Visual Impact Assessment for the Proposed Makganyane Mining Right near Postmasburg, Northern Cape Province

SUBMITTED FOR ENVIRONMENTAL AUTHORISATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) (NEMA)

Prepared for	Greenmined Environmental (Pty) Ltd
Telephone No.	+27 (0)21 851 2673
Physical Address	106 Baker Square Block 1, Paardevlei De Beers Avenue Somerset West 7130

Eco Thunder Consulting (Pty) Ltd

11 Ruby Close, Witkoppen, Fourways, Sandton, Johannesburg, South Africa, 2068

Phone: +27 64 655 2752

PO Box 2055, Fourways, Sandton, Johannesburg, South Africa, 2191

Email: admin@eco-thunder.co.za
Website: www.eco-thunder.co.za

CONTROL SHEET

ETC Reference:	ETC0606	
Project Name:	Makganyane Mining Right	
Prepared For:	Greenmined Environmental (Pty) Ltd	
Prepared By:	Eco-Thunder Consulting (Pty) Ltd www.eco-thunder.co.za	
Address:	PO Box 2055 Fourways 2191	
Telephone Number:	+27 64 655 2752 / +27 (0)10 157 8682	
Email Address:	admin@eco-thunder.co.za brogan@eco-thunder.co.za	
Report Compiled By:	**Compiler:**	Brogan Geldenhuys
	Affiliation No.:	IAIAsa: 7152 IAP2SA: 135 ILASA: 2135
	Signature:	
	Date:	29th April 2025
Report Reviewed By:	**Reviewer:**	Siobhan Motley
	Date:	30th April 2025
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EXECUTIVE SUMMARY

INTRODUCTION

Assmang (Pty) Ltd is proposing the establishment of a greenfield iron ore mine with associated infrastructure, located within the Tsantsabane Local Municipality, Northern Cape Province. The development, referred to as the Makganyane Mining Right, seeks environmental authorisation, a mining right, and a waste licence to mine hematite, magnetite, goethite, limonite, siderite, and various other iron and manganese-bearing ores, including diamonds (general).

Greenmined Environmental (Pty) Ltd ('Greenmined') has commissioned Eco-Thunder Consulting (Pty) Ltd ('ETC') to conduct a VIA for the proposed Makganyane Mining Right. The VIA forms an integral component of the broader EIA process and is specifically aimed at identifying and assessing the potential visual impacts of the proposed development on the receiving landscape and its receptors.

The Makganyane project covers an area of ~1549.61ha, straddling both sides of the R385 provincial road, ~20km north-west of Postmasburg. The site is currently characterised by agricultural land uses and semi-natural vegetation types including Kuruman Mountain Bushveld, Olifantshoek Plains Thornveld, and Postmasburg Thornveld.

Mining will be undertaken via opencast methods, with initial site establishment followed by topsoil stripping, drilling, blasting, and excavation of two main pits (Pit 1 and Pit 2). Supporting infrastructure will include internal haul roads, a centralised waste rock dump, water storage facilities, crushing and stockpile areas, and a site office complex. Ore will be crushed and stockpiled on-site, with transportation via side tipper trucks to the existing Beeshoek Mine for processing. No mineral processing will occur within the Makganyane footprint itself.

The VIA focuses on evaluating how the proposed Makganyane Iron Ore Mine may influence the visual landscape, including potential changes to scenic quality, visibility from public roads (particularly the R385), and visual intrusion in relation to sensitive receptors such as homesteads, agricultural holdings, and any natural or cultural landmarks. The assessment considers the extent and scale of the proposed mining activities, their spatial arrangement, and their degree of integration with the existing visual character of the Tsantsabane landscape.

IMPACT STATEMENT

The VIA undertaken for the proposed Makganyane Mining Right has assessed the visual implications of the project in the context of the local landscape and surrounding receptors. The site is situated in an area already influenced by agricultural activities and mining infrastructure, which has altered the natural landscape to a moderate degree. While the proposed mine will introduce additional elements such as open pits, a substantial waste rock dump, stockpiles, haul roads, and support infrastructure, these features will largely consolidate within an environment already characterised by human modification.

The assessment identified that visual impacts will be most pronounced within the immediate vicinity of the mining area. Receptors along the R385 provincial road, as well as nearby farmsteads and agricultural holdings, are likely to experience the highest degree of visual change, particularly within a radius of up to 1 kilometre from the active mining areas. Beyond this distance, the visibility and significance of the project diminish considerably due to intervening vegetation, subtle topographic variations, and the general distance decay effect. While cumulative visual impacts, in combination with other mining and agricultural activities in the region, were considered, the additional contribution from the proposed Makganyane Mining Right is not expected to fundamentally alter the broader landscape character.

