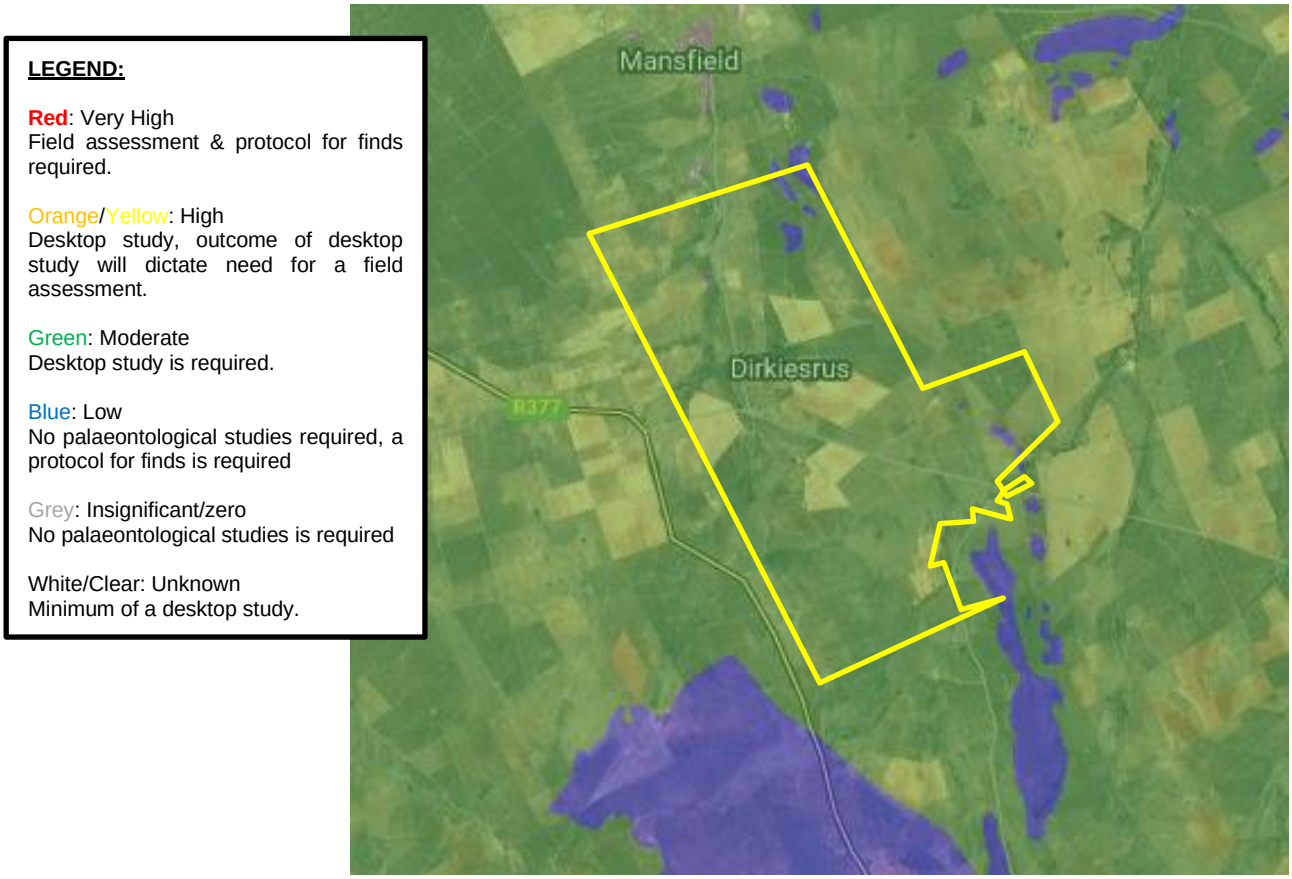


Figure 14: The SAHRA palaeontological sensitivity map shows that the proposed mining footprint (yellow polygon) extends over an area of moderate (green) concern (image obtained from the Palaeo Sensitivity Map on SAHRIS).

Also refer to *Section 1(h)(iv)(1)(c) Description of specific environmental features and infrastructure on site – Site Specific Cultural and Heritage Environment.*

SOCIO-ECONOMIC ENVIRONMENT

(Information extracted from the Naledi Local Municipality Integrated Development Plan 2024- 2025)

The proposed mining project is located in the Magisterial District of Vryburg, within the Naledi and Rathlou Local Municipalities, Northwest Province. This area is characterized by a mix of agricultural, mining, and service industries, contributing to the local and provincial economy. The socio-economic landscape is shaped by key sectors, including agriculture, retail, manufacturing, tourism, and energy.

Demographics and Employment

The Naledi Local Municipality has a population of approximately 63,755 people, with the majority residing in rural and semi-urban settlements. The municipality has the lowest unemployment rate in the Dr Ruth Segomotsi Mompati District, with 20,593 individuals

employed in 2021 while 6,332 were unemployed. The employment sector is predominantly formal, with major job opportunities in agriculture, trade, business services, and mining.

Economic Sectors and Growth Potential

Agriculture:

The district is known as the "Beef Basket Epic-Center," with cattle farming being a significant economic activity.

Mining:

The mining sector, though limited in scale, presents growth opportunities. The proposed project will enhance mineral extraction activities, specifically targeting Chrome, Cobalt, Copper, Gold Ore, Iron Ore, Nickel Ore, PGMs, Silver Ore, and Vanadium.

Retail and Services:

Vryburg serves as a regional business hub, supporting trade and logistics.

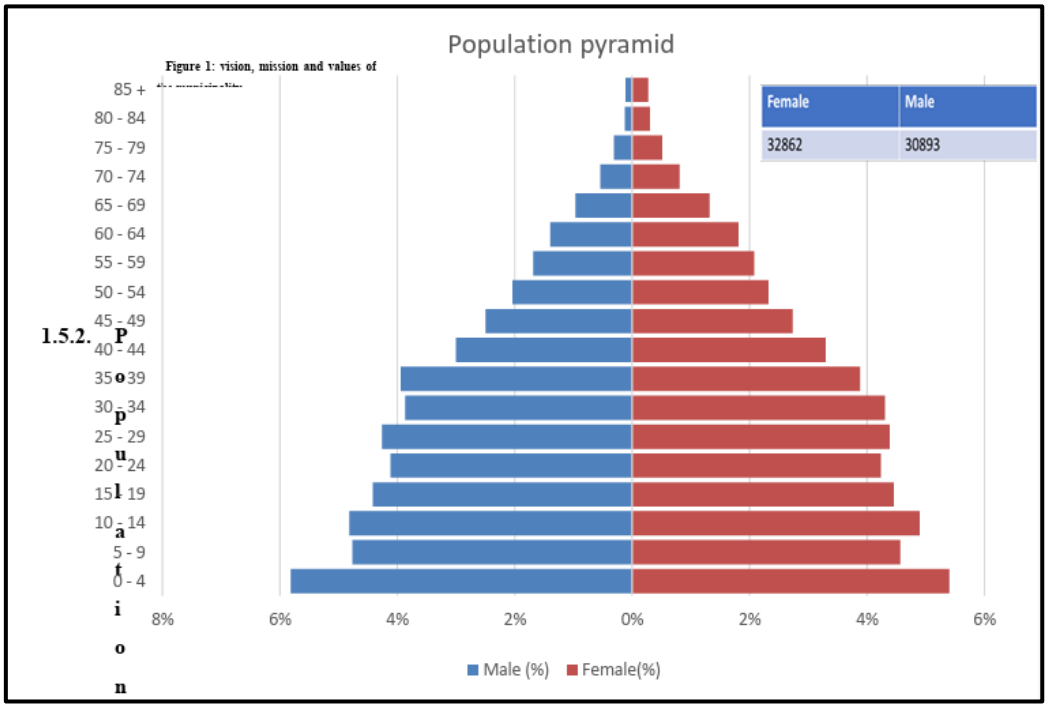
Tourism and Renewable Energy:

The municipality is investing in game farming, eco-tourism, and renewable energy initiatives to diversify economic opportunities

The proposed mining operation is expected to contribute significantly to the regional economy while implementing sustainable development practices to mitigate potential adverse effects.

Population Distribution by Age and Gender

There is relatively equal distribution between males and females across most age groups, however, there are some variations. In the youngest age group (0-4 years old), males are slightly more than females by 4%. In the older age groups (70-74, 80-84), females are more than females by 14% males. Increased number of females is evident once more on the bracket of 80 – 84 years. Furthermore, the distribution seems relatively stable across most age groups, with minor fluctuations.



1.5.2. Population

Figure 15: Gender and age distribution profile (image obtained from Naledi Local Municipality Integrated Development Plan 2024- 2025).

Education Levels

Naledi local municipality has all Institutions of Basic Education and no Further Education and Training institutions. In the municipal area, there are many Vocational training institutes with no certainty on registration with the Education fraternity. Higher education institutes / institutions in the municipality would assist with the improvement of literacy levels within the area of Jurisdiction. As a result of the unavailability or proximity to tertiary or FET institutions within Naledi, very few youth has access to tertiary qualifications, the many of the youth have access to Matric Qualifications.

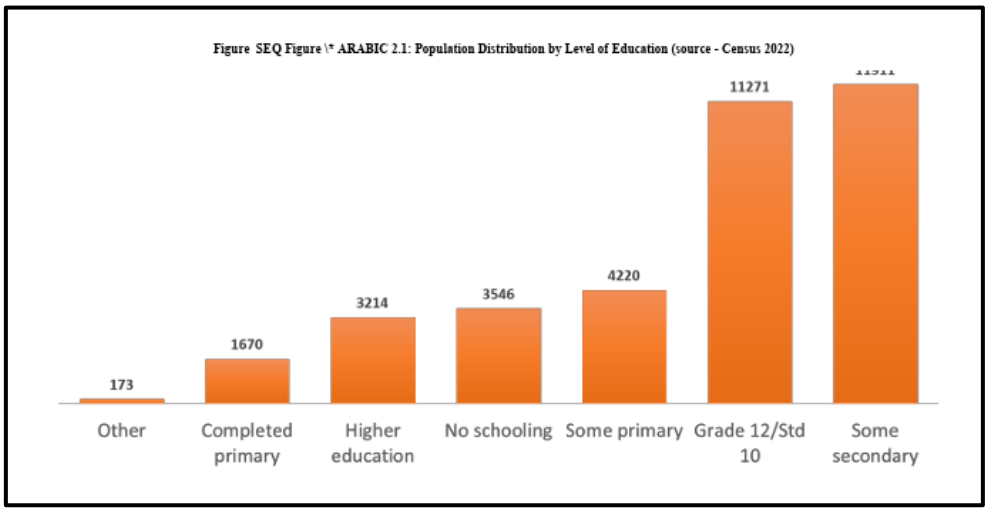


Figure 16: Population Distribution by Level of Education (source - Census 2022).

The above charts demonstrate the education level of the population of Naledi local municipality according to Census 2022. The level of education drops significantly after matric. From Grade R-7, the level of education is about 56% of the population, while from Grade 8-12 drops to 38% and only 1% attends private colleges after matric and 2% of the population obtains university qualifications. This implies that after matric, there is no level of education. This could have a negative impact on the economy moving forward. Low level of education can lead to high level of unemployment and low growth as far as sustainable economic growth is concerned. Therefore, this calls for urgent attention.

Employment Status

More than half of the population in the Dr Ruth Segomotsi Mompati District Municipality live in poverty, using the upper poverty line definition. The Naledi Local Municipality has the lowest poverty rate, within the district, with a total of 57.3% of its population living in poverty. In comparison to the other local municipalities in the district, Naledi Local Municipality has the lowest unemployment rate. The table below indicates the employment status in the municipality. Around 20593 people were employed in 2021 while 6332 were unemployed. The majority of the population was employed in the formal sector.

Table 8: Employment Status (Quantec 2021).

	2019	2020	2021
Employed	23855	21458	20593
Unemployed	5551.284	5274.273	6331.955
Unemployment rate	18.87788%	19.72998%	23.51705%

Table 9: Employment sectors of the NLM.

	2019	2020	2021
Employed-Formal	15539	14868	15016
Employed-Informal	8316	6590	5577

Income Levels

The table above indicates that the majority of Households in Naledi has a joint income above R3960.00; only 13% of the Households can be recognized and registered in the indigent Register. 42% of the households in Naledi has an income between R10’000.00 and R40, 000.00. The municipality should develop mechanism of improving on Revenue and debt collection for purposes of enhancing the level of Service delivery.

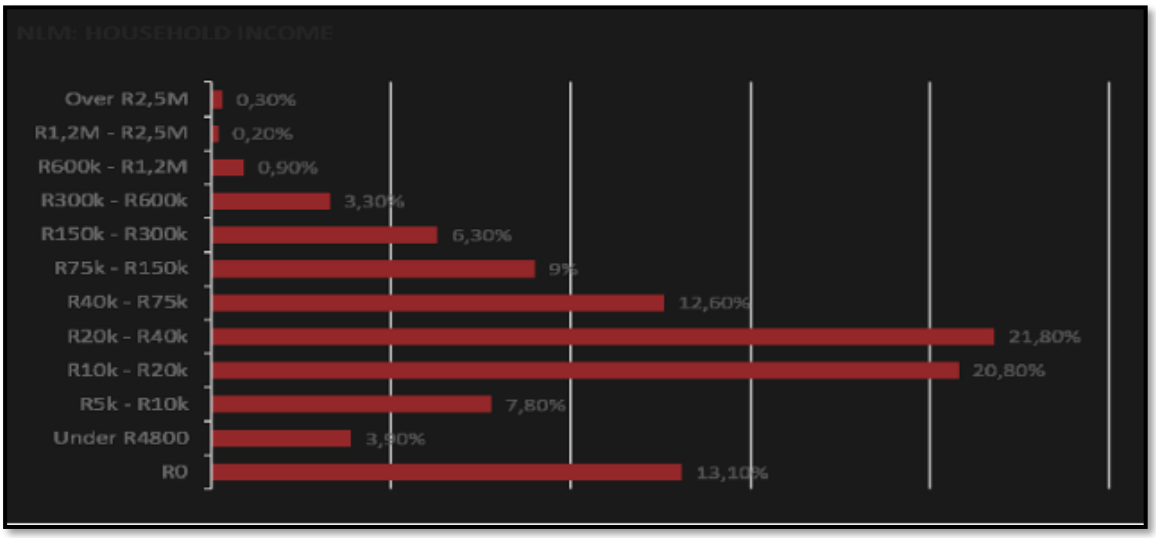


Figure 17: NLM income levels.

(b) Description of the current land uses

The application area, covering approximately 15,867.90 ha, is situated across the farms Groot Gewaagd 270 IN, Gemsbok Pan 309 IN, Koodoos Rand 321 IN, and Papiesvlakte 323 IN within the Magisterial District of Vryburg, Northwest Province. The land is located in Wards 1 of the Naledi Local Municipality and 13 of the Ratlou Local Municipality.

Existing Land Uses

The land in the application area is primarily characterized by agriculture, grazing, and conservation-related activities, with limited existing industrial or commercial development.

Agriculture and Livestock Farming

The region is widely recognized as the "Beef Basket Epic-Center" of South Africa, with cattle farming being the dominant land use.

Some areas are used for crop cultivation, although cattle grazing is the main agricultural activity.

Rural and Conservation Areas

Portions of the land are conserved for ecological and biodiversity purposes, particularly around Critical Biodiversity Areas (CBAs) and natural water drainage systems.

The Leon Taljaard Nature Reserve, located west of the broader region, plays a role in environmental conservation.

Settlements and Infrastructure

Scattered rural farm dwellings and supporting infrastructure such as boreholes, dirt roads, and fencing exist within the area.

The land is not heavily developed, with minimal urban infrastructure apart from nearby Vryburg town, which serves as the economic hub of the region.

Mining Potential

Although historically mining activities have been limited, the region has known mineral resources, particularly Platinum Group Metals (PGMs), Vanadium, Gold, and Nickel.

Future expansion of mining could reshape the land use pattern, integrating extractive activities with existing agricultural functions.

The application area currently supports agriculture, conservation, and scattered rural settlements, with minimal industrial activity. The proposed mining project will introduce a new land use, necessitating careful land-use planning and environmental management to ensure sustainable development while mitigating any negative impacts on existing agricultural and ecological land uses.

The Screening Report for Environmental Authorizations as required by the 2014 EIA Regulations (hereafter referred to as the “DFFE Screening Report”), classifies the Agricultural Theme Sensitivity of the area as high in the following figure.

Figure 18: Agricultural theme sensitivity according to the DFFE screening report (2024).

The following table provides a description of the land uses and/or prominent features that currently occur within a 500 m radius of the study area:

Table 10: Land uses and/or prominent features that occur within 500 m radius of the study area – These are only preliminary and will be elaborated on during the EIA phase.

LAND USE CHARACTER	YES	NO	DESCRIPTION
Natural area	**YES**	-	The proposed footprint is surrounded by natural areas used for grazing.
Low density residential	-	**NO**	-
Medium density residential	-	**NO**	-
High density residential	-	**NO**	-
Informal residential	-	**NO**	-
Retail commercial & warehousing	-	**NO**	-
Light industrial	-	**NO**	-
Medium industrial	-	**NO**	-
Heavy industrial	-	**NO**	-
Power station	-	**NO**	-
High voltage power line	-	**NO**	To be verified during the EIA phase
Office/consulting room	-	**NO**	-
Military or police base / station / compound	-	**NO**	-
Spoil heap or slimes dam		**NO**	
Quarry, sand or borrow pit		**NO**	
Dam or reservoir	**YES**	-	To be verified during the EIA phase
Hospital/medical centre	-	**NO**	-
School/ crèche	-	**NO**	-
Tertiary education facility	-	**NO**	-
Church	-	**NO**	-
Old age home	-	**NO**	-
Sewage treatment plant	-	**NO**	-
Train station or shunting yard	-	**NO**	-
Railway line		**NO**	
Major road (4 lanes or more)	-	**NO**	.
Airport	-	**NO**	-
Harbour	-	**NO**	-
Sport facilities	-	**NO**	-
Golf course	-	**NO**	-
Polo fields	-	**NO**	-
Filling station	-	**NO**	-
Landfill or waste treatment site	-	**NO**	-
Plantation	-	**NO**	-
Agriculture	**YES**	-	The earmarked properties are used for agricultural purposes.
River, stream, or wetland	YES		To be verified during the EIA phase
Nature conservation area	-	**NO**	-
Mountain, hill, or ridge		**NO**	
Museum	-	**NO**	-
Historical building	-	**NO**	-
Protected Area	-	**NO**	-
Graveyard	**YES**	-	To be verified during the EIA phase

LAND USE CHARACTER	YES	NO	DESCRIPTION
Archaeological site	**YES**	-	
Other land uses (describe)	-	**NO**	-

(c) Description of specific environmental features and infrastructure on the site

SPECIFIC ENVIRONMENTAL FEATURES

SITE SPECIFIC TOPOGRAPHY

The topography of the proposed mining area in the region is characterized by a predominantly flat to gently undulating terrain, typical of the semi-arid Kalahari landscape. The elevation across the project area is relatively consistent, with subtle variations in topography influenced by underlying geological formations and historical erosional processes.

The topography is slightly undulating to flat-lying with the average surface elevation variable between 1,245m to 1,275m above mean sea level.

Figure 19: Elevation profile of the application area footprint (image obtained from Google Earth).

SITE SPECIFIC VISUAL CHARACTERISTICS

The application area is characterised by a predominantly flat to gently undulating terrain, interspersed with low-lying ridges, rocky outcrops, and open grassland plains. These features contribute to the natural scenic value of the region and influence the visual absorption capacity of the landscape.

The visual character of the site is shaped by its semi-arid climate, with sparse vegetation consisting of grasses, shrubs, and scattered trees, primarily Acacia species and *Boscia albitrunca* (Shepherd's tree). The existing land use is dominated by agriculture, including livestock grazing and limited dryland farming, which has already modified parts of the natural landscape. However, the area still retains its rural, open-space visual aesthetic, with minimal built infrastructure apart from a few scattered farmsteads, dirt roads, and fencing.

The visual sensitivity of the site is considered moderate, as it does not feature prominent tourism or recreational value, but its expansive open landscapes contribute to a sense of place that may be altered by large-scale mining activities. The nearest towns and settlements, including Vryburg and Stella, are located at a considerable distance, reducing direct visual impacts on residential areas. However, potential visual disturbances, such as excavations, waste rock dumps, stockpiles, processing infrastructure, and heavy vehicle movement, may be perceptible from certain vantage points, particularly from local access roads and elevated areas.

To mitigate potential visual impacts, the proposed mining operations will incorporate progressive rehabilitation, vegetation screening, and responsible infrastructure placement to minimize intrusion into the existing landscape. Further assessments, including a Landscape and Visual Impact Assessment, may be conducted as part of the Environmental Impact Assessment (EIA) phase to refine mitigation strategies and ensure that the visual integrity of the surrounding area is preserved where possible. The figures below show the viewshed analysis of the prospecting area within a ±10 km radius. The green shaded areas show the positions from where the mining area is visible.

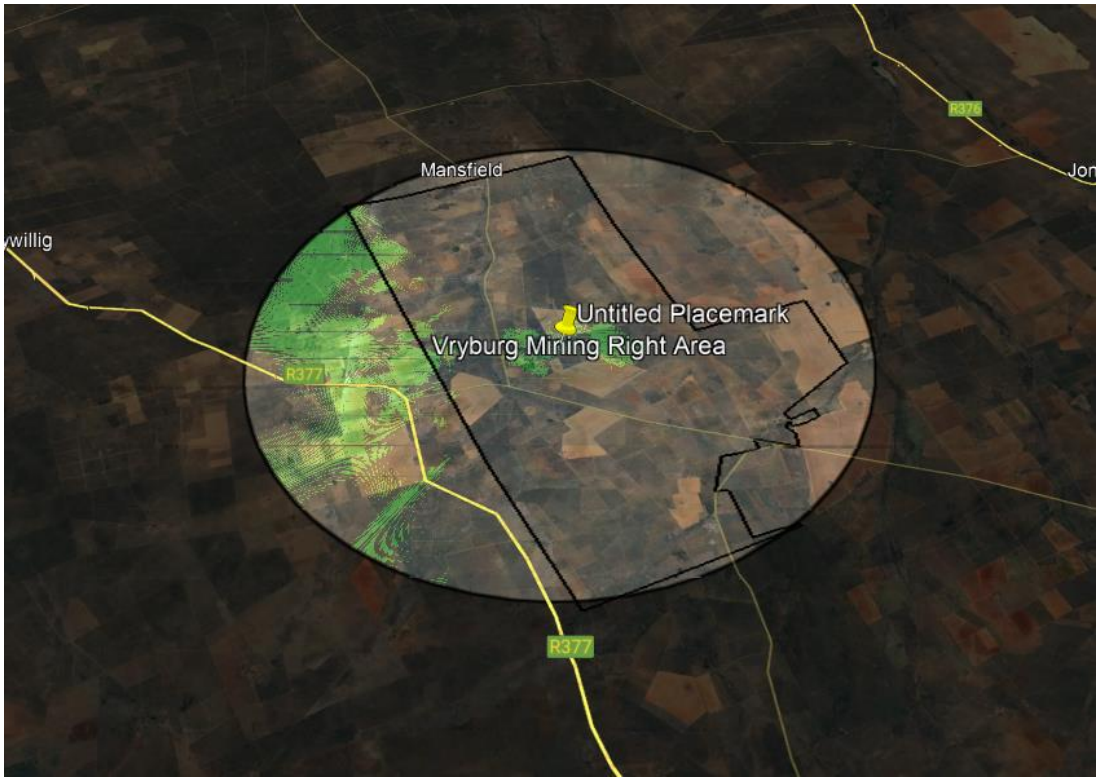


Figure 20: Viewshed of the of the proposed mining area (image obtained from Google Earth).

The potential impact that the proposed project may have on the receiving environment will be assessed as part of the EIAR.

SITE SPECIFIC GEOLOGY

(Information extracted from Information obtained from the Kalahari Platinum Project Summary)

The proposed mining site is located within the Stella Layered Intrusion (SLI), an approximately 3.0-billion-year-old geological formation. The area is structurally associated with the Kraaipan Greenstone Belt, which is known for hosting significant mineral deposits.

The primary host rocks include:

- Unfoliated gabbros
- Leucogabbros
- Magnetite gabbros (with varying magnetite content from 1% to 90%)

The mineralization in the project area is predominantly found within magnetite-rich gabbros, occurring 150–230 meters above the contact with the Kraaipan Greenstone rocks.

Stratigraphy and Ore Deposits

The PGM (Platinum Group Metals) mineralization in the area is hosted in the sub-vertically dipping SLI, with different mineralized reef structures identified within the rock formations. The key geological features include:

- Magnetite bands: These layers can range from a few centimetres to 2 meters in width, with varying mineralization levels.
- PGM-bearing reefs: The primary precious metals are Platinum (Pt) and Palladium (Pd), which are present in roughly equal proportions, along with minor amounts of Gold (Au) and Copper (Cu).
- The weathered-fresh rock interface is typically found at depths of 30–40 meters, but in some areas, weathering extends beyond 50 meters due to faults and joint structures.

Structural Geology

The project site has two distinct strike orientations:

In the southern part, the strike direction is north-west (300° true north).

In the northern part, the strike direction shifts to north-northwest (330° true north).

The dips are generally steep (>70°) westward, often leading to an overturned stratigraphy.

Additionally, the area is affected by north-northeast trending fault structures, which influence the continuity of mineralization. The overall mineralized strike length across the deposits is estimated to be 7–8 km.

Mining Depths and Pit Designs

The ore bodies vary in depth across different pit locations:

- Crater Pit: 85–90 meters
- Vela Pit: 70–105 meters
- Orion Pit: 140–145 meters
- Crux Pit: 90–110 meters
- Serpens North Pit: 75–100 meters
- Sirius Pit: 70–80 meters

The geological setting of the site is highly favorable for mining due to its rich PGM mineralization and well-defined reef structures. However, fault structures, steep dips, and

variations in depth necessitate careful mine planning and geotechnical considerations to ensure optimal ore recovery and stability.

Figure 21: The western belt of the Kraaipan is referred to as the Stella Belt (Kalplats Project area) and the eastern belt as the Goldridge Belt (Figure 2.3.1 obtained from the Kalahari Platinum Project Summary).

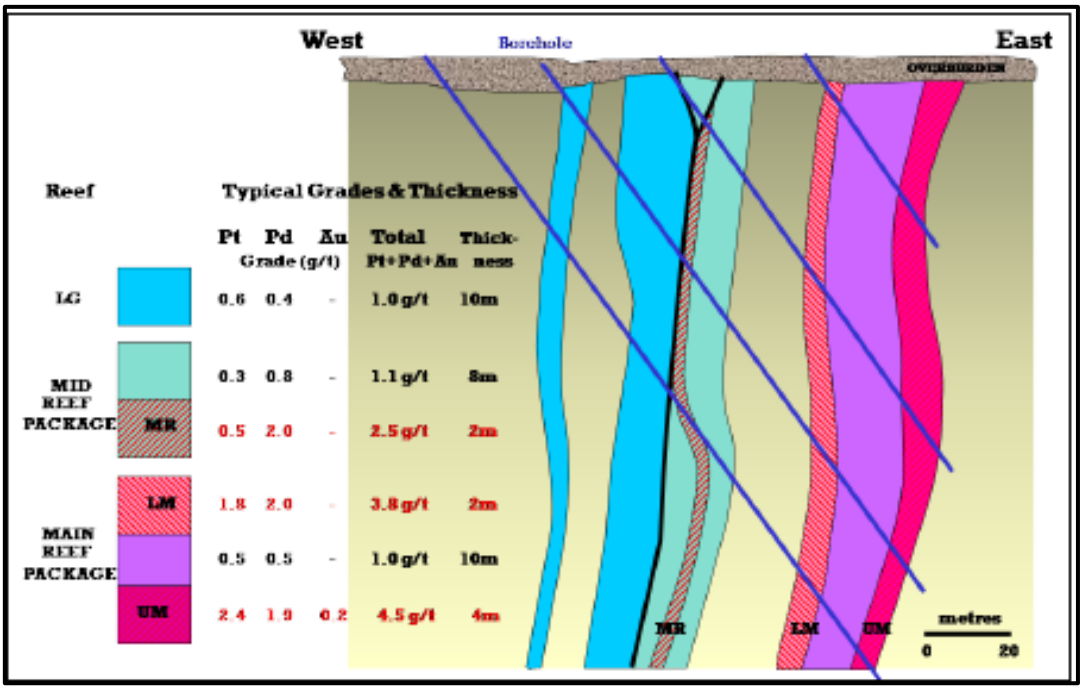


Figure 22: The subdivision of the mineralisation in the SLI into several distinct reefs (Figure 2.3.2 obtained from the Kalahari Platinum Project Summary).

The site-specific geology of the earmarked area will be expanded upon in the EIAR upon completion of all the relevant specialist studies.

SITE SPECIFIC HYDROLOGY

The site-specific hydrology of the proposed mining footprint is representative of the regional hydrology described for the study area earlier in this report (*Section 1(h)(iv)(1)(a)*

The project area falls within the D41B quaternary catchment, which is part of the Bo-Molopo drainage region. Surface water features in the vicinity include:

Mosita-se-Laagte Non-Perennial River: Located to the west of the site, this river flows into the Setlagoli River approximately 30 km north before joining the Molopo River, which is 47 km north of the site.

Ephemeral Pans and Impoundments: Several small ephemeral pans and artificial impoundments are present within the central part of the study site, particularly within seepage zones that drain northward.

Non-Perennial Seep Zones: These natural drainage corridors facilitate the movement of groundwater and surface water during seasonal rainfall events.

Small Dams: A few small dams are present in the surrounding areas, providing water for agricultural and livestock use.

Groundwater

Aquifer Characteristics: The region is classified as a sole-source aquifer, meaning it is the primary water source for local communities and ecosystems.

Borehole Yields: Groundwater extraction from boreholes in the area shows an average yield of 1.5 to 3 liters per second (ℓ/s).

Water Quality:

Five boreholes sampled during the hydrocensus survey revealed Class III water quality, which is unsuitable for potable use without treatment.

High levels of fluoride and nitrate nitrogen may negatively affect livestock health, causing developmental issues such as poor tooth and joint growth.

The presence of toxic nitrite compounds may pose a risk to human and animal health.

Water Supply Considerations for the Mining Project

The total sustainable groundwater yield from the six boreholes and an existing open pit is estimated at 6.6 ℓ/s (570 m³/day).

No bulk water pipelines currently supply the area, making the mine dependent on local groundwater sources.

The Vryburg Sewage Treatment Plant has been identified as a potential water supply option, with plans for an upgrade to increase capacity from 6.5 ML/day to 9 ML/day.

Hydrological Impact Considerations

Potential Water Table Lowering: Dewatering of mining pits could reduce groundwater availability, affecting nearby boreholes.