Mitigation measures have been proposed to address and reduce the visual impacts associated with the project. These include careful siting and design of infrastructure, retention and enhancement of vegetation buffers, use of visually sympathetic materials and colours where feasible, minimisation of night-time lighting impacts, and progressive rehabilitation of disturbed areas. Furthermore, final closure and rehabilitation measures, including the reshaping of landforms and re-vegetation with appropriate indigenous species, will assist in softening the long-term visual footprint of the mine and integrating it more naturally into the receiving environment.

The VIA concludes that, with the full implementation of the recommended mitigation measures and responsible visual management throughout the life of the project, no fatal flaws exist that would prevent the authorisation of the proposed Makganyane Mining Right from a visual perspective. The project is therefore supported on the basis that visual impacts will be effectively managed to remain within acceptable levels. It is recommended that the mitigation measures outlined in this report be integrated into the Environmental Management Programme (EMPr) and

Closure Plan to ensure that visual objectives are met during the construction, operational and decommissioning phases.

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LIST OF ABBREVIATIONS

Abbreviation	Description
AfDB	African Development Bank
BAR	Basic Assessment Report
CA	Competent Authority
CBA	Critical Biodiversity Area
DFFE	Department of Forestry, Fisheries and Environment
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme Report
ESA	Ecological Support Area
ETC	Eco Thunder Consulting (Pty) Ltd
GIS	Geographical Information Systems
Greenmined	Greenmined Environmental (Pty) Ltd
HA	Hectares
IFC	International Finance Corporation
MEA	Millennium Ecosystem Assessment
NEMA	National Environmental Management Act
O&M	Operation and Maintenance
OHL	Overhead Line
SACLAP	South African Council for the Landscape Architectural Profession
SLA	Service Level Agreement
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VAC	Visual Absorption Capacity
VIA	Visual Impact Assessment
WHC	World Heritage Convention

GLOSSARY LIST

Glossary Item	Description
Aesthetic Value	Aesthetic value is the emotional response derived from the experience of the environment with its natural and cultural attributes. The response can be either to visual or non-visual elements and can embrace sound, smell and any other factor having a strong impact on human thoughts, feelings, and attitudes (Ramsay, 1993). Thus, aesthetic value encompasses more than the seen view, visual quality, or scenery, and includes atmosphere, landscape character and sense of place (Schapper, 1993).
Aesthetically significant place	A formally designated place visited by recreationists and others for the express purpose of enjoying its beauty. For example, tens of thousands of people visit Table Mountain on an annual basis. They come from around the country and even from around the world. By these measurements, one can make the case that Table Mountain (a designated National Park) is an aesthetic resource of national significance. Similarly, a resource that is visited by large numbers who come from across the region probably has regional significance. A place visited primarily by people whose place of origin is local is generally of local significance. Unvisited places either have no significance or are "no trespass" places. (After New York, Department of Environment 2000).
Aesthetic impact	Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Mere visibility, even startling visibility of a Project proposal, should not be a threshold for decision making. Instead, a Project, by its visibility, must clearly interfere with or reduce (i.e., visual impact) the public's enjoyment and/or appreciation of the appearance of a valued resource e.g., cooling tower blocks a view from a National Park overlook (after New York, Department of Environment 2000).
Cumulative Effects	The summation of effects that result from changes caused by a development in conjunction with the other past, present, or reasonably foreseeable actions.
Glare	The sensation produced by luminance within the visual field that is sufficiently greater than the luminance to which the eyes are adapted, which causes annoyance, discomfort, or loss in visual performance and visibility. See Glint. (USDI 2013:314)
Glint	A momentary flash of light resulting from a spatially localized reflection of sunlight. See Glare. (USDI 2013:314)
Landscape Character	The individual elements that make up the landscape, including prominent or eye-catching features such as hills, valleys, woods, trees, water bodies, buildings, and roads. They are generally quantifiable and can be easily described.
Landscape Impact	Landscape effects derive from changes in the physical landscape, which may give rise to changes in its character and how this is experienced (Institute of Environmental Assessment & The Landscape Institute 1996).