Surface Water Contamination Risks: Runoff from mining operations could impact non-perennial rivers and seepage zones, necessitating water quality monitoring and stormwater management plans.

The site is hydrologically sensitive, with limited groundwater availability and non-perennial surface water features. Proper water management strategies, including groundwater conservation, pollution control, and community engagement, will be crucial for ensuring sustainable mining operations.

Type of Environment Affected by the Proposed Activity – Hydrology). The DFFE Screening Report shows the proposed MR footprint within an area of Very High aquatic biodiversity importance as depicted in the following figure.

Figure 23: Aquatic biodiversity theme sensitivity according to the DFFE screening report (2024).

A hydrologist will be contracted to conduct a comprehensive Aquatic Biodiversity (if needed) and Hydrological Impact Assessment of the study area during the EIA process. The scope of work includes an investigation of the watercourses within the study area, as well as the delineation of those watercourses. The assessment will fulfil the ecological assessment requirements of the EIA process as required in terms of the applicable Assessment Protocol (2020) and/or the requirements of Appendix 6 of the EIA Regulations. The assessment will also report on the required information needed for the water use licensing in terms of the NWA, 1998. The reports will form part of the DEIAR.

SITE SPECIFIC AIR QUALITY AND NOISE AMBIANCE

This region is characterized by a semi-arid climate, with sparse vegetation and predominantly agricultural land use, primarily livestock grazing and limited dryland farming. These activities typically contribute minimally to air pollution, resulting in relatively good ambient air quality.

Potential sources of air pollution in the area include dust emissions from unpaved roads, occasional veld fires, and windblown dust during dry and windy conditions. However, due to the low population density and limited industrial activities, anthropogenic air pollution sources are minimal. Consequently, the baseline air quality is expected to be within the national ambient air quality standards set by the South African National Ambient Air Quality Standards (NAAQS).

Noise Ambiance

The existing noise environment within the project area is typical of rural settings, characterized by low ambient noise levels. Primary noise sources include natural sounds such as wind, bird calls, and occasional fauna activity, along with intermittent anthropogenic noises from farming operations, vehicular traffic on local roads, and community activities.

South Africa's National Noise Control Regulations (GNR 154 of 1992) define a "disturbing noise" as a noise level that exceeds the ambient sound level at the same measuring point by 7 dBA or more. Given the rural context, ambient noise levels are generally low, and any significant increase in noise levels could be perceived as disturbing.

The air quality in the study area is primarily influenced by natural dust emissions, agricultural activities, and vehicle movement on unpaved roads. Existing sources of air pollution include:

- Windblown dust from open fields and grazing lands.
- Vehicle emissions from roads such as D3519, D3520, D3521, and R377.
- Agricultural activities, including plowing and livestock movements, contribute to localized particulate matter emissions.

No major industrial air pollution sources exist within the immediate vicinity, suggesting that current air quality is relatively unpolluted aside from localized dust sources.

The proposed mining activities will generate dust, particulate matter and gaseous emissions, primarily from:

- Open-pit mining operations, including drilling and blasting, which release airborne dust.
- Haul truck movements on unpaved roads, which are the main sources of dust emissions. Dust suppression through watering of roads is recommended.
- Crushing and screening of ore, generating fine dust particles that can become airborne.
- Stockpiling and wind erosion, which may release particulate matter into the atmosphere.
- Diesel-powered machinery, including excavators, loaders, and haul trucks, which will emit carbon dioxide (CO_2), nitrogen oxides (NO_x), and sulfur dioxide (SO_2).

The baseline noise environment is characterized by low ambient noise levels, primarily influenced by:

- Vehicular traffic on regional roads (D3519, D3520, D3521, and R377).
- Farming operations, including tractor use and cattle handling.
- Natural sounds, such as those from birds and insects.

No significant industrial noise sources are present, and overall noise levels remain within typical rural background levels.

The mining activities will introduce significant noise sources into the study area, including:

- Drilling and blasting operations, which produce short-duration but high-intensity noise.
- Excavation and hauling operations, as large machinery moves rock and ore from the pits.
- Crushing and screening plants, which operate continuously and generate mechanical noise.
- Traffic on haul roads, as heavy trucks transport ore and waste rock.

Mitigation strategies include using noise barriers, restricting blasting to specific hours, and maintaining equipment to reduce excessive noise emissions.

The impact of the proposed project on the air quality of the receiving environmental will be assessed during the EIA process. The report will further propose mitigation and management measures to address/minimise identified impacts.

SITE SPECIFIC TERRESTRIAL BIODIVERSITY, CONSERVATION AREAS, GROUNDCOVER AND FAUNA

Terrestrial Biodiversity

This region is characterized by semi-arid Kalahari thornveld, a subset of the Savanna Biome, which supports a variety of flora and fauna adapted to arid conditions. The project is located in a region with varying ecological landscapes, including koppies (rocky outcrops), seep zones, and open woodlands. These ecosystems support diverse flora and fauna, some of which are ecologically significant. Two tree species, *Acacia erioloba* (Camel Thorn) and *Boscia albitrunca* (Shepherd's Tree), are protected under South African environmental laws and are prevalent across the project area.

The seep zones play a critical role in sustaining biodiversity by acting as a dispersal corridor for fauna, aiding in genetic diversity by preventing inbreeding. These areas are also vital for groundwater-dependent ecosystems, such as those sustaining Camel Thorn trees.

Conservation Areas

The site does not fall within any formally protected conservation areas, but there are sensitive ecological features, such as wetlands and riparian zones, that require mitigation measures to reduce environmental impacts.

Groundcover

The vegetation within the project area is predominantly shrubby grassland, interspersed with species characteristic of the Kalahari thornveld. Common flora includes camel thorn (*Vachellia erioloba*), three-thorn (*Rhigozum trichotomum*), and Bushman grass (*Schmidtia kalahariensis*). The landscape features a mix of high and low dunes, sandy plains with red to pinkish sand, and occasional pans with compact calcareous sand and clay. The presence of large trees along ephemeral riverbeds provides essential habitats for various bird species.

The landscape consists of five primary vegetation units, with variations across the survey area.

Koppies: Higher species diversity in the northern koppie (*Boscia albitrunca – Tarchonanthus camphoratus* vegetation) compared to the southwestern koppie (*Acacia tortilis – Eragrostis trichophora* vegetation).

Agricultural Areas: Large sections of the site are used for cattle grazing and cultivation, leading to transformed landscapes with reduced natural vegetation cover.

Certain soil types in the area are vulnerable to wind erosion, particularly in wetland zones, necessitating the use of buffer zones and conservation measures.

Fauna

The region hosts a diverse array of wildlife adapted to the arid environment. Notably, the area supports several raptor species, including the Bateleur (*Terathopius ecaudatus*), Martial Eagle (*Polemaetus bellicosus*), and Tawny Eagle (*Aquila rapax*). The open plains are inhabited by species such as the Kori Bustard (*Ardeotis kori*) and Ludwig's Bustard (*Neotis ludwigii*). Additionally, nomadic species like Stark's Lark (*Spizocorys starki*) and Black-eared Sparrow-lark (*Eremopterix australis*) occur seasonally, especially following favorable rainfall.

Mammalian fauna includes species such as the cheetah (*Acinonyx jubatus*), brown hyena (*Hyaena brunnea*), and the pangolin (*Manis temminckii*), which are of conservation

concern. Reptilian species endemic to the region include the Kalahari sand lizard (*Pedioplanis namaquensis*) and the barking gecko (*Ptenopus garrulus*).

The Brown Hyena (*Hyaena brunnea*), a near-threatened species, has been confirmed within the study area. Additionally, the site is home to a rich diversity of invertebrates, particularly Scarabaeidae (dung beetles), which are essential for ecosystem function.

The Giant Bullfrog (*Pyxicephalus adspersus*), another near-threatened species, uses the wetland areas within the site for breeding and foraging. The loss of these wetlands due to mining activities could impact the local population, making habitat preservation or the creation of artificial breeding sites a necessary mitigation strategy.

Understanding the site's specific terrestrial biodiversity, conservation context, groundcover, and fauna is crucial for assessing potential environmental impacts of the proposed mining activities. This knowledge will inform the development of mitigation strategies to minimize adverse effects on the local ecosystem and maintain ecological integrity.

The DFFE Screening Report notes that the plant species sensitivity of the area is of low significance, while the Terrestrial Biodiversity Sensitivity is indicated as Very High due to the presence of the CBA1, an Ecological Support Area (ESA), and the FEPA sub-catchment.

Figure 24: Plant species theme sensitivity according to the DFFE screening report (2024).

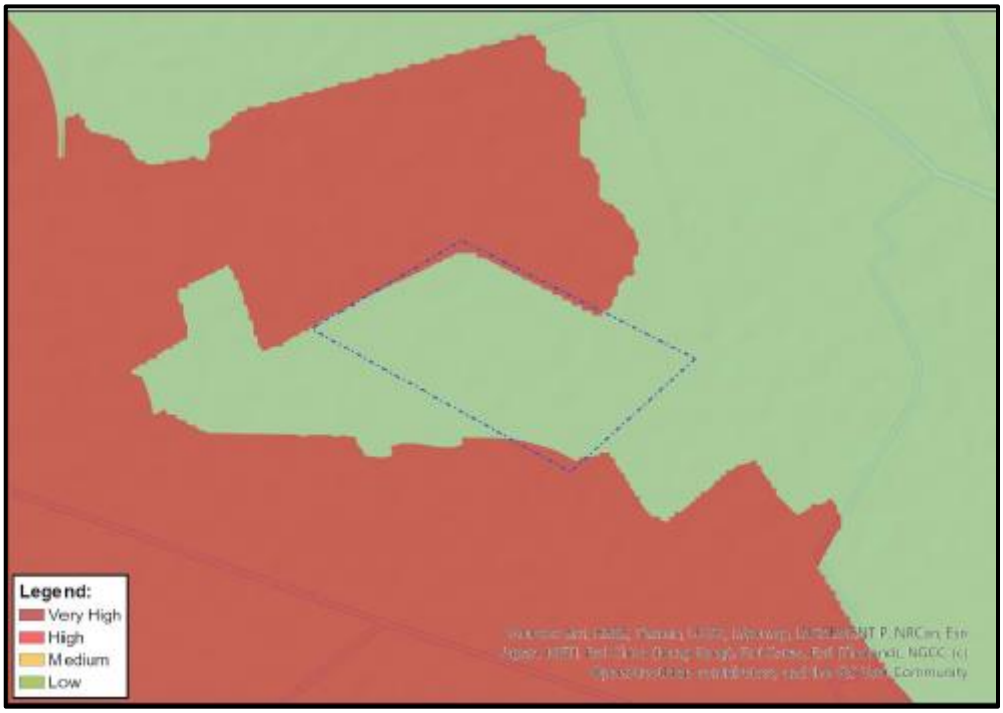


Figure 25: Terrestrial biodiversity theme sensitivity according to the DFFE screening report (2024).

The DFFE screening report classifies the Animal Species Theme Sensitivity of the area as low in the following figure.

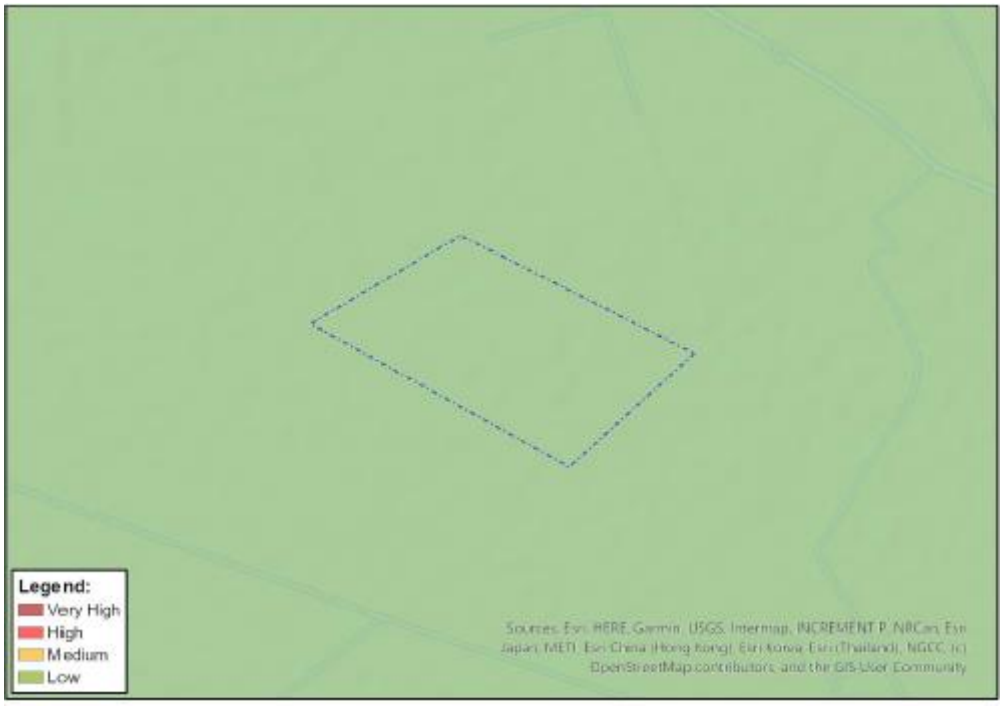


Figure 26: Animal species theme sensitivity according to the DFFE screening report (2024).

In line with the protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial biodiversity, as per Government Notice 320 published in terms of NEMA, dated 20 March 2020: “Procedures for the

Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation" – section 3, subsection 1:

- An applicant intending to undertake an activity identified in the scope of the protocol, on a site identified on the screening tool as being of 'Very High' sensitivity for terrestrial biodiversity, must submit a Terrestrial Biodiversity Specialist Assessment; however;
- Where the information gathered from the site sensitivity verification differs from the designation of 'Very High' terrestrial biodiversity sensitivity on the screening tool and it is found to be of a 'Low' sensitivity, then a Terrestrial Biodiversity Compliance Statement must be submitted.

A qualified ecologist will assess the sensitivity, and ground-truth the conservation status of the study area. The findings will be presented in the Terrestrial Biodiversity Impact Assessment that will be inclusive of a Plant- and Animal Species Assessment and discussed in detail in the draft environmental impact assessment report (DEIAR). The discussion will also propose mitigation and management measures to address/minimise identified impacts.

SITE SPECIFIC CULTURAL AND HERITAGE ENVIRONMENT

(Information obtained from the Kalahari Platinum Project Summary)

The DFFE Screening Report notes the Archaeological and Cultural Heritage sensitivity of the area as Low, while the palaeontological sensitivity of the area is marked as Medium. The DFFE Screening Report therefore differs from the SAHRA palaeontological sensitivity map that shows the area to be of low concern.

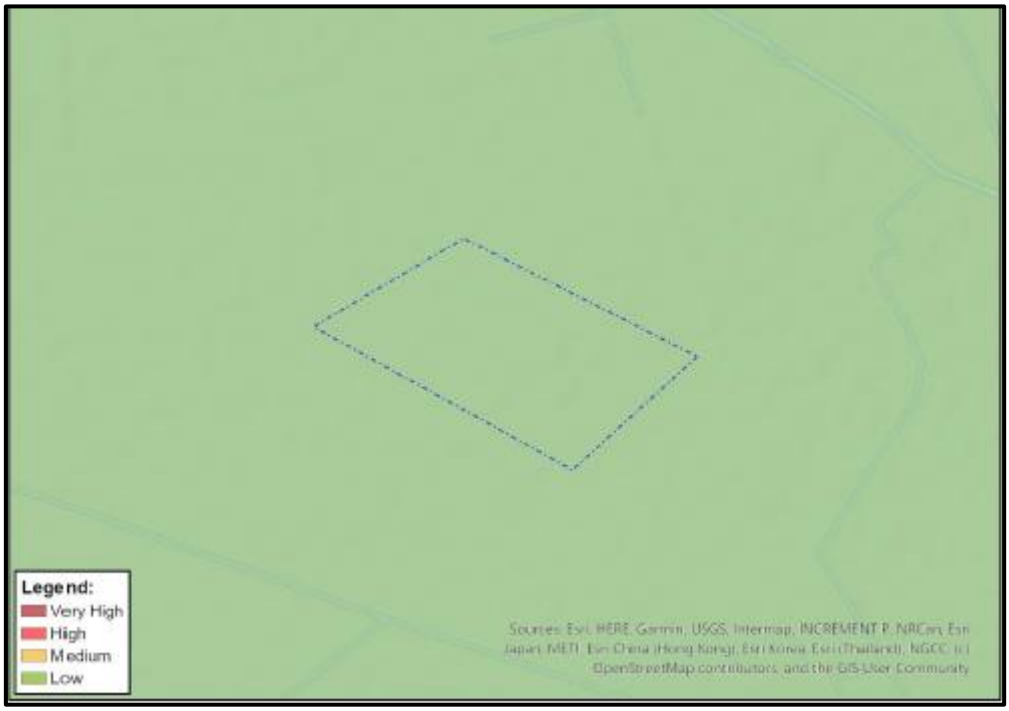


Figure 27: Archaeological theme sensitivity of the proposed area according to the DFFE screening report (2024).

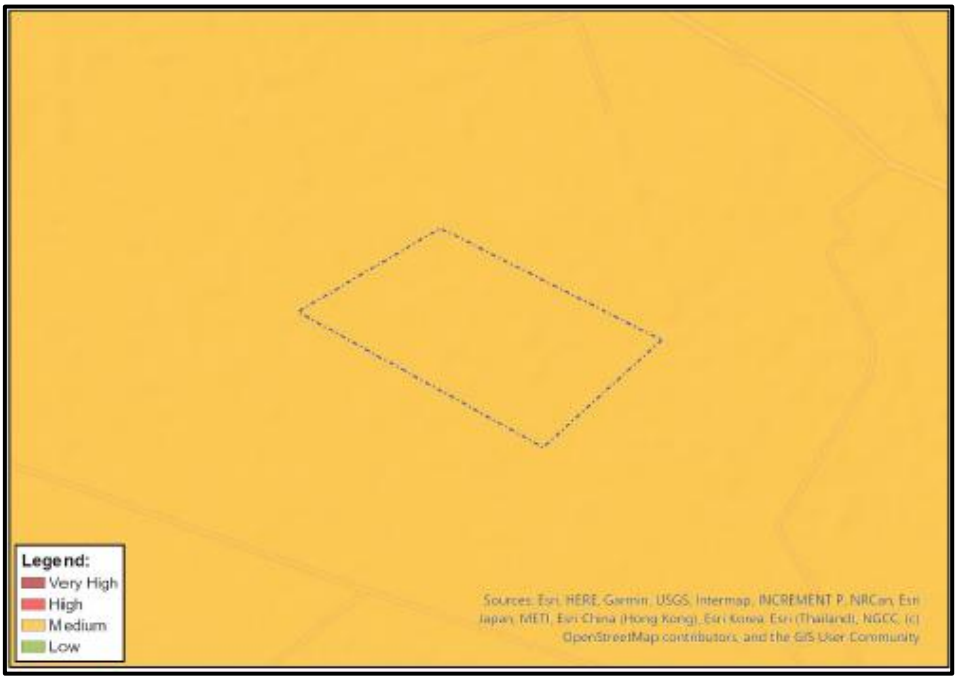


Figure 28: Palaeontological theme sensitivity of the proposed area according to the DFFE screening report (2024).

The Project area has previously been assessed for cultural and heritage resources, with findings indicating some features of historical significance. While the Department of Forestry, Fisheries, and the Environment (DFFE) Screening Report classifies the Archaeological and Cultural Heritage sensitivity of the area as Low, it marks the palaeontological sensitivity as Medium. This contrasts with the South African Heritage

Resources Agency (SAHRA) palaeontological sensitivity map, which categorizes the area as being of low concern.

Despite these assessments, the Kalahari Platinum Project Summary has identified specific sites of concern, including:

- A historic house older than 60 years, which is protected under the National Heritage Resources Act (NHRA) (Act 25 of 1999) and requires further assessment before any modification or relocation.
- Several grave sites, some of which may be impacted by mining activities, requiring adherence to heritage laws and consultation with affected families.

A Heritage Impact Assessment (HIA) must be conducted before development to ensure compliance with national heritage regulations.

If graves need to be relocated, the process must follow the NHRA, the Removal of Graves and Dead Bodies Ordinance (Ordinance 7 of 1925), the Human Tissues Act (Act 65 of 1983), and local municipal bylaws.

Engagement with SAHRA and local communities is required before any site disturbance to ensure culturally appropriate mitigation.

While broader heritage sensitivity is generally low, the identification of specific sites of concern highlights the need for site-specific heritage management during mine development.

For this mining right application, the cultural and heritage environment with specific reference to archaeological- and palaeontological aspects will be reviewed by appropriately qualified specialists and the findings updated (if necessary) and discussed in the DEIAR.

SITE SPECIFIC SOCIO-ECONOMIC ENVIRONMENT

The proposed mining project is located in the Magisterial District of Vryburg, within the Naledi and Ratlou Local Municipalities of the Northwest Province. This area has a diverse economic base, including agriculture, mining, retail, manufacturing, tourism, and renewable energy, contributing to both the local and provincial economy.

Demographics and Education

The Naledi Local Municipality has a population of approximately 63,755 people, mostly residing in rural and semi-urban areas. The level of education drops significantly after matric, with only 3% of the population obtaining tertiary education. The lack of access to Further Education and Training (FET) institutions limits youth employment opportunities, affecting long-term economic sustainability.

Employment and Income Levels

In 2021, 20,593 individuals were employed, while 6,332 were unemployed. The formal sector dominates employment, particularly in agriculture, trade, business services, and mining. Despite Naledi having the lowest unemployment rate in the Dr Ruth Segomotsi Mompati District, 57.3% of the population lives in poverty. The majority of households earn between R10,000 and R40,000 per month, while 13% qualify for indigent support.

Economic Growth Potential

Agriculture: The district is recognized as the "Beef Basket Epic-Center", with cattle farming as a major industry.

Mining: The project aims to enhance mineral extraction, focusing on Chrome, Cobalt, Copper, Gold, Iron Ore, Nickel, PGMs, Silver, and Vanadium.

Retail and Services: Vryburg serves as a regional business hub, supporting trade and logistics.

Tourism and Renewable Energy: Investments in game farming, eco-tourism, and renewable energy offer economic diversification.

Social and Labour Plan (SLP)

A Draft Social and Labour Plan (SLP), included in the Mining Right (MR) application, outlines initiatives for human resource development, economic delivery, business support, and community participation. This document serves as a framework for socio-economic upliftment and sustainable development.

Population Distribution

The population distribution is relatively stable across age and gender groups, with a slight increase in female representation in older age brackets. These demographic factors, along with employment trends, will influence the potential socio-economic impact of the mining

project, which will be further assessed during the Environmental Impact Assessment (EIA) phase.

The proposed mining operation is expected to stimulate economic growth, create job opportunities, and enhance local infrastructure, while implementing sustainable development practices to mitigate potential adverse effects.

SITE SPECIFIC EXISTING INFRASTRUCTURE

The application area is located in a rural area with some existing infrastructure that can support mining operations. The available infrastructure includes road networks, power supply, and water sources, which will be upgraded or supplemented as needed for the project.

- Road Infrastructure

The project area is accessible via regional roads, including:

R377, a major road that provides connectivity to nearby towns.

D3519, D3520, and D3521, which link the site to local communities and supporting facilities.

While these roads provide basic access, upgrades will be required to accommodate increased mining traffic. This includes widening, resurfacing, and dust suppression measures to handle heavy-duty haul trucks and equipment.

- Power Supply

There is existing power infrastructure in the region, but to meet the high energy demands of mining operations, the project will require:

The construction of an 89 km 132 kV overhead power line to connect the site to the national grid.

Possible on-site backup generators or alternative power sources for emergency use.

- Water Supply

Water availability is limited in the region, requiring a dedicated supply system for the mine. Planned water infrastructure includes:

A 98 km pipeline from Vryburg, transporting treated sewage effluent at 3 ML per day to the mine.

On-site water storage facilities for operational and emergency use.

- Community and Social Infrastructure

Nearby communities have basic social infrastructure, including schools, healthcare facilities, and small businesses. The project will contribute to local economic growth by improving these services as part of its Social and Labour Plan (SLP).

While some infrastructure is available, significant upgrades and new installations are necessary to support full-scale mining operations. The project will incorporate sustainable infrastructure development to minimize environmental impacts and benefit local communities.

(d) Environmental and current land use map

(Show all environmental, and current land use features)

The environmental and current land use map is attached as Appendix 4.

i) Impacts Identified

(Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impacts of such activities, and as informed by the consultants with affected parties together with the significance, probability and duration of the impacts)

The following potential impacts were identified of each main activity in each phase of the proposed project. The listed impacts must be treated as **preliminary**, to be expanded upon proper assessment of the study area during the EIA process. The significance rating was determined using the methodology as explained under *j) Methodology used in determining and ranking the significance of environmental impacts*. The impact rating listed below was determined for each impact **prior** to bringing the proposed mitigation measures into consideration. The degree of mitigation indicates the possibility of partial, full or no mitigation of the identified impact.

SITE ESTABLISHMENT AND INFRASTRUCTURE DEVELOPMENT

Loss of Natural Habitat (land clearing for infrastructure and mining pits).

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium - High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
4	5	1	3.3	5	5	5	**16.5**				

Increased Traffic and Road Deterioration

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
3	5	4	4	5	5	5	**20**				

Increased dust emissions along the roads

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating:High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
3	5	4	4	5	5	5	**20**				

Visual impact due to site establishment

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium - High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
2	5	4	3.6	5	5	5	**18**				

Impact on biodiversity sensitive areas, and/or species of concern

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
3	5	4	4	5	1	3	**12**				

Potential negative impact on the stormwater drainage of the affected area

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
4	5	4	4.3	4	1	2.5	**10.7**				

Potential impact on terrestrial fauna within mining footprint

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Low- Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
2	5	2	3	4	1	2.5	**7.5**				

Potential impact on areas/infrastructure of heritage or cultural concern

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Low-Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
5	5	1	3.6	4	1	2.5	**9**				

Increased work opportunities to community members **(Positive Impact)**

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
1	5	4	3.3	5	5	5	**16.5**				

STRIP AND STOCKPILE OF TOPSOIL AND OVERBURDEN TO ACCESS THE ORE

Dust nuisance caused by the disturbance of the soil and transport of material.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
3	5	2	3.3	5	5	5	**16.5**				

Noise nuisance caused by earthmoving machinery.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
2	5	2	3	5	5	5	**15**				

Potential infestation of the topsoil heaps with weeds or invader plant species

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating:Low- Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
3	5	2	3.3	4	2	3	**9.9**				

Loss/contamination of stockpiled topsoil

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Low- Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
3	5	1	3	4	2	3	**9**				

Potential contamination of area due to hydrocarbon spillages

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
4	4	2	3.3	4	3	3.5	**11.6**				

Potential erosion of denuded areas

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Low- Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
3	5	1	3	4	2	3	**9**				

Visual impact due to excavation activities

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
2	5	4	3.6	5	5	5	**18**				

Potential impact on areas of palaeontological concern

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Low- Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
5	5	5	5	2	1	1.5	**7.5**				

OPENCAST MINING (INCLUDING DRILLING AND BLASTING)

Health and safety risk posed by blasting activities.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Full**				
5	5	5	5	3	1	2	**10**				

Dust nuisance because of blasting and mining activities.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
4	5	4	4.3	5	4	4.5	**19.3**				

Noise nuisance caused by blasting and mining activities.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
2	5	2	3	3	4	3.5	**10.5**				

Light pollution due to shift work

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
2	5	2	3	5	5	5	**15**				

Waste Generation

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
2	5	2	3	5	5	5	**15**				

Potential impact on the surrounding environment (including groundwater users) if dewatering cause a groundwater depression cone.

Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	**Significance**
Rating: TBD			**Present Proposal**			**Degree of Mitigation: TBD**	
Impact to be assessed as part of the Aquatic Biodiversity and Hydrological Impact Assessment during the following EIA phase.							

Increased work opportunities to community members **(Positive Impact)**

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
1	5	5	3.6	5	5	5	**18**				

Potential impact on the surrounding groundwater users if mining activities contaminate groundwater.

			Consequence			Likelihood	**Significance**
Severity	Duration	Extent		Probability	Frequency		
Rating: TBD			**Present Proposal**			**Degree of Mitigation: TBD**	
Impact to be assessed as part of the Aquatic Biodiversity and Hydrological Impact Assessment during the following EIA phase.							

TRANSPORT, STOCKPILE AND CRUSHING OF ROM

Dust nuisance due to the movement of earthmoving equipment and denuded stockpile area

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**			**Degree of Mitigation:Partial**					
3	5	2	3.3	5	5	5	**16.5**				

Noise nuisance generated by earthmoving equipment.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**			**Degree of Mitigation:Partial**					
2	5	2	3	3	5	4	**12**				

Light pollution due to shift work

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**			**Degree of Mitigation:Partial**					
2	5	2	3	5	5	5	**15**				

Potential contamination of surface runoff because of hydrocarbon spillages

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**			**Degree of Mitigation:Full**					
4	4	2	3.3	4	3	3.5	**11.6**				

CUMULATIVE IMPACTS

Loss of agriculture land during the operational phase of the mine (change of land use)

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25

Rating:High			Site Layout Alternative 1				Degree of Mitigation:Partial
4	5	5	4.6	5	5	5	**23**

Potential impact of the mine on food security and/or climate change

Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	**Significance**
Rating: TBD			**Present Proposal**			**Degree of Mitigation: TBD**	

Potential impact on the sense of place of the receiving environment

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating:High			**Site Layout Alternative 1**				**Degree of Mitigation:TBD**				
4	5	5	4.6	5	5	5	**23**				

Potential of Loss of Employment upon closure of the mine.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
4	4	4	4	4	5	4.5	**18**				

Contribution of the proposed mine to the South African economy **(Positive Impact)**

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating:High			**Site Layout Alternative 1**				**Degree of Mitigation:N/A**				
5	5	5	5	5	5	5	**25**				

REHABILITATION UPON CLOSURE OF THE SITE

Dust nuisance generated because of the rehabilitation/landscaping activities.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Low- Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
2	3	4	3	4	2	3	**9**				

Noise nuisance caused by machinery during the decommissioning phase.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Low- Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
3	2	3	2.6	4	2	3	**7.8**				

Potential safety risk posed by unrehabilitated (unsloped) areas.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Full**				
4	5	1	3.3	4	5	4.5	**14.9**				

Potential safety risk posed by unrehabilitated (unsloped) areas.

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
4	5	1	3.3	4	5	4.5	**14.9**				

Potential Pit and Waste Dump Stability Risks

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
4	4	1	3	4	5	4.5	**13.5**				
Significance to be corroborated by the specialist – Mine Rehabilitation Plan.											

Potential Pit and Waste Dump Stability Risks

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
4	4	1	3	4	5	4.5	**13.5**				
Significance to be corroborated by the specialist – Mine Rehabilitation Plan.											