Glossary Item	Description
Study area	For the purposes of this report this Project the study area refers to the proposed Project footprint/Project site as well as the 'zone of potential influence' (the area defined as the radius about the centre point of the Project beyond which the visual impact of the most visible features will be insignificant) which is a 5,0km radius surrounding the proposed Project footprint/site.
Project Footprint/Site	For the purposes of this report the Project site/footprint refers to the actual layout of the Project as described.
Sense of Place (genius loci)	Sense of place is the unique value that is allocated to a specific place or area through the cognitive experience of the user or viewer. A genius locus literally means 'spirit of the place'.
Sensitive Receptors	Sensitivity of visual receptors (viewers) to a proposed development.
Viewshed analysis	The two-dimensional spatial pattern created by an analysis that defines areas, which contain all possible observation sites from which an object would be visible. The basic assumption for preparing a viewshed analysis is that the observer eye height is 1,8m above ground level.
Visibility	The area from which Project components would potentially be visible. Visibility depends upon general topography, aspect, tree cover or other visual obstruction, elevation, and distance.
Visual Exposure	Visibility and visual intrusion qualified with a distance rating to indicate the degree of intrusion and visual acuity, which is also influenced by weather and light conditions.
Visual Impact	Visual effects relate to the changes that arise in the composition of available views because of changes to the landscape, to people's responses to the changes, and to the overall effects with respect to visual amenity available views because of changes to the landscape, to people's responses to the changes, and to the overall effects with respect to visual amenity.
Visual Intrusion	The nature of intrusion of an object on the visual quality of the environment resulting in its compatibility (absorbed into the landscape elements) or discord (contrasts with the landscape elements) with the landscape and surrounding land uses.
Visual Absorption Capacity (VAC)	VAC is defined as the landscape's ability to absorb physical changes without transformation in its visual character and quality. The landscape's ability to absorb change ranges from low- capacity areas, in which the location of an activity is likely to cause visual change in the character of the area, to high-capacity areas, in which the visual impact of development will be minimal (Amir & Gidalizon 1990).
Worst-case Scenario	Principle applied where the environmental effects may vary, for example, seasonally or collectively to ensure the most severe potential effect is assessed.

Glossary Item	Description
Zone of Potential Visual Influence	By determining the zone of potential visual influence, it is possible to identify the extent of potential visibility and views which could be affected by the proposed development. Its maximum extent is the radius around an object beyond which the visual impact of its most visible features will be insignificant primarily due to distance.

SPECIALIST CHECKLIST

No.	NEMA 2014 (as amended) Regs - Appendix 6(1) Requirement	Report Section
	A specialist report prepared in terms of these Regulations must contain -	
a	details of - • the specialist who prepared the report; and • the expertise of that specialist to compile a specialist report including a curriculum vitae.	Specialist Details and Appendix A
b	a declaration that the specialist is independent in a form as may be specified by the competent authority (CA);	Specialist Declaration
c	an indication of the scope of, and the purpose for which, the report was prepared;	Section 5.1
	an indication of the quality and age of base data used for the specialist report	Section 1.4
	a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change	Section 7 and Section 8
d	the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;	Section 5.4
e	a description of the methodology adopted in preparing the report or carrying out the specialised process inclusive of equipment and modelling used;	Section 5
f	details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of a site plan identifying site alternatives;	Section 7
g	an identification of any areas to be avoided, including buffers;	Section 8.2
h	a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;	Section 6.2

No.	NEMA 2014 (as amended) Regs - Appendix 6(1) Requirement	Report Section
l	a description of any assumptions made and any uncertainties or gaps in knowledge;	Section 0
j	a description of the findings and potential implications of such findings on the impact of the proposed activity or activities;	Section 8.2
k	any mitigation measures for inclusion in the EMPr;	Section 0
l	any conditions for inclusion in the EA;	Section 9
m	any monitoring requirements for inclusion in the EMPr or EA;	Section 0
n	a reasoned opinion - • whether the proposed activity, activities or portions thereof should be authorised; • regarding the acceptability of the proposed activity or activities; and • if the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan.	Section 9
o	a description of any consultation process that was undertaken during the course of preparing the specialist report;	N/A
p	a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and	N/A
q	any other information requested by the CA.	N/A

SPECIALIST DETAILS

ETC is a 100% woman-owned, private company that specialises in a range of specialist studies, such as visual impact assessments, air quality impact assessments, noise impact assessments socio-economic impact assessments, socio-economic research, economic development planning, development program design and implementation as well as community trust management. Based across South Africa, Eco-Thunder has established itself as an expert on the conditions, needs and assets of communities that are linked to independent power generation facilities.

SPECIALIST DECLARATION

Full Name	Title/Position

Brogan Geldenhuys	CEO
Telephone Number	**Email Address**
064 655 2752	brogan@eco-thunder.co.za
Qualification(s):	BEng Industrial
Registration(s):	ILASA, IAIAsa, GISSA, IAP2

I, **Brogan Geldenhuys**, declare that: –

- I act as an independent specialist in this application;
- I will perform the work relating to the application objectively, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the CA all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken concerning the application by the CA; and - the objectivity of any report, plan or document to be prepared by myself for submission to the CA;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offense and is punishable by law.