Groundwater Recovery Challenges

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
4	4	1	3	4	5	4.5	**13.5**				
Significance to be corroborated by the specialist – Mine Rehabilitation Plan.											

Potential infestation of the reinstated areas by weeds and invader plant species

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Full**				
4	4	1	3	5	2	3.5	**10.5**				

Potential contamination of environment because of improper waste disposal

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium			**Site Layout Alternative 1**				**Degree of Mitigation:Full**				
4	4	2	3.3	4	5	4.5	**14.9**				

Return of the rehabilitated area to agricultural land use **(Positive Impact)**

							Significance				
							Low	Low-Medium	Medium	Medium-High	High
Severity	Duration	Extent	Consequence	Probability	Frequency	Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25
Rating: Medium-High			**Site Layout Alternative 1**				**Degree of Mitigation:Partial**				
1	5	5	3.6	5	5	5	**18**				

j) Methodology used in determining the significance of environmental impacts

(Describe how the significance, probability, and duration of the aforesaid identified impacts that were identified through the consultation process was determined to decide the extent to which the initial site layout needs revision)

Methodology for the assessment of the potential environmental, social and cultural impacts

DEFINITIONS AND CONCEPTS

Environmental Significance

The concept of significance is at the core of impact identification, evaluation and decision-making. The concept remains largely undefined and there is no international consensus on a single definition. The following common elements are recognized from the various interpretations:

- Environmental significance is a value judgment
- The degree of environmental significance depends on the nature of the impact
- The importance is rated in terms of both biophysical and socio-economic values
- Determining significance involves the amount of change to the environment perceived to be acceptable to affected communities.

Significance can be differentiated into impact magnitude and impact significance. Impact magnitude is the measurable change (i.e. intensity, duration and likelihood). Impact significance is the value

placed on the change by different affected parties (i.e. level of acceptability) (DEAT (2002) Impact Significance, Integrated Environmental Management, Information Series 5).

The concept of risk has two dimensions, namely the consequence of an event or set of circumstances, and the likelihood of particular consequences being realised (Environment Australia (1999) Environmental Risk Management).

Impact

The positive or negative effects on human well-being and / or the environment.

Consequence

The intermediate or final outcome of an event or situation OR it is the result, on the environment, of an event.

Likelihood

A qualitative term covering both probability and frequency.

Frequency

The number of occurrences of a defined event in a given time or rate.

Probability

The likelihood of a specific outcome measured by the ratio of a specific outcome to the total number of possible outcomes.

Environment

Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation (ISO 14004, 1996).

Methodology that will be used

The environmental significance assessment methodology is based on the following determination:

Environmental Significance = Overall Consequence x Overall Likelihood

Determination of Overall Consequence

Consequence analysis is a mixture of quantitative and qualitative information, and the outcome can be positive or negative. Several factors can be used to determine consequence. For the purpose of determining the environmental significance in terms of consequence, the following factors were

chosen: Severity/Intensity, Duration and Extent/Spatial Scale. Each factor is assigned a rating of 1 to 5, as described in the tables below.

Determination of Severity / Intensity

Severity relates to the nature of the event, aspect or impact to the environment and describes how severe the aspects impact on the biophysical and socio-economic environment.

Table 11: Table to be used to obtain an overall rating of severity, taking into consideration the various criteria.

TYPE OF CRITERIA	RATING				
	1	2	3	4	5
Quantitative	0-20%	21-40%	41-60%	61-80%	81-100%
Qualitative	Insignificant / Non-harmful	Small / Potentially harmful	Significant/ Harmful	Great/ Very harmful	Disastrous Extremely harmful
Social/ Community response	Acceptable / I&AP satisfied	Slightly tolerable / Possible objections	Intolerable/ Sporadic complaints	Unacceptable / Widespread complaints	Totally unacceptable / Possible legal action
Irreversibility	Very low cost to mitigate/ High potential to mitigate impacts to level of insignificance/ Easily reversible	Low cost to mitigate	Substantial cost to mitigate/ Potential to mitigate impacts/ Potential to reverse impact	High cost to mitigate	Prohibitive cost to mitigate/ Little or no mechanism to mitigate impact Irreversible
Biophysical (Air quality, water quantity and quality, waste production, fauna and flora)	Insignificant change / deterioration or disturbance	Moderate change / deterioration or disturbance	Significant change / deterioration or disturbance	Very significant change / deterioration or disturbance	Disastrous change / deterioration or disturbance

Determination of Duration

Duration refers to the amount of time that the environment will be affected by the event, risk or impact, if no intervention e.g. remedial action takes place.

Table 12: Criteria for the rating of duration.

RATING	DESCRIPTION
1	Up to ONE MONTH
2	ONE MONTH to THREE MONTHS (QUARTER)
3	THREE MONTHS to ONE YEAR
4	ONE to TEN YEARS
5	Beyond TEN YEARS

Determination of Extent/Spatial Scale

Extent or **spatial scale** is the area affected by the event, aspect or impact.

Table 13: Criteria for the rating of extent / spatial scale.

RATING	DESCRIPTION
1	Immediate, fully contained area
2	Surrounding area
3	Within Business Unit area of responsibility
4	Within the farm/neighbouring farm area
5	Regional, National, International

Determination of Overall Consequence

Overall consequence is determined by adding the factors determined above and summarized below, and then dividing the sum by 3.

Table 14: Example of calculating overall consequence.

CONSEQUENCE	RATING
Severity	Example 4
Duration	Example 2
Extent	Example 4
SUBTOTAL	**10**
TOTAL CONSEQUENCE: (Subtotal divided by 3)	**3.3**

Determination of Likelihood

The determination of likelihood is a combination of Frequency and Probability. Each factor is assigned a rating of 1 to 5, as described below.

Determination of Frequency

Frequency refers to how often the specific activity, related to the event, aspect or impact, is undertaken.

Table 15: Criteria for the rating of frequency.

RATING	DESCRIPTION
1	Once a year or once/more during operation
2	Once/more in 6 Months
3	Once/more a Month
4	Once/more a Week
5	Daily

Determination of Probability

Probability refers to how often the activity or aspect has an impact on the environment.

Table 16: Criteria for the rating of probability.

RATING	DESCRIPTION
1	Almost never / almost impossible
2	Very seldom / highly unlikely
3	Infrequent / unlikely / seldom
4	Often / regularly / likely / possible
5	Daily / highly likely / definitely

Overall Likelihood

Overall likelihood is calculated by adding the factors determined above and summarized below, and then dividing the sum by 2.

Table 17: Example of calculating overall likelihood.

CONSEQUENCE	RATING
Frequency	Example 4
Probability	Example 2
SUBTOTAL	**6**
TOTAL LIKELIHOOD (Subtotal divided by 2)	**3**

Determination of Overall Environmental Significance

The multiplication of overall consequence with overall likelihood will provide the environmental significance, which is a number that will then fall into a range of **LOW, LOW-MEDIUM, MEDIUM, MEDIUM-HIGH** or **HIGH**, as shown in the table below.

Table 18: Determination of overall environmental significance.

SIGNIFICANCE OR RISK	LOW	LOW-MEDIUM	MEDIUM	MEDIUM-HIGH	HIGH
Overall Consequence X Overall Likelihood	1 - 4.9	5 - 9.9	10 - 14.9	15 – 19.9	20 - 25

Qualitative description or magnitude of Environmental Significance

This description is qualitative and is an indication of the nature or magnitude of the Environmental Significance. It also guides the prioritizations and decision making process associated with this event, aspect or impact.

Table 19: Description of environmental significance and related action required.

SIGNIFICANCE	LOW	LOW-MEDIUM	MEDIUM	MEDIUM-HIGH	HIGH
Impact Magnitude	Impact is of very low order and therefore likely to have very little real effect. Acceptable.	Impact is of low order and therefore likely to have little real effect. Acceptable.	Impact is real, and potentially substantial in relation to other impacts. Can pose a risk to company	Impact is real and substantial in relation to other impacts. Pose a risk to the company. Unacceptable	Impact is of the highest order possible. Unacceptable. Fatal flaw.
Action Required	Maintain current management measures. Where possible improve.	Maintain current management measures. Implement monitoring and evaluate to determine potential increase in risk. Where possible improve	Implement monitoring. Investigate mitigation measures and improve management measures to reduce risk, where possible.	Improve management measures to reduce risk.	Implement significant mitigation measures or implement alternatives.

Based on the above, the significance rating scale has been determined as follows:

HIGH Of the highest order possible within the bounds of impacts which could occur. In the case of negative impacts, there would be no possible mitigation and / or remedial activity to offset the impact at the spatial or time scale for which it was predicted. In the case of positive impacts, there is no real alternative to achieving the benefit.

MEDIUM-HIGH Impacts of a substantial order. In the case of negative impacts, mitigation and / or remedial activity would be feasible but difficult, expensive, time-consuming or some combination of these. In the case of positive impacts, other means of achieving this benefit would be feasible, but these would be more difficult, expensive, time-consuming or some combination of these.

MEDIUM Impact would be real but not substantial within the bounds of those, which could occur. In the case of negative impacts, mitigation and / or remedial activity would be both feasible and fairly easily possible, In case of positive impacts; other means of achieving these benefits would be about equal in time, cost and effort.

LOW-MEDIUM Impact would be of a low order and with little real effect. In the case of negative impacts, mitigation and / or remedial activity would be either easily achieved of little would be required, or both. In case of positive impacts alternative means for achieving this benefit would likely be easier, cheaper, more effective, less time-consuming, or some combination of these.

LOW Impact would be negligible. In the case of negative impacts, almost no mitigation and or remedial activity would be needed, and any minor steps, which might be needed, would be easy, cheap, and simple. In the case of positive impacts, alternative means would almost all likely be better, in one or a number of ways, than this means of achieving the benefit.

INSIGNIFICANT There would be a no impact at all – not even a very low impact on the system or any of its parts.

k) The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternatives will have on the environment and the community that may be affected.

(Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties)

PRELIMINARY LIST OF POSITIVE IMPACTS ASSOCIATED WITH THE PROJECT PROPOSAL

- Economic Growth & Job Creation – The mine will generate employment opportunities for local communities, both directly and indirectly, through supply chains and service industries.
- Infrastructure Development – The project includes the construction of roads, water pipelines, and power supply infrastructure, which could benefit local residents.
- Skills Development & Training – The mining company may provide training programs and skills development initiatives for employees and local businesses.
- Revenue for Local and National Economy – The mine will contribute to local municipalities and national GDP through taxes, royalties, and investments.
- Improved Social Services – Social and Labour Plans (SLPs) may support healthcare, education, and community projects.
- Increased Business Opportunities – Small and medium enterprises (SMEs) may benefit from contracts related to transport, catering, security, and construction.
- Potential for Land Rehabilitation – Responsible mining practices may include land rehabilitation plans, restoring ecological function after mining ceases.

PRELIMINARY LIST OF NEGATIVE IMPACTS ASSOCIATED WITH THE PROJECT PROPOSAL

The following table lists the potential negative impacts associated with the present project proposal:

Table 20: List of potential negative impacts associated with the present project proposal.

ACTIVITY	POTENTIAL IMPACT	SIGNIFICANCE (BEFORE MITIGATION)
SITE ESTABLISHMENT AND INFRASTRUCTURE DEVELOPMENT	Loss of Natural Habitat (land clearing for infrastructure and mining pits)	Medium - High
	Increased Traffic and Road Deterioration	High
	Increased dust emissions along the roads	High
	Visual impact due to site establishment	Medium - High
	Impact on biodiversity-sensitive areas and/or species of concern	Medium
	Potential negative impact on the stormwater drainage of the affected area	Medium
	Potential impact on terrestrial fauna within the mining footprint	Low - Medium
	Potential impact on areas/infrastructure of heritage or cultural concern	Low - Medium
STRIP AND STOCKPILE OF TOPSOIL AND OVERBURDEN TO ACCESS THE ORE	Dust nuisance caused by the disturbance of the soil and transport of material	Medium - High
	Noise nuisance caused by earthmoving machinery	Medium - High
	Potential infestation of the topsoil heaps with weeds or invader plant species	Low - Medium
	Loss/contamination of stockpiled topsoil	Low - Medium
	Potential contamination of area due to hydrocarbon spillages	Medium
	Potential erosion of denuded areas	Low - Medium
	Visual impact due to excavation activities	Medium - High

ACTIVITY	POTENTIAL IMPACT	SIGNIFICANCE (BEFORE MITIGATION)
	Potential impact on areas of palaeontological concern	Low - Medium
OPENCAST MINING (INCLUDING DRILLING AND BLASTING)	Health and safety risk posed by blasting activities	Medium
	Dust nuisance due to blasting and mining activities	Medium - High
	Noise nuisance caused by blasting and mining activities	Medium
	Light pollution due to shift work	Medium - High
	Waste Generation	Medium - High
	Potential impact on the surrounding environment (including groundwater users) if dewatering causes a groundwater depression cone	To be determined (Assessed in EIA Phase)
	Potential impact on the surrounding groundwater users if mining activities contaminate groundwater	To be determined (Assessed in EIA Phase)
TRANSPORT, STOCKPILE, AND CRUSHING OF ROM	Dust nuisance due to the movement of earthmoving equipment and denuded stockpile area	Medium - High
	Noise nuisance generated by earthmoving equipment	Medium
	Light pollution due to shift work	Medium - High
	Potential contamination of surface runoff due to hydrocarbon spillages	Medium
CUMULATIVE IMPACTS	Loss of agricultural land during the operational phase of the mine (change of land use)	High
	Potential impact of the mine on food security and/or climate change	To be determined

ACTIVITY	POTENTIAL IMPACT	SIGNIFICANCE (BEFORE MITIGATION)
	Potential impact on the sense of place of the receiving environment	High
	Potential loss of employment upon closure of the mine	Medium - High
REHABILITATION UPON CLOSURE OF THE SITE	Dust nuisance generated due to rehabilitation/landscaping activities	Low - Medium
	Noise nuisance caused by machinery during the decommissioning phase	Low - Medium
	Potential safety risk posed by unrehabilitated (unsloped) areas	Medium
	Potential Pit and Waste Dump Stability Risks	Medium
	Groundwater Recovery Challenges	Medium
	Potential infestation of the reinstated areas by weeds and invader plant species	Medium
	Potential contamination of the environment due to improper waste disposal	Medium

l) The possible mitigation measures that could be applied and the level of risk

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered).

Considering the above listed impacts that may have a negative impact on the study area, the following preliminary mitigation measures are proposed to address/minimize the resulting impacts. It must be noted that the following list should be treated as initial mitigation measures that will be expanded upon should the scoping report be approved, and the specialist recommendations be received.

Mitigation measures to be expanded upon (if needed) in the EIAR and EMPR once the specialists' recommendations are available.

TOPOGRAPHY

Rehabilitation of the Excavations

- Waste rocks and coarse material removed during the operational phase can be dumped into the excavation.
- No general/hazardous waste may be permitted to be deposited into the excavations.
- Once overburden, rocks and coarse natural materials have been added to the excavation and it was profiled with acceptable contours and erosion control measures, the topsoil previously stored must be returned to its original depth over the area.
- The area must be fertilized if necessary to allow vegetation to establish rapidly. The site must be seeded with a local or adapted indigenous seed mix to propagate the locally or regionally occurring flora, should natural vegetation not re-establish within 6 months from closure of the site.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining operation be corrected and the area be seeded with a vegetation seed mix to his or her specification.

The aspects associated with the decommissioning of the mine will be expanded upon receipt of the Mine Rehabilitation Plan recommendations to be discussed in the EIAR & EMPR.