Signature of the Specialist

30/04/2025

Date

Eco Thunder Consulting (Pty) Ltd ('ETC'), acting as an independent specialist in the field of visual impact assessment within the energy sector, hereby affirms its professional standing and expertise. Appointed by Greenmined Environmental (Pty) Ltd ('Greenmined') for the specific purpose of conducting an independent and unbiased assessment, our firm leverages approaches and methodologies that have been meticulously refined and successfully applied across various projects.

Our engagement with this project is characterised by a commitment to maintaining the highest standards of integrity and professionalism. The opinions and viewpoints expressed within this

report are solely those of ETC and reflect our extensive experience and specialised knowledge in visual impact assessment within the renewable energy sector.

This assessment is conducted in accordance with the best practices and industry standards, ensuring a comprehensive and objective analysis. It is our firm belief that the methodologies employed are robust and have established precedence in maintaining the quality and accuracy required for such evaluations.

In fulfilling our role as an independent specialist, we have adhered to all relevant legal and regulatory requirements, ensuring that our assessment is both transparent and accountable. We affirm that our relationship with Greenmined and all other parties involved in this project is free from any conflict of interest or undue influence, thereby safeguarding the impartiality of our findings and recommendations.

ETC remains dedicated to providing an assessment that is not only thorough and precise but also contributes positively to the energy sector, reflecting our ongoing commitment to environmental sustainability and responsible development.

The author of this report, however, accepts no liability for any actions, claims, demands, losses, liabilities, costs, damages, and expenses arising from or in connection with services rendered, and by the use of the information contained in this document.

No form of this report may be amended or extended without the prior written consent of the author and/or a relevant reference to the report by the inclusion of an appropriately detailed citation.

Any recommendations, statements, or conclusions drawn from or based on this report must cite or refer to this report. Whenever such recommendations, statements or conclusions form part of the main report relating to the current investigation, this report must be included in its entirety.

1 Background

1.1 Scope and Objective of the Specialist Study

The main aim of the study is to document the baseline and to ensure that the visual/aesthetic consequences of the proposed Makganyane Mining Right are understood. The Visual Impact Assessment (VIA) therefore aims to identify scenic resources, and visually sensitive areas or receptors. It also aims to identify key concerns or issues relating to potential visual impacts arising from the Project, and which must be addressed in the assessment phase**.**

1.2 Structure of the Report

The report is organised into ten sections:

- Section 1: Background;
- Section 2: Project Description;
- Section 3: Requirement for a VIA;
- Section 4: Legislation and Policy Review;
- Section 5: Approach and Methodology;
- Section 6: Baseline Environmental Profile;
- Section 7: Identification of Visual Impacts;
- Section 8: Impacts and Risks Identified;
- Section 9: Environmental Impact Statement Conclusion; and
- Section 10: References.

1.3 Seasonal Change

In terms of Appendix 6 of the 2014 EIA Regulations, a specialist report must contain information on “the date and season of the site investigation and the relevance of the season to the outcome of the assessment”. The site visit was undertaken in **Autumn (1 April 2025).** The seasonal variation in vegetation and landscape characteristics will be taken into consideration when evaluating the significance of the impacts identified, the mitigation measures, and the conclusions of the assessment.

1.4 Information Base

The following information was used to conduct the VIA:

- Documentation and KML files supplied by the client;
- ToR for the visual specialist;

- Photographs and information captured during the site visit;
- Google Earth software and data;
- Sentinel-2 Satellite Imagery;
- SRTM Digital Elevation Model;
- South African National Landcover dataset;
- Local zoning and planning documents;
- Historical maps and aerial photographs;
- Meteorological data;
- Landscape character assessments;
- Geographic Information System (GIS) data; and
- Regulatory and policy documents.

1.5 Terms and Reference

A specialist study is required to establish the visual baseline and to identify any potential visual impacts arising from the proposed development based on the general requirements for a comprehensive VIA.

The following terms of reference were established:

- Data collected allows for a description and characterisation of the receiving environment;
- Describe the landscape character, and quality and assess the visual resource of the study area;
- Describe the visual characteristics of the components of the proposed Project;
- Identify issues that must be addressed in the impact assessment phase; and
- Propose mitigation options to reduce the potential impact of the proposed Project.

1.6 Level of Confidence

Level of confidence is determined as a function of:

The information available, and understanding of the study area by the practitioner:

- 3: A high level of information is available of the study area and a thorough knowledge base could be established during site visits, surveys etc. The study area was readily accessible.

- 2: A moderate level of information is available of the study area and a moderate knowledge base could be established during site visits, surveys etc. Accessibility to the study area was acceptable for the level of assessment.
- 1: Limited information is available of the study area and a poor knowledge base could be established during site visits and/or surveys, or no site visit and/or surveys were carried out.

The information available, understanding of the study area and experience of this type of project by the practitioner:

- 3: A high level of information and knowledge is available of the project and the visual impact assessor is well experienced in this type of project and level of assessment.
- 2: A moderate level of information and knowledge is available of the project and/or the visual impact assessor is moderately experienced in this type of project and level of assessment.
- 1: Limited information and knowledge are available of the project and/or the visual impact assessor has a low experience level in this type of project and level of assessment.

The level of confidence for this assessment is determined to be 9 and indicates that the author's confidence in the accuracy of the findings is high.

1.7 Limitations and Assumptions

The following assumptions and limitations are applicable to this Report:

Assumptions

- The assessment has been based on the requirements of the Western Cape Department of Environmental Affairs & Development Planning Guidelines (WC DEDP)[1].
- The assessment assumes that all necessary consultations with stakeholders, including local communities, authorities, and other interested parties, have been/will be conducted in accordance with legal requirements, and that their views and concerns have been duly considered.
- Whilst most homesteads and housing areas were visited during the site visit in order to confirm their nature and likely visibility of the development, it was not possible to visit all homesteads and housing areas.
- The information and analysis provided in this report is based on the details available during the undertaking of the VIA. As the VIA specialists, we have, to the best of our ability, analysed and interpreted the data provided.

[1] The WC DEDP Guidelines offer detailed directives on incorporating visual and aesthetic specialists into the EIA processes. These guidelines represent the primary legislative framework specifically pertaining to VIA in the region. While provincial insights and information will be integrated into the respective reports where feasible, it is important to note that the WC DEDP Guidelines are regarded as the definitive legislative standard for best practices in VIA.

- We operate under the assumption that all information supplied by the client is accurate, current, and reflective of the agreements made with relevant landowners. Our assessments and recommendations are based on the information provided to us, and we rely on the client to ensure that this information is complete and up to date.
- The Project report uses the concept of 'worst case scenario' to identify issues and rate visual impacts. This scenario assumes that all facilities along with the associated grid infrastructure and sub-stations would be constructed at the same time.

Limitations

- It was not possible to visit all homesteads and housing areas.
- The information and analysis are based on the details available during the undertaking of the VIA, and there is an inherent limitation in the data available at any given time.
- There is a reliance on the accuracy, currency, and completeness of the information supplied by the client. Any decisions regarding development on specific portions of land, including agreements on relocations, demolitions, or other alterations, should be confirmed and discussed directly with the relevant landowners.
- Regulation 11(3) of the EIA Regulations, which suggests that if more than one activity is part of the same development, a single application may be required, discourages the practice of splitting components or assessing them in isolation, thereby promoting a unified and integrated approach to cumulative impact assessment.
- The responsibility for implementing the recommendations, mitigation measures, and any other actions outlined in this report lies solely with the client or project proponent. The VIA practitioners are not responsible for monitoring, enforcing, or ensuring compliance with these measures.

2 Project Description

Assmang (Pty) Ltd is proposing the establishment of a greenfield iron ore mine with associated infrastructure, located within the Tsantsabane Local Municipality, Northern Cape Province. The development, referred to as the Makganyane Mining Right, seeks environmental authorisation, a mining right, and a waste licence to mine hematite, magnetite, goethite, limonite, siderite, and various other iron and manganese-bearing ores, including diamonds (general).

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The Makganyane project covers an area of ~1549.61ha, straddling both sides of the R385 provincial road, ~20km north-west of Postmasburg. The site is currently characterised by agricultural land uses and semi-natural vegetation types including Kuruman Mountain Bushveld, Olifantshoek Plains Thornveld, and Postmasburg Thornveld.

Mining will be undertaken via opencast methods, with initial site establishment followed by topsoil stripping, drilling, blasting, and excavation of two main pits (Pit 1 and Pit 2). Supporting infrastructure will include internal haul roads, a centralised waste rock dump, water storage facilities, crushing and stockpile areas, and a site office complex. Ore will be crushed and stockpiled on-site, with transportation via side tipper trucks to the existing Beeshoek Mine for processing. No mineral processing will occur within the Makganyane footprint itself.

The VIA focuses on evaluating how the proposed Makganyane Iron Ore Mine may influence the visual landscape, including potential changes to scenic quality, visibility from public roads (particularly the R385), and visual intrusion in relation to sensitive receptors such as homesteads, agricultural holdings, and any natural or cultural landmarks. The assessment considers the extent and scale of the proposed mining activities, their spatial arrangement, and their degree of integration with the existing visual character of the Tsantsabane landscape.