Rehabilitation of the Mining Related Infrastructure

- Rehabilitation of the surface area shall entail landscaping, levelling, top dressing, land preparation, seeding (if required) and maintenance, and weed / alien clearing.
- All infrastructure, temporary equipment and other items used during the mining period shall be removed from the site (section 44 of the MPRDA).
- Waste material of any description, including receptacles, scrap, rubble, and tyres, shall be removed entirely from the mining area, and disposed of at a recognized landfill facility. It will not be permitted to be buried or burned on the site.
- Weed / alien clearing will be done in a sporadic manner during the life of the mining activities. Species regarded as Category 1a and 1b invasive species in terms of NEM:BA (National Environmental Management: Biodiversity Act 10 of 2004 and regulations applicable thereto) must be managed and controlled on site on an ongoing basis.
- Final rehabilitation shall be completed within a period specified by the Regional Manager.

The aspects associated with the decommissioning of the mine will be expanded upon receipt of the Mine Rehabilitation Plan recommendations to be discussed in the EIAR & EMPR.

VISUAL CHARACTERISTICS

Visual Mitigation

- The site must have a neat appearance and always be kept in good condition.
- Mining equipment must be parked neatly in a dedicated area when not in use.
- The MR holder must limit vegetation removal, and stripping of topsoil may only be done immediately prior to the mining/use of a specific area.
- Upon closure the benches must be stabilised with proper vegetation cover to ensure that the visual impact on the aesthetic value of the area is kept to a minimum.

GEOLOGY AND SOIL

Topsoil Management

- The first 300 mm of topsoil (if available) must be removed and stored within a designated, signposted stockpile area. Stockpiled topsoil must be protected from erosion and mixing with other material. The topsoil must be used to cover the rehabilitated area and improve the establishment of natural vegetation;
- Topsoil stripping, stockpiling, and re-spreading must be done in a systematic way. The mining plan must be such that topsoil is stockpiled for the minimum possible time.
- The topsoil must be placed on a levelled area, within the mining footprint.
- Topsoil stockpiles must be positioned so as not to be vulnerable to erosion by wind and water. The establishment of plants (weeds or a cover crop) on the stockpiles will help to prevent erosion.
- Topsoil heaps may not exceed 2 m to preserve micro-organisms within the topsoil, which can be lost due to compaction and lack of oxygen.
- The temporary topsoil stockpiles must be kept free of invasive plant species.
- Storm- and runoff water must be diverted around the stockpile area to prevent erosion.
- The stockpiled topsoil must be evenly spread, to a depth of 300 mm, over the rehabilitated area upon closure of the site.
- The Applicant must strive to re-instate topsoil at a time of year when vegetation cover can be established as quickly as possible afterwards, so that erosion of returned topsoil by both rain and wind, before vegetation is established, is minimized. The best time of year is at the end of the rainy season, when there is moisture in the soil for vegetation establishment and the risk of heavy rainfall events is minimal.
- A cover crop must be planted, irrigated, and established immediately after spreading of topsoil, to stabilize the soil and protect it from erosion. The cover crop must be fertilized for optimum biomass production, and any soil deficiencies must be corrected, based on a chemical analysis of the re-spread soil (if deemed necessary). It is important that rehabilitation be taken up to the

point of cover crop stabilization. Rehabilitation cannot be considered complete until the first cover crop is well established.

- The rehabilitated area must be monitored for erosion, and appropriately stabilized if any erosion occurs for at least 12 months after reinstatement.

HYDROLOGY

Mitigating the Potential Impact on Drainage Lines and Surface Water

- No activities may take place, without the necessary authorisation from the DWS, within a horizontal distance of 100 m from any watercourse or estuary or within a 500 m radius from a delineated boundary of any wetland or pan.
- Proper stormwater control measures must be implemented for the life of the mine.
- Any channelized flow from mining areas must be slowed, and storm water management infrastructure must be implemented.

Erosion Mitigation / Storm Water Control

- A Stormwater Management Plan must be compiled and implemented on site for the duration of the mining activities.
- Storm water must be diverted around the topsoil heaps, mining areas and access roads to prevent erosion.
- Drainage must be controlled to ensure that runoff from the mining area does not culminate in off-site pollution, flooding or result in any damage to properties downstream or any storm water discharge points.
- Silt traps must be used where there is a danger of topsoil or material stockpiles eroding and entering the river and/or other sensitive areas.
- Mining must be conducted in accordance with the Best Practice Guideline for small scale mining that relates to storm water management, erosion and sediment control and waste management, developed by the Department of Water and Sanitation (DWS), and any other conditions which that Department may impose:
  - Clean water (e.g. rainwater) must be kept clean and be routed to a natural watercourse by a system separate from the dirty water system. You must prevent clean water from running or spilling into dirty water systems.
  - Dirty water must be collected and contained in a system separate from the clean water system.
  - Dirty water must be prevented from spilling or seeping into clean water systems.

- A storm water management plan must apply for the entire life cycle of the mining activity and over different hydrological cycles (rainfall patterns).
- The statutory requirements of various regulatory agencies and the interests of stakeholders must be considered and incorporated into a storm water management plan.

Groundwater Related Matters

- Groundwater quality and level monitoring must be implemented for the duration of the operational phase:
  - The right holder must take an initial water sample from the existing borehole/s on the farm, of which the results will serve as baseline information.
  - Thereafter quarterly water samples from the same borehole/s must be tested for changes in water quality and/or level.
  - Should the monitoring information show any significant changes, the opinion of a geohydrologist must be obtained (within a week from receipt of the results) and the findings must be submitted to DWS for further consideration.
- Upon closure of the mining activities a final water sample must be tested. The results must be submitted to DWS and filed for auditing purposes.

AIR QUALITY AND NOISE AMBIANCE

Mitigation of Fugitive Dust Emissions

- The liberation of dust into the surrounding environment must be effectively controlled using, inter alia, water spraying and/or environmentally friendly dust-allaying agents.
- The roads and stockpile areas must be sprayed with water or an environmentally friendly dust-allaying agent that contains no PCB's (e.g. DAS products) if dust is generated above acceptable limits.
- The mine manager must ensure continuous assessment of the dust suppression equipment to confirm its effectiveness in addressing dust suppression.
- Speed on the access road must be controlled to prevent the generation of excess dust.
- The crusher plant must have operational water sprayers to alleviate dust generation from the conveyor belts;
- Areas devoid of vegetation, which could act as a dust source, must be minimized and vegetation removal may only be done immediately prior to mining.
- Topsoil stockpiles must be planted with indigenous grass species to minimize exposed surface areas and reduce windblown dust from the site. The vegetation will further assist in capturing wind born dust and minimizing the spread of dust from the site.

- Fines, blowing from the drop end of the crusher plant, must be minimized by attaching strips of used conveyor belts to the conveyor's end.
- Compacted dust must weekly be removed from the crusher plant to eliminate the dust source.
- The MR Holder must implement a dust management plan and conduct fall-out dust monitoring on site to accurately determine the site specific dust levels.
- All dust generating activities shall comply with the National Dust Control Regulations, GN No R827 promulgated in terms of NEM:AQA (Act 39 of 2004) and ASTM D1739 (SANS 1137:2012).
- Loads must be flattened and covered to prevent spillage during transportation, also minimising windblown dust.
- Weather conditions must be considered upon commencement of daily operations. Limiting dust emitting operations during very windy periods would reduce airborne dust and resulting impacts.
- Best practice measures shall be implemented during the stripping of topsoil, loading, and transporting of the products from site to minimize potential dust impacts.

Noise Management

- The Applicant must ensure that the employees and visitors to the site conduct themselves in an acceptable manner while on site.
- No loud music may be permitted at the mining area.
- All mining vehicles must be equipped with silencers and maintained in a road worthy condition in terms of the National Road Traffic Act, 1996 (Act No 93 of 1996).
- Best practice measures shall be implemented to minimize potential noise impacts.
- A qualified occupational hygienist must be contracted to quarterly monitor and report on the personal noise exposure of the employees working at the mine. The monitoring must be done in accordance with the SANS 10083:2004 (Edition 5) sampling method as well as NEM:AQA, 2004, SANS 10103:2008.
- Employees will not be allowed to reside on site.
- Drilling and blasting may only take place from Monday – Friday during normal work hours (8:00 to 17:00).

TERRESTRIAL BIODIVERSITY, CONSERVATION AREAS, GROUNDCOVER AND FAUNA

Mitigating the Potential Impact on Biodiversity Sensitive Areas, Vegetated Areas, and Species of Concern

- The mining boundaries must be clearly demarcated, and all operations must be contained to the approved mining area.
- The area outside the mining boundaries must be declared a no-go area, and all employees must be educated accordingly.

- Prior to bush clearance, the earmarked area must be inspected by and ecologist for the presence of sensitive and/or protected plant species. Plant removal permits must be obtained prior to the removal of any protected species. Relocation/destruction must be in accordance with the recommendations of the specialist.
- An invasive plant species management plan must be implemented on site to control weeds and invasive plants on denuded areas, topsoil heaps and reinstated areas.

Management of Invasive Plant Species

- An invasive plant species management plan must be implemented at the site to ensure the management and control of all species regarded as Category 1a and 1b invasive species in terms of NEM:BA (National Environmental Management: Biodiversity Act 10 of 2004 and regulations applicable thereto). Weed/alien clearing must be done on an ongoing basis throughout the life of the mining activities.
- All stockpiles must be kept free of invasive plant species.
- Management must take responsibility to control declared invader or exotic species on the rehabilitated areas. The following control methods can be used:
  - The plants can be uprooted, felled, or cut off and can be destroyed completely.
  - The plants can be treated chemically by a registered pest control officer (PCO) using an herbicide recommended for use by the PCO in accordance with the directions for the use of such an herbicide.

Fauna Management

- All mining must be confined to the mining footprint.
- Site management must ensure no fauna is caught, killed, harmed, sold, or played with.
- Workers must be instructed to report any animals that may be trapped in the working area.
- No snares may be set, or nests raided for eggs or young.

CULTURAL AND HERITAGE ENVIRONMENT

Archaeological, Heritage and/or Palaeontological Aspects

- All mining must be confined to the mining footprint.
- Known heritage resources must be avoided with a buffer zone of 30 m.
- If during the pre-construction phase, construction, operations or closure phases of this project, any person employed by the developer, one of its subsidiaries, contractors and subcontractors, or service provider, finds any artefact of cultural significance or heritage site, this person must cease work at the site of the find and report this find to their immediate supervisor, and through their supervisor to the senior on-site manager.

- It is the responsibility of the senior on-site Manager to make an initial assessment of the extent of the find and confirm the extent of the work stoppage in that area.
- The senior on-site Manager must inform the ECO of the chance find and its immediate impact on operations. The ECO must then contact a professional archaeologist for an assessment of the finds who must notify the SAHRA.
- Work may only continue once the go-ahead was issued by SAHRA.

LAND USE

Change of the Land Use / Sense of Place during the Life of the Mine

Mitigation measures to be expanded upon (if needed) in the EIAR and EMPR once the specialists' recommendations are available.

EXISTING INFRASTRUCTURE

Road and Traffic Management

- The speed of all mining equipment/vehicles must be controlled surrounding roads.
- Vehicular movement must be restricted to the existing access roads and crisscrossing of tracks through undisturbed areas must be prohibited.
- Rutting and erosion of the access road caused as a direct result of the mining activities must be repaired by the MR Holder.
- Overloading of the trucks must be prevented, and proof of load weights must be filed for auditing purposes.

GENERAL

Waste Management

- Vehicle maintenance, repairs and services may only take place at the workshop and service area. If emergency repairs are needed on equipment not able to move to the workshop, drip trays must be present. All waste products must be disposed of in a closed container/bin to be removed from the emergency service area (same day) to the workshop to ensure proper disposal.
- Ablution facilities must be provided to all employees. The ablution facilities must not cause pollution or pose a health hazard. In addition, no form of secondary pollution should arise from the disposal of refuse or sewage. Any pollution problems arising from the above are to be addressed immediately by the MR Holder.

- If a diesel bowser is used on site, it must always be equipped with a drip tray. Drip trays must be used during each refuelling event. The nozzle of the bowser needs to rest in a sleeve to prevent dripping after refuelling.
- Site management must ensure drip trays are cleaned after each use. No dirty drip trays may be used on site.
- Any effluents containing oil, grease or other industrial substances must be collected in a suitable receptacle and removed from the site, either for resale or for appropriate disposal at a recognized facility.
- Should spillage occur, such as oil or diesel leaking from a burst pipe, the contaminated soil must, within the first hour of occurrence, be collected in a suitable receptacle and removed to the hazardous waste storage area of the workshop, either for resale or for appropriate disposal at a recognized facility. Proof must be filed.
- A waste management plan must be compiled by site management and implemented on site. The plan must focus on the waste hierarchy of the NEM:WA.
- Hazardous- and general waste must be contained in marked, sealable, refuse bins placed at a designated area, to be removed when filled to a recognised hazardous or general waste landfill site whichever is applicable.
- No general waste (apart from inert waste) may be buried or burned on the site.
- It is important that any significant spillage of chemicals, fuels etc. during the lifespan of the mining activities is reported to the Department of Water and Sanitation and other relevant authorities.

Management of Health and Safety Risks

- The type, duration and timing of the blasting procedures must be planned with due cognizance of other land users and structures in the vicinity;
- The surrounding landowners must be informed ahead of every blasting event, and proof must be available;
- Measures to limit flyrock must be taken;
- Audible warning of a pending blast must be given at least 3 minutes in advance of the blast;
- All flyrock (of diameter 150mm and larger) which falls beyond the working area, together with the rock spill must be collected and removed;
- Adequate ablution facilities and water for human consumption must daily be available on site.
- Workers must have access to the correct personal protection equipment (PPE) as required by law.
- All operations must comply with the Mine Health and Safety Act, 1996 (Act No 29 of 1996).

Light pollution due to shift work

- Site management must plan the positioning of exterior lighting such that lamps and reflectors are not visible from beyond the mining footprint;
- Lighting may not cause excessive reflected glare;
- Direct lighting may not illuminate the night-time sky;
- Illumination of the project and its immediate vicinity must be limited;
- Light fittings must incorporate fixture hoods/shielding with lights directed downwards or concentrated on the area to be illuminated;
- Lighting shall be minimum necessary brightness and lights in high illumination areas shall have switches, timers, or motion detectors so that the lights operate only when needed;
- The mitigation measures associated with this impact must be expanded upon as part of the engineering service report and EIA process.

m) The outcome of the site selection Matrix Final Site Layout Plan

(Provide a final site layout plan as informed by the process of consultation with interested and affected parties)

The most current site activities map was compiled upon assessment of the site-specific conditions and is attached as Appendix 4 to this document.

n) Motivation where no alternative sites were considered.

Refer to *Section 1(h)(i) Description of the process followed to reach the proposed preferred site* above.

o) Statement motivating the preferred site.

(Provide a statement motivation of the final site layout that is proposed)

The selection of the preferred site for the application was based on a comprehensive assessment of geological, environmental, socio-economic, and technical factors. The preferred site has been identified as the most feasible and economically viable location for mining operations while ensuring minimal environmental and social disruption.

This mining right application follows a previously held prospecting right (NW30/5/1/1/2/11876PR), which expired in October 2024. The prospecting activities confirmed the presence of an economically viable mineral resource, supporting the progression to a mining right application.

Mining rights can only be applied for in areas where such rights are not yet held by other companies/applicants. Additionally, the viability of mining activities depends on the presence of the target minerals, which in turn are dictated by geological formations. Given these constraints, the proposed footprint of the mining right application was founded on the prospecting right area and is supported by extensive prospecting results and geological assessments.

Key Motivations for the Preferred Site:

1. Geological Suitability & Resource Availability

- The preferred site is located over a well-defined and economically viable mineral resource hosted within the Stella Layered Intrusion (SLI).
- Geological studies and prospecting results confirm the presence of Platinum Group Metals (PGMs), gold, and associated minerals at grades suitable for commercial extraction.
- The ore body is shallow and amenable to open-pit mining, making it a more cost-effective and technically feasible mining method.

2. Existing Infrastructure & Accessibility

- The site is strategically positioned near major road networks (D3519, D3520, D3521, and R377), power supply infrastructure, and potential water sources, reducing the need for extensive new infrastructure development.
- The location allows for efficient transportation of mined materials to processing plants and export facilities, enhancing the project's economic feasibility.

3. Minimized Environmental Impact

- The preferred site avoids highly sensitive ecological zones, such as protected conservation areas and critical wetlands.
- The project design incorporates buffer zones around identified sensitive habitats to minimize impacts on biodiversity.
- Mitigation measures, including dust suppression, water conservation, and progressive rehabilitation, will be implemented to reduce environmental footprint.

Socio-Economic Benefits & Community Considerations

- The mine may generate employment opportunities, prioritizing local hiring and skills development.
- Increased economic activity will support local businesses, infrastructure improvements, and municipal revenue generation.
- Engagement with local communities has been prioritized to ensure that concerns related to land use, environmental protection, and socio-economic impacts are adequately addressed.

Alternative sites within the broader mineralized belt were evaluated; however, these were found to be less viable due to the following factors:

- Lower resource grades, making them economically less attractive.
- Greater logistical challenges, such as limited access to roads, power lines, and water supply.
- Higher environmental sensitivity, with some alternative areas falling within more ecologically sensitive zones.

The preferred site for the application was selected based on geological assessments, resource availability, infrastructure considerations, environmental sustainability, and socio-economic benefits. Given that the site aligns with the previously approved prospecting right, is backed by confirmed mineral reserves, and offers strategic infrastructure advantages, it presents the most suitable location for mining operations.

The findings of the project team and environmental specialists will be presented in the Draft Environmental Impact Assessment Report (DEIAR), which will also be made available for public input and review. This will ensure that all potential impacts and mitigation strategies are transparently assessed before the project progresses further.

2. PLAN OF STUDY FOR THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

a) Description of alternatives to be considered including the option of not going ahead with the activity.

Refer to *Section 1(h)(i) Description of the process followed to reach the proposed preferred site*, and *Section 1(o) Statement motivating the preferred site* above.

b) Description of the aspects to be assessed as part of the environmental impact assessment process.

(The EAP must undertake to assess the aspects affected by each individual mining activity whether listed or not, including activities such as blasting, Loading, hauling and transport, and mining activities such as Excavations, stockpiles, discard dumps or dams, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc....etc.)

Key Aspects to Be Assessed in the EIA Process Following Scoping Report Approval

Upon approval of the Scoping Report by the Department of Mineral Resources and Energy (DMRE), the EIA phase will focus on in-depth assessments of the following key aspects:

- Environmental Aspects

Soil and Land Capability: Impact of mining on soil quality, erosion risks, and rehabilitation strategies.

Water Resource Management: Assessment of groundwater drawdown, surface water contamination, and mitigation.
Biodiversity and Ecosystem Integrity: Impact on terrestrial and aquatic biodiversity, including protected species, vegetation loss, and habitat fragmentation.
Air Quality: Evaluation of dust emissions, vehicle exhaust pollution, and overall air quality degradation due to mining activities.
Climate Change Considerations: Carbon footprint of the mining operation and adaptation strategies for extreme weather events.

- Socio-Economic Aspects

Employment and Economic Development: Impact on local communities, job creation, and procurement opportunities.
Cultural and Heritage Resources: Identification of archaeological sites, historical landmarks, and traditional land uses.
Health and Safety: Occupational health risks, exposure to dust and noise, and emergency response planning.
Community Well-being: Socio-economic disruptions, including potential displacement, land use changes, and increased demand for services.

- Waste and Hazardous Material Management

Mine Waste Management: Handling and disposal of tailings, overburden, and other mining-related waste materials.
Hazardous Substances Control: Management of chemicals, fuels, and potential contaminants stored on-site.
The EIA process will comprehensively assess all potential environmental, social, and economic impacts associated with the proposed mining activities. The findings will be integrated into the Draft and Final Environmental Impact Assessment Report (EIAR) and Environmental Management Programme (EMPr), ensuring compliance with national legislation, best practices, and sustainability principles.
The aspects to be assessed as part of the environmental impact assessment process that will follow upon approval of the Scoping Report by the DMRE will include, but not be limited to, the following:

1. Various alternatives will be considered during the EIA process as supplementary information becomes available. Identifying viable alternatives will in turn dictate the design and layout of the proposed project as well as hone the proposed mining method.

2. The need and desirability of the proposed activity will be discussed in detail and weighed against the no-go option of upholding the *status quo* at the study area.

3. The inputs received during the public participation process (first- and second phase) will be assessed and considered by the project team during the EIA process.

4. The findings, recommendations and management measure proposed in the specialist reports will be assessed during the EIA process and incorporated into the DEIAR. The following specialists will be consulted during the EIA phase and possible studies done if deemed necessary:
   - Agricultural Impact Assessment;
   - Animal Species Assessment;
   - Aquatic Biodiversity Impact Assessment;
   - Archaeological and Cultural Heritage Impact Assessment;
   - Noise Impact Assessment;
   - Paleontology Impact Assessment;
   - Plant Species Assessment;
   - Terrestrial Biodiversity Impact Assessment;
   - Traffic Impact Assessment;

5. The impact of the proposed project on the physical-, biological-, and human environments will be assessed. The nature, probability and significance of the potential impacts associated with the project will be determined using the above-mentioned methodology.

6. Mitigation measures will be proposed to control, modify, remedy, or stop the impacts associated with the proposed activity on the surrounding environment.

7. Any additional requirements submitted by the DMRE will be incorporated into the DEIAR and treated accordingly.

c) Description of aspects to be assessed by specialists

The Environmental Impact Assessment (EIA) process will include various specialist studies to assess the potential impacts of the proposed mining activities on the environment and socio-economic conditions. The findings from these studies will be incorporated into the Draft and Final Environmental Impact Assessment Report (EIAR) and the Environmental Management Programme (EMPr).

The following specialist studies have been commissioned as part of the EIA process:

Agricultural Impact Assessment (AIA)

- The screening tool has identified high agricultural sensitivity for the earmarked properties. Given the significance of agricultural activities in the area, the proposed mining operation will take into

consideration the existing farming practices of landowners. Upon completion of mining activities, rehabilitation efforts will aim to restore the land for agricultural use.

- Due to the potential high impact of mining operations on farming activities, an agricultural specialist will be consulted during the EIA phase to determine whether an Agricultural Impact Assessment is required. The assessment will evaluate the extent of disruption, soil degradation, and mitigation measures necessary to reduce the impact on agricultural productivity.

Animal Species Assessment

- The screening tool has identified low sensitivity for animal species within the project area. Nonetheless, mining operations must be conducted in consultation with landowners to ensure the safety and security of animals that may be present in the mining zone.
- A preliminary assessment of the potential impact of mining activities on local fauna will be undertaken. Specialists will be consulted during the EIA phase to confirm whether further studies are required. If necessary, mitigation measures such as wildlife corridors, fencing, and relocation strategies will be proposed.

Plant Species Assessment

- The screening tool has identified low sensitivity for plant species in the designated mining area. However, biodiversity conservation remains a priority, and mining activities must be conducted in a way that limits disturbance to native plant species.
- The impact of the proposed mining operations on local vegetation and plant diversity will be further assessed during the EIA phase. Specialists will be consulted to determine whether additional plant species assessments are required. Any recommendations made by specialists will be incorporated as mitigation measures to reduce habitat loss, prevent soil erosion, and promote post-mining land rehabilitation.

Terrestrial Biodiversity Impact Assessment

- The screening tool has classified the terrestrial biodiversity sensitivity of the earmarked properties as very high. Therefore, a detailed biodiversity assessment will be conducted to evaluate potential impacts on terrestrial ecosystems, including habitats, species diversity, and ecological functioning.
- Specialists will be engaged to determine the extent of habitat fragmentation and propose conservation measures. Recommendations will focus on minimizing biodiversity loss, habitat restoration strategies, and environmental management practices to be implemented during and after mining operations.

Aquatic Biodiversity Impact Assessment

- The screening tool has identified the aquatic biodiversity sensitivity of the area as very high. Given the potential impact on water sources, wetlands, and aquatic ecosystems, an in-depth assessment will be undertaken.
- Specialists will evaluate the potential effects of mining activities on surface water bodies, groundwater recharge, and aquatic habitats. The study will include recommendations on water conservation, pollution control, sediment management, and sustainable water use to ensure minimal disruption to aquatic biodiversity.

Archaeological, Cultural Heritage, and Palaeontological Impact Assessment

- The screening tool has classified the archaeological, cultural heritage, and palaeontological sensitivity as low. However, in compliance with heritage protection laws, mining activities will be assessed to ensure no significant cultural or historical sites are disturbed.
- Specialists will be consulted during the EIA phase to determine whether further studies are required. If necessary, mitigation measures such as site preservation, excavation documentation, and alternative site selection will be implemented to protect heritage resources.

Radioactivity Impact Assessment

- A radioactivity impact assessment is not deemed necessary for the proposed mining operations. The project does not involve radioactive material storage, radioactive waste generation, or any activities with radiation hazards. Should any unforeseen risks be identified, additional studies may be considered.

Noise Impact Assessment

- The proposed mining activities are expected to temporarily contribute to noise levels in the project area. However, due to the topography and remote location, the impact is anticipated to be moderate.
- The impact on ambient noise levels will be assessed as part of the EIA process and discussed in the Draft EIAR. If necessary, noise mitigation measures such as buffer zones, equipment noise reduction technologies, and work-hour restrictions will be proposed. Should any unforeseen risks be identified, additional studies may be considered necessary to obtain specialist input unless further assessment identifies significant concerns.

The Environmental Impact Assessment process will evaluate the full scope of potential environmental and socio-economic impacts associated with the proposed mining activities. The specialist studies outlined above will provide crucial data to inform mitigation strategies, ensuring compliance with environmental regulations and promoting responsible mining practices.

The findings from all assessments will be incorporated into the Draft and Final Environmental Impact Assessment Report (EIAR) and Environmental Management Programme (EMPr) to support decision-making by the competent authority.

Waste Classification Study

- Waste classification will be in terms of GN R. 634 of 23 August 2013 read together with SANS 10234;
- Waste Assessment as per the National Norms and Standards for the Assessment of Waste for Landfill Disposal in terms of GN R. 635 of 23 August 2013 will be performed;
- A Report on Waste Assessment and Classification will be compiled and will include the supporting documents as mentioned in the above tasks including original laboratory results.

d) Proposed method of assessing the environmental aspects including the proposed method of assessing alternatives

The impact assessment component of the EIA is subdivided into several environmental aspects to be studied as listed below (preliminary list):

- Topography;
- Visual Characteristics;
- Geology and Soils;
- Hydrology;
- Air Quality and Noise Ambiance;
- Terrestrial Biodiversity, Conservation Areas, Groundcover and Fauna;
- Cultural and Heritage Environment;
- Socio-economic Environment / Land Use;
- Existing Infrastructure; and
- Preferred Project Proposal including the No-go Option.

Greenmined will use a team of specialists to review the environmental aspects which will be assessed as part of the environmental impact assessment process. The environmental aspects briefly described in the Scoping Report will be updated, and site and technology specific impacts and mitigation recommendations will be proposed to be reviewed by the project team, registered stakeholders and I&AP's and competent authority (DMRE). Presently it is expected that the significance of the impacts will be assessed in terms of the methodology described in *Section 1 j) Methodology Used in Determining and Ranking the Significance*.

e) The proposed method of assessing duration significance.

The significance of the identified impacts will be determined using the approach outlined in *Section 1 j) Methodology Used in Determining and Ranking the Significance*. The environmental significance assessment methodology is based on the Overall Consequence x Overall Likelihood.

Consequence analysis is a mixture of quantitative and qualitative information, and the outcome can be positive or negative. For the purpose of determining the environmental significance in terms of consequence, the following factors were chosen: Severity/Intensity, Duration and Extent/Spatial Scale.

The determination of likelihood is a combination of Frequency and Probability.

The multiplication of overall consequence with overall likelihood will provide the environmental significance, which is a number that will then fall into a range of LOW, LOW-MEDIUM, MEDIUM, MEDIUM-HIGH or HIGH.

Qualitative description or magnitude of Environmental Significance is qualitative and is an indication of the nature or magnitude of the Environmental Significance. It also guides the prioritizations and decision making process associated with this event, aspect, or impact.

Assessing duration significance forms part of the environmental significance determination of the impacts and will be assessed accordingly.

f) The stages at which the competent authority will be consulted.

The environmental authorization- and mining right application in terms of the NEMA: EIA Regulations, 2014 (as amended) and the MPRDA, 2002 were simultaneously submitted to the DMRE on 23 October 2024 for which acceptance was issued on 12 February 2025 and received from the DMRE on 17 March 2025. As competent authority the DMRE will be invited to comment on the Draft Scoping Report (DSR), and any comments received will be incorporated into the FSR to be considered for approval.

Should the DMRE approve the Final Scoping Report, the draft EIA report, including all investigations, assessments, and the specialist studies, will be circulated for a 30-day commenting period. Any additional requirements received from the DMRE will be added to the Final EIA report to be submitted for approval.

As stipulated in the NEMA EIA Regulations, 2014 (as amended) read with the MPRDA, 2002, the EIA process will comprise of the following:

1. Application for Environmental Authorization and a Mining Right filed with supporting documentation on the online SAMRAD system;
2. The DMRE responds with reference number and accepts the application;
3. Draft Scoping Report circulated for perusal by I&AP's and stakeholders (including the DMRE);
4. Final Scoping Report (FSR) submitted to the DMRE;
5. The DMRE decision on FSR;
6. If the FSR is approved, the Draft EIA report is circulated for perusal by I&AP's and stakeholders (including the DMRE);
7. Final EIA report submitted to DMRE;
8. DMRE decision on Final EIA report;
9. Submission of the Financial Provision amount need for Rehabilitation;
10. If the FEAR is approved, the DMRE issues the Environmental Authorizations;
11. Appeal period;
12. Approval of supporting documentation including, but not limited to, the Mining Work Programme, and Social and Labour Plan; and
13. Decision on the Mining Right Application.

g) Particulars of the public participation process with regard to the Impact Assessment process that will be conducted

i) Steps to be taken to notify interested and affected parties.

(These steps must include the steps that will be taken to ensure consultation with the affected parties identified in (h) (ii) herein).

The aspects to be assessed as part of the environmental impact assessment process were added to the Draft Scoping Report that will be distributed to all registered I&AP's and stakeholders for a 30-day commenting period.

The I&AP’s and stakeholders will be informed of the project and availability of the DSR for perusal and commenting through:

1. Email notifications, with a direct link to the electronic copy of the DSR and appendices, sent to all persons with email access;
2. Advertisements placed in the Stellalander will invite the public to comment on the project.
3. On-site notices placed at conspicuous places inviting the public to comment on the project.

The registrations, comments, concerns, and recommendations received on the Draft Scoping Report will be added to the Final Scoping Report to be submitted to the DMRE for consideration. The project will be advertised in English.

ii) Details of the engagement process to be followed

(Describe the process to be undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings and records of such consultation will be required in the EIA at a later stage).