2.1 Project Location

The proposed Makganyane Mining Right area is situated ~20km north-west of Postmasburg, within the Northern Cape Province, on both sides of the R385 provincial road.

Table 1, Table 2 and Figure 1 below provides the details of the project, including the main infrastructure components and services that will be required during the project life cycle.

Table 1: Details of the Study Area

Component	Description
District Municipality	ZF Mgcawu District Municipality (ZMDM)
Local Municipality	Tsantsabane Local Municipality (TLM)

Ward Number	Ward 6
Nearest Town(s)	Postmasburg (~20 km south-east);
Access Road	Accessible via the R385, which intersects the mining right area and links to Postmasburg to the south-east and Olifantshoek to the north-west. Internal access is expected to be formalised via dedicated haul roads and entrance points from the R385.

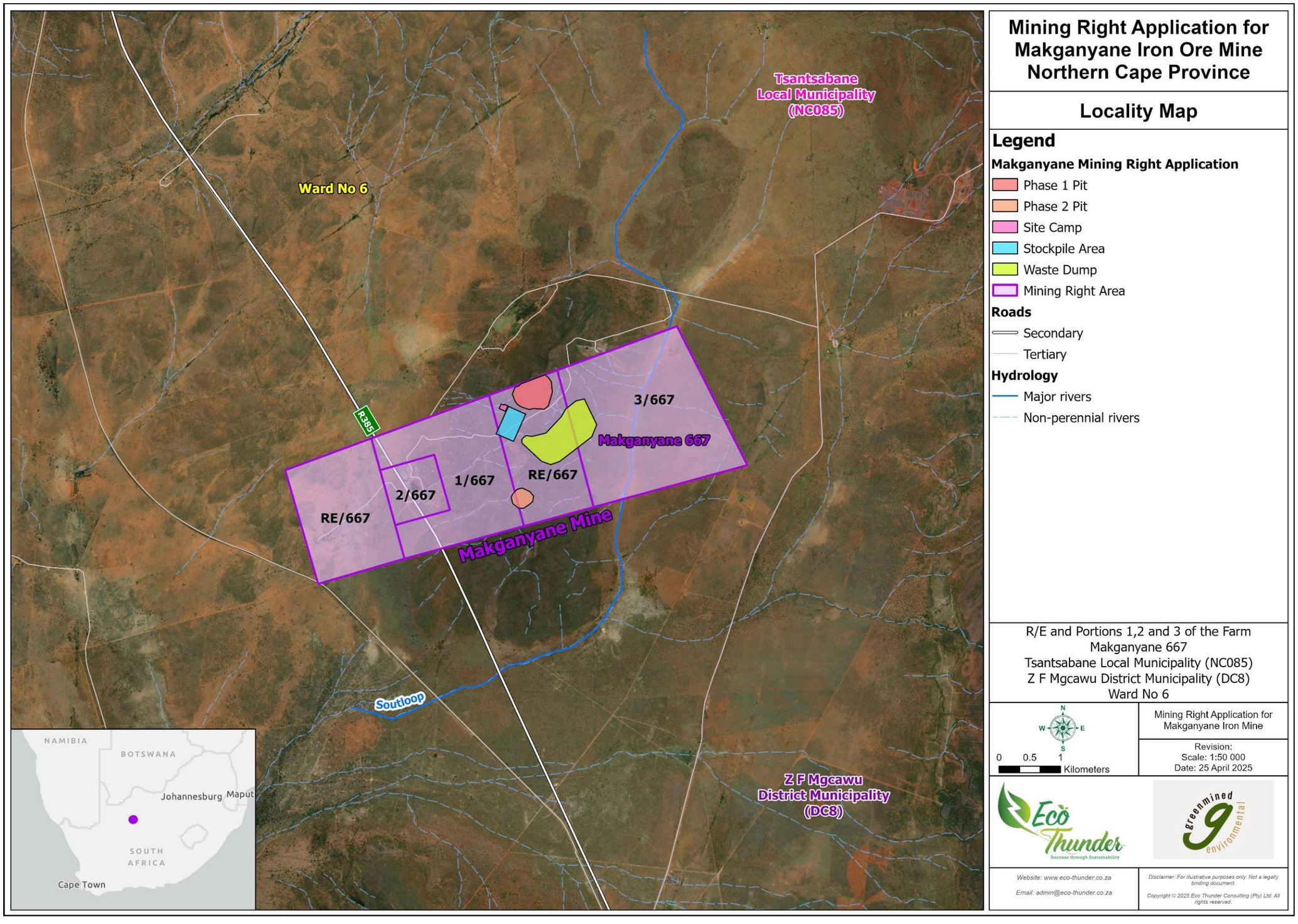

Figure 1: Locality Map

2.2 Project Technical Details

The proposed Makganyane Mining Right will be developed as a greenfield opencast iron ore mining operation. The mining method entails conventional open pit mining, involving site preparation, soil stripping, drilling, blasting, excavation, haulage, and in-pit backfilling.

The preliminary layout of the mining area (Figure 3 and Figure 4) is expected to include at least the following infrastructure components:

- Internal Haul Roads: An internal network of unpaved haul roads to connect mining pits, stockpiles, waste rock dumps, and support facilities.
- Office Complex (~1 ha):
  - Ablution facilities;
  - Diesel depot;
  - Equipment workshop;
  - Office containers;
  - Parking area;
  - Planning and meeting rooms;
  - Security access control;
  - Water reservoir;
  - Wash bays.
- Stockpile Area (~15 ha):
  - Crushing plant;
  - Weighbridge and operations hut.
- Excavations (~36 ha):
  - Pit 1 (northern pit);
  - Pit 2 (southern pit).
- Waste Rock Dump (~64 ha): Centralised dump for overburden and waste material.
- Water Storage Dams: Surface dams constructed for pit dewatering and operational water supply.

Ore will be hauled to the stockpile area for primary crushing and stockpiling before being transported via side tipper trucks along the R385 to Beeshoek Mine for further processing. No mineral beneficiation will occur on site.

The operational Life of Mine (LoM) is projected at approximately 38 months, after which closure and rehabilitation activities will be undertaken. Final landform recontouring, topsoil replacement, and vegetation re-establishment will form part of the closure objectives, in alignment with the Environmental Management Programme (EMPr) and Closure Plan requirements.

Table 2 provides detailed information on the infrastructure and services required for the proposed Makganyane Mining Right throughout its lifecycle:

Table 2: Details of the Proposed Makganyane Mining Right Project and Associated Infrastructure

Component	Description/Dimensions
Farm Name(s) and Number(s) of Properties Affected by the TPP, incl. SG 21 Digit Code (s)	• R/E of Farm Makganyene No. 667 (C04100000000066700000); • R/E of Portion 1 of Farm Makganyene No. 667 (C04100000000066700001); • Portion 2 of Farm Makganyene No. 667 (C04100000000066700002); and • Portion 3 of Farm Makganyene No. 667 (C04100000000066700003)
Current zoning	Agriculture
Total extent of the Affected Properties, also referred to as the project site[2]	~1549.61ha
Total extent of the Development footprint[3]	~116ha (as per Phase 1 & 2 scenario)
Mining Method	Opencast mining via drilling, blasting, and truck-and-shovel operations
Number of Pits	2 (Pit 1 – North; Pit 2 – South)
Bench Height	10m per bench
Pit Slope Angle	Between 45° and 55°
Ramp Inclination	8% Gradient
Office Complex	~1 ha; includes ablution facilities, diesel depot, workshop, office containers, planning rooms, security checkpoint, and wash bays
Stockpile Area	~15ha; includes crushing plant, weighbridge, and operations hut

2 The project site is that identified area within which the development area and development footprint are located. It is the broader geographic area assessed as part of the EIA process, within which indirect and direct effects of the project may occur.
3 The development footprint is the defined area (located within the development area) where the prospecting right and other associated infrastructure for the proposed project is planned to be constructed. This is the actual footprint of the facility, and the area which would be disturbed.

Waste Rock Dump	~64ha (centralised location)
Excavation Area (Pits)	~36ha combined
Water Storage Dams	Required for pit dewatering and operations
Power Supply	Primarily diesel generators; potential for grid connection from nearby 132kV overhead line
Transport Route	R385 provincial road (Makganyane to Beeshoek Mine, ~11.5km)
Crushing and Haulage	On-site crushing and stockpiling; ore transported off-site for processing
Construction Camp (Temporary)	Will be established during site preparation; extent to be confirmed in EIAR
Mining Schedule	Phase 1 & 2: 38-month LoM; includes ramp-up, waste stripping, ore production, and rehabilitation

Table 3 lists the GPS coordinates of the proposed mining right and corresponds to Figure 2.