Public participation during the impact assessment phase of the EIA will entail a review of the findings of the EIA, presented in the Draft Scoping Report and Draft EIA and EMPr Reports. These reports will be made available for public comment as described above.

I&APs will be advised of the availability of these reports and how to obtain them. They will be encouraged to comment in writing (mail or email). Any issues, comments or suggestions raised during the comment period will be added to the Comments and Response Report (CRR) that will accompany the Final Scoping Report.

iii) Description of the information to be provided to Interested and Affected Parties.

(Information to be provided must include the initial site plan and sufficient detail of the intended operation and the typical impacts of each activity, to enable them to assess what impact the activities will have on them or on the use of their land.)

Upon approval of the Final Scoping Report, the Draft EIA report will be compiled. The Draft EIA & EMPR report will be circulated to the registered I&AP's and stakeholders for their perusal over a 30-days period.

The Environmental Impact Assessment Report and Environmental Management Programme Report templates prescribed by the DMRE in terms of the National Environmental Management Act, 1998 in respect of listed activities that have been trigger by this application will be used to assess the information regarding the proposed project.

The research and analysis regarding the project will be processed and interpreted to compile the information required in the abovementioned template to be distributed for public comment.

h) Description of the tasks that will be undertaken during the environmental impact assessment process

The EIA process for the proposed project is depicted below:

1. Application for Environmental Authorization and Mining Right to the DMRE;
2. The DMRE responds with reference number and accepts the application;
3. Draft Scoping Report circulated for perusal by I&AP's and stakeholders;
4. Final Scoping Report (FSR) submitted to DMRE;

5. DMRE takes a decision on the FSR;
6. Impact Assessment Process:
   - Project description and site environmental baseline;
   - Impact assessment;
   - Mitigation measures and recommendations;
   - EMPr compilation;
7. Draft EIA report circulated for perusal by registered I&AP's and stakeholders;
8. Final EIA report submitted to DMRE;
9. DMRE takes a decision on the Final EIA report;
10. Submission of Financial Provision amount;
11. Announcement of Environmental Authorization and Appeal Procedure;
12. Opportunity to Appeal;
13. Execution of the Mining Right.

i) 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

Table 21: Table listing the identified impacts, residual risks to be managed and monitored.

ACTIVITY Whether listed or not listed (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply, dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc)	POTENTIAL IMPACT (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc...etc..)	MITIGATION TYPE (modify, remedy, control or stop) Through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc...etc) E.g. Modify through alternative method. Control through noise control Control through management and monitoring through rehabilitation.	POTENTIAL FOR RESIDUAL RISK
δ **Site Establishment & Infrastructure Development**	Loss of natural habitat	Control through habitat conservation & demarcation	Low - Medium
	Increased traffic and road deterioration	Control through road maintenance & traffic management	Medium
	Increased dust emissions	Control through dust suppression measures	Medium - High
	Visual impact due to site establishment	Modify through visual screening & progressive rehabilitation	Low - Medium
	Impact on biodiversity-sensitive areas	Remedy through biodiversity management plan	Medium
	Potential negative impact on stormwater drainage	Control through stormwater management system	Low - Medium
	Impact on cultural & heritage sites	Avoidance through site demarcation & monitoring	Low

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	POTENTIAL FOR RESIDUAL RISK
Topsoil Stripping & Stockpiling	Dust nuisance	Control through dust suppression & windbreaks	Medium
	Noise nuisance from machinery	Control through noise-reducing equipment	Medium
	Potential infestation of stockpiles by invasive plants	Remedy through regular monitoring & control	Low - Medium
	Erosion of denuded areas	Remedy through erosion control measures	Low
	Contamination due to hydrocarbon spillages	Control through spill management plan	Medium
Opencast Mining (Drilling & Blasting)	Health and safety risks	Modify through strict safety protocols	Medium
	Dust nuisance due to blasting and excavation	Control through water sprays and dust control	Medium - High
	Noise nuisance due to blasting	Control through controlled blasting techniques	Medium
	Light pollution due to shift work	Modify through downward-directed lighting	Medium
	Waste generation	Remedy through waste management plan	Medium
	Groundwater contamination risks	Remedy through groundwater monitoring	Medium
Transport, Stockpiling & Crushing	Dust nuisance from material transport	Control through watering & vehicle speed limits	Medium
	Noise nuisance from equipment	Control through acoustic barriers	Medium
	Light pollution	Modify through reduced light intensity	Medium

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	POTENTIAL FOR RESIDUAL RISK
	Surface runoff contamination	Control through designated drainage and pollution control	Medium
Cumulative Impacts	Loss of agricultural land	Remedy through rehabilitation plan	Medium - High
	Impact on food security & climate change	To be determined	High
	Impact on sense of place	Control through visual impact management	Medium - High
	Loss of employment post-closure	Remedy through skills development & alternative livelihood programs	Medium - High
Rehabilitation & Closure	Dust nuisance from rehabilitation activities	Control through dust suppression measures	Low
	Noise from machinery during decommissioning	Control through scheduled operations	Low
	Safety risks from unrehabilitated pits	Remedy through slope stabilization	Medium
	Pit & waste dump stability risks	Remedy through geotechnical analysis	Medium
	Groundwater recovery challenges	Remedy through post-closure monitoring	Medium
	Infestation by invasive species	Remedy through long-term vegetation management	Medium
	Improper waste disposal impacts	Control through strict closure waste management	Medium
Site Establishment & Infrastructure Development	Loss of natural habitat	Control through habitat conservation & demarcation	Low - Medium

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	POTENTIAL FOR RESIDUAL RISK
	Increased traffic and road deterioration	Control through road maintenance & traffic management	Medium
	Increased dust emissions	Control through dust suppression measures	Medium - High
	Visual impact due to site establishment	Modify through visual screening & progressive rehabilitation	Low - Medium
	Impact on biodiversity-sensitive areas	Remedy through biodiversity management plan	Medium
	Potential negative impact on stormwater drainage	Control through stormwater management system	Low - Medium
	Impact on cultural & heritage sites	Avoidance through site demarcation & monitoring	Low
Topsoil Stripping & Stockpiling	Dust nuisance	Control through dust suppression & windbreaks	Medium
	Noise nuisance from machinery	Control through noise-reducing equipment	Medium
	Potential infestation of stockpiles by invasive plants	Remedy through regular monitoring & control	Low - Medium
	Erosion of denuded areas	Remedy through erosion control measures	Low
	Contamination due to hydrocarbon spillages	Control through spill management plan	Medium
Opencast Mining (Drilling & Blasting)	Health and safety risks	Modify through strict safety protocols	Medium

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	POTENTIAL FOR RESIDUAL RISK
	Dust nuisance due to blasting and excavation	Control through water sprays and dust control	Medium - High
	Noise nuisance due to blasting	Control through controlled blasting techniques	Medium
	Light pollution due to shift work	Modify through downward-directed lighting	Medium
	Waste generation	Remedy through waste management plan	Medium
	Groundwater contamination risks	Remedy through groundwater monitoring	Medium
Transport, Stockpiling & Crushing	Dust nuisance from material transport	Control through watering & vehicle speed limits	Medium
	Noise nuisance from equipment	Control through acoustic barriers	Medium
	Light pollution	Modify through reduced light intensity	Medium
	Surface runoff contamination	Control through designated drainage and pollution control	Medium
Cumulative Impacts	Loss of agricultural land	Remedy through rehabilitation plan	Medium - High
	Impact on food security & climate change	To be determined	High
	Impact on sense of place	Control through visual impact management	Medium - High
	Loss of employment post-closure	Remedy through skills development & alternative livelihood programs	Medium - High
Rehabilitation & Closure	Dust nuisance from rehabilitation activities	Control through dust suppression measures	Low

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	POTENTIAL FOR RESIDUAL RISK
	Noise from machinery during decommissioning	Control through scheduled operations	Low
	Safety risks from unrehabilitated pits	Remedy through slope stabilization	Medium
	Pit & waste dump stability risks	Remedy through geotechnical analysis	Medium
	Groundwater recovery challenges	Remedy through post-closure monitoring	Medium
	Infestation by invasive species	Remedy through long-term vegetation management	Medium
	Improper waste disposal impacts	Control through strict closure waste management	Medium

j) Other Information required by the competent Authority

i) Compliance with the provisions of sections 24(4)(a) and (b) read with section 24(3)(a) and (7) of the National Environmental Management Act (Act 107 of 1998) the EIA report must include the:

(1) Impact on the socio-economic conditions of any directly affected person

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as **Appendix 2.19.1** and confirm that the applicable mitigation is reflected in 2.5.3, 2.11.6 and 2.12 herein)

In compliance with the provisions of Sections 24(4)(a) and (b) read with Section 24(3)(a) and (7) of the National Environmental Management Act (Act 107 of 1998), this section evaluates the potential socio-economic impacts of the proposed mining project on directly affected persons. The assessment considers employment opportunities, economic development, land use changes, and potential disruptions to existing livelihoods.

The investigation, assessment, and evaluation of these impacts were conducted through desktop studies.

Preliminary Socio-Economic Impacts Identified:

Positive Socio-Economic Impacts

- Job Creation and Employment Opportunities
- The mining project will generate direct employment in mining, processing, and administration.
- Indirect employment will be created in supporting industries, including transport, catering, security, and equipment supply.
- Preference may be given to local communities for employment opportunities.
- Economic Growth and Local Business Development
- Increased demand for goods and services will benefit local businesses, contractors, and suppliers.
- Revenue generation through taxes and royalties will contribute to regional economic development.
- Infrastructure improvements such as roads, electricity, and water supply may also support local economic activities.
- Skills Development and Training
- The project may offer training programs and upskilling initiatives for local employees, leading to long-term career development.
- Corporate Social Responsibility (CSR) Initiatives
- The project could implement social and community development programs, such as education, healthcare, and small business support.

Negative Socio-Economic Impacts

- Land Use Change
- Some landowners, farmers, and residents may be affected by mining operations, resulting in reduced agricultural activities.
- Environmental Impacts Affecting Livelihoods
- Dust, noise, and water pollution may affect agriculture and livestock farming, leading to reduced productivity for local farmers.
- Water resource usage may create competition between mining and local water supply needs.
- Influx of Job Seekers and Pressure on Local Services
- The project may attract a large number of job seekers to the area, leading to increased pressure on housing, healthcare, and municipal services.
- Economic Dependence on Mining
- The community may become overly dependent on mining-related jobs and services. A decline in operations or mine closure could result in economic hardship if alternative industries are not developed.
- Health and Safety Risks
- Increased vehicle movement and industrial activities could lead to higher accident risks on roads.
- Exposure to dust and emissions could impact respiratory health, particularly for vulnerable groups.

Mitigation Measures and Recommendations

To maximize benefits and minimize negative impacts, the following measures are recommended:

- Employment and Skills Development
- Implement local hiring policies to prioritize affected communities.
- Develop skills training and alternative employment programs to prepare workers for life after mine closure.
- Community Engagement and Compensation
- Conduct transparent consultations with affected landowners and communities.
- Environmental and Health Protections
- Implement dust suppression, noise reduction, and water conservation measures to protect farming and residential areas.
- Improve health and safety awareness for workers and communities.
- Sustainable Development Planning

- Invest in long-term community projects such as education, small business development, and infrastructure.

The proposed mining project presents significant economic opportunities but also introduces challenges for directly affected persons. Through proper planning, mitigation, and stakeholder engagement, the negative effects can be minimized, ensuring a balanced and sustainable socio-economic impact.

The final Environmental Impact Assessment Report (EIAR) will provide a detailed analysis of mitigation strategies, compensation mechanisms, and long-term sustainability planning.

(2) Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act, attach the investigation report as **Appendix 2.19.2** and confirm that the applicable mitigation is reflected in 2.5.3, 2.11.6 and 2.12 herein)

The presence of national estate as referred to in section 3(2) of the NHRA, 1999 will be reassessed by the archaeologist as part of the phase 1 heritage impact assessment review to follow during the EIA process.

k) Other matters required in terms of sections 24(4)(a) and (b) of the Act.

(the EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives as contemplated in sub-regulation 22(2)(h), exist. The EAP must attach such motivation as **Appendix 4)**

The alternatives to be considered during the impact assessment process will be done at the hand of information obtained during the site investigation, public participation process, desktop studies as well as the specialist studies of the earmarked area. As discussed earlier the following alternatives may need to be assessed in the EIAR:

A) <u>THE PROPERTY ON WHICH, OR LOCATION WHERE, IT IS PROPOSED TO UNDERTAKE THE ACTIVITY</u>

The proposed mining activity will be undertaken within the Magisterial District of Vryburg, Northwest Province. The site was selected based on geological surveys indicating viable mineral deposits and was further supported by environmental assessments and public participation inputs. The assessment of alternatives, as part of the Environmental Impact Assessment Report (EIAR), will be guided by site investigations, desktop studies, specialist studies, and stakeholder engagements.

The chosen site was selected based on its rich mineral deposits and economic viability. However, the final decision on mining activities will be informed by the outcomes of specialist studies, public participation processes, and regulatory compliance assessments. The findings of the Environmental Impact Assessment Report (EIAR) will provide further justification regarding the feasibility and sustainability of the project in this location.

B) TYPE OF ACTIVITY TO BE UNDERTAKEN

The proposed mining activity is strategically planned to maximise resource extraction while adhering to environmental and social sustainability principles. The Environmental Impact Assessment Report (EIAR) will further assess the feasibility, alternatives, and potential mitigation measures to ensure responsible mining practices.

C) DESIGN AND LAYOUT OF THE ACTIVITY

Apart from the two scenarios discussed in this report, it is expected that the present mine design/layout may have to be altered upon receipt of the specialist reports. The final design/layout alternatives will be considered during the EIA process as supplementary information is obtained from the specialist studies, and the stakeholders and I&AP's contribute their knowledge towards the proposed project.

D) OPERATIONAL ASPECTS OF THE ACTIVITY

The design and layout of the proposed mining activity have been planned to optimise resource extraction while minimizing environmental and socio-economic impacts. Various layout and design alternatives will be considered during the Environmental Impact Assessment Report (EIAR), informed by site investigations, specialist studies, public participation, and feasibility assessments.

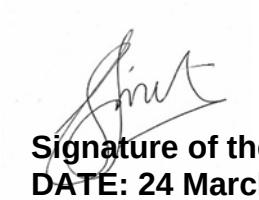
The layout includes open-pit mining areas, processing facilities, water infrastructure, roads, and waste management systems. The feasibility of alternative designs will be assessed to ensure sustainability and regulatory compliance.

E) OPTION OF NOT IMPLEMENTING THE ACTIVITY (NO-GO ALTERNATIVE)

While the No-Go Alternative preserves the existing environment, it also forgoes significant socio-economic benefits. The final decision will be guided by the findings of the Environmental Impact Assessment (EIA), stakeholder consultations, and regulatory requirements to ensure that the best long-term solution is selected for both the environment and local communities.

l) UNDERTAKING REGARDING CORRECTNESS OF INFORMATION

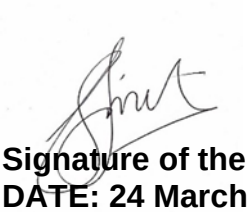
I Sonette Smit **herewith undertake that the information provided in the foregoing report is correct, and that the comments and inputs form stakeholders and Interested and Affected parties has been correctly recorded in the report.**



Signature of the EAP
DATE: 24 March 2025

m) UNDERTAKING REGARDING LEVEL OF AGREEMENT

I Sonette Smit **herewith undertake that the information provided in the foregoing report is correct, and that the level of agreement with interested and Affected Parties and stakeholders has been correctly recorder and reported herein.**



Signature of the EAP
DATE: 24 March 2025

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