Table 3: GPS Coordinates of the Proposed Mining Footprint

Number	Degrees, Minutes, Seconds		Decimal Degrees	
	LAT (S)	LONG (E)	LAT (S)	LONG (E)
A	28°09’00.02”	22°53’50.99”	-28.150006°	22.897497°
B	28°08’42.35”	22°54’42.37”	-28.145097°	22.911769°
C	28°08’18.66”	22°55’51.24”	-28.138516°	22.930899°
D	28°08’04.65”	22°56’31.94”	-28.134624°	22.942206°
E	28°07’40.21”	22°57’42.93”	-28.127835°	22.961924°
F	28°08’53.30”	22°58’25.59”	-28.148140°	22.973776°
G	28°09’17.06”	22°56’54.85”	-28.154740°	22.948571°
H	28°09’27.69”	22°56’14.23”	-28.157692°	22.937286°
J	28°09’46.16”	22°55’03.61”	-28.162823°	22.917670°
K	28°09’59.73”	22°54’11.70”	-28.166593°	22.903251°
1A	28°08’58.80”	22°54’47.84”	-28.149666°	22.913290°
1B	28°08’50.29”	22°55’20.36”	-28.147303°	22.922323°
1C	28°09’19.11”	22°55’29.96”	-28.155310°	22.924989°
1D	28°09’27.62”	22°54’57.44”	-28.157672°	22.915956°

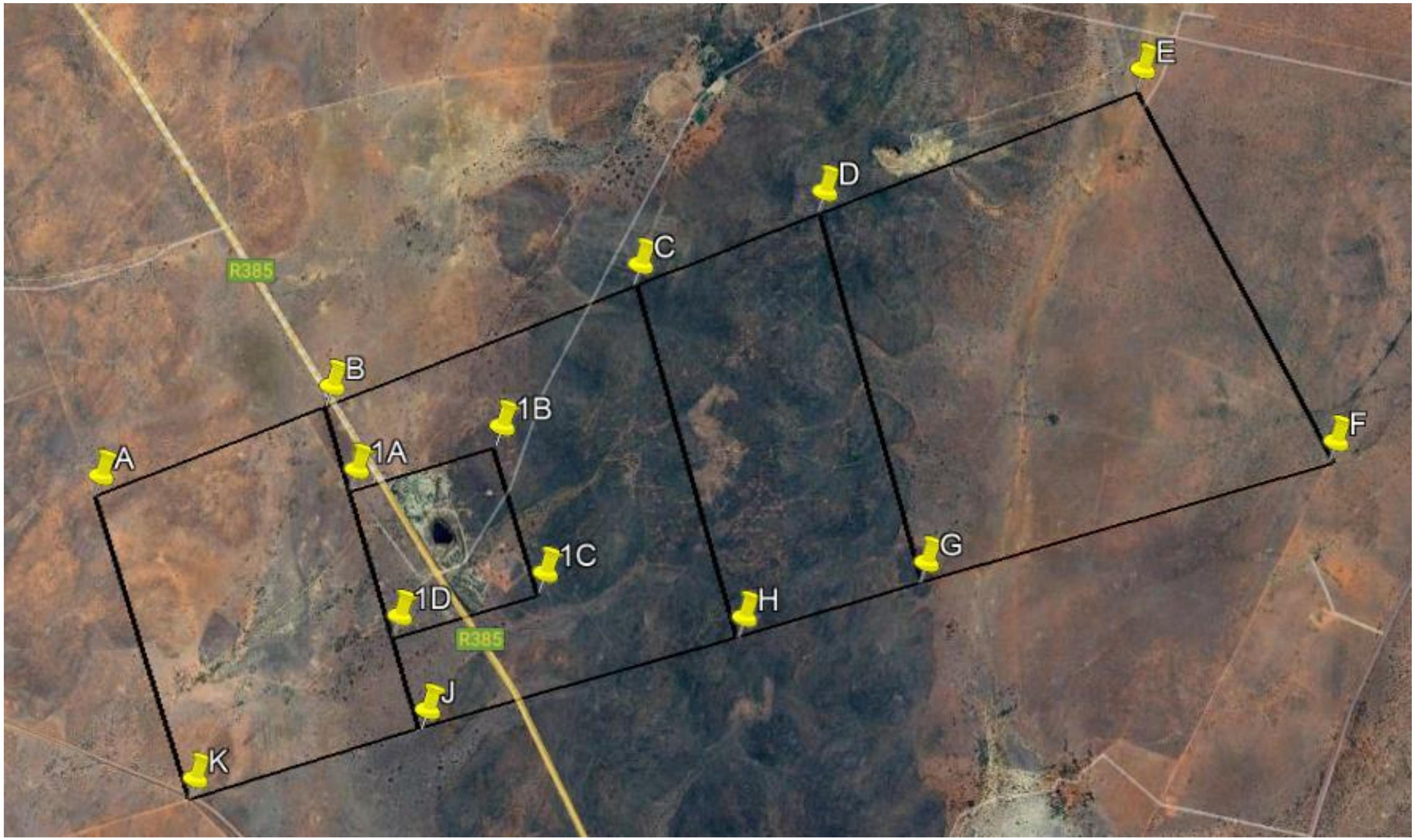

Figure 2: Satellite View of the Proposed Mining Area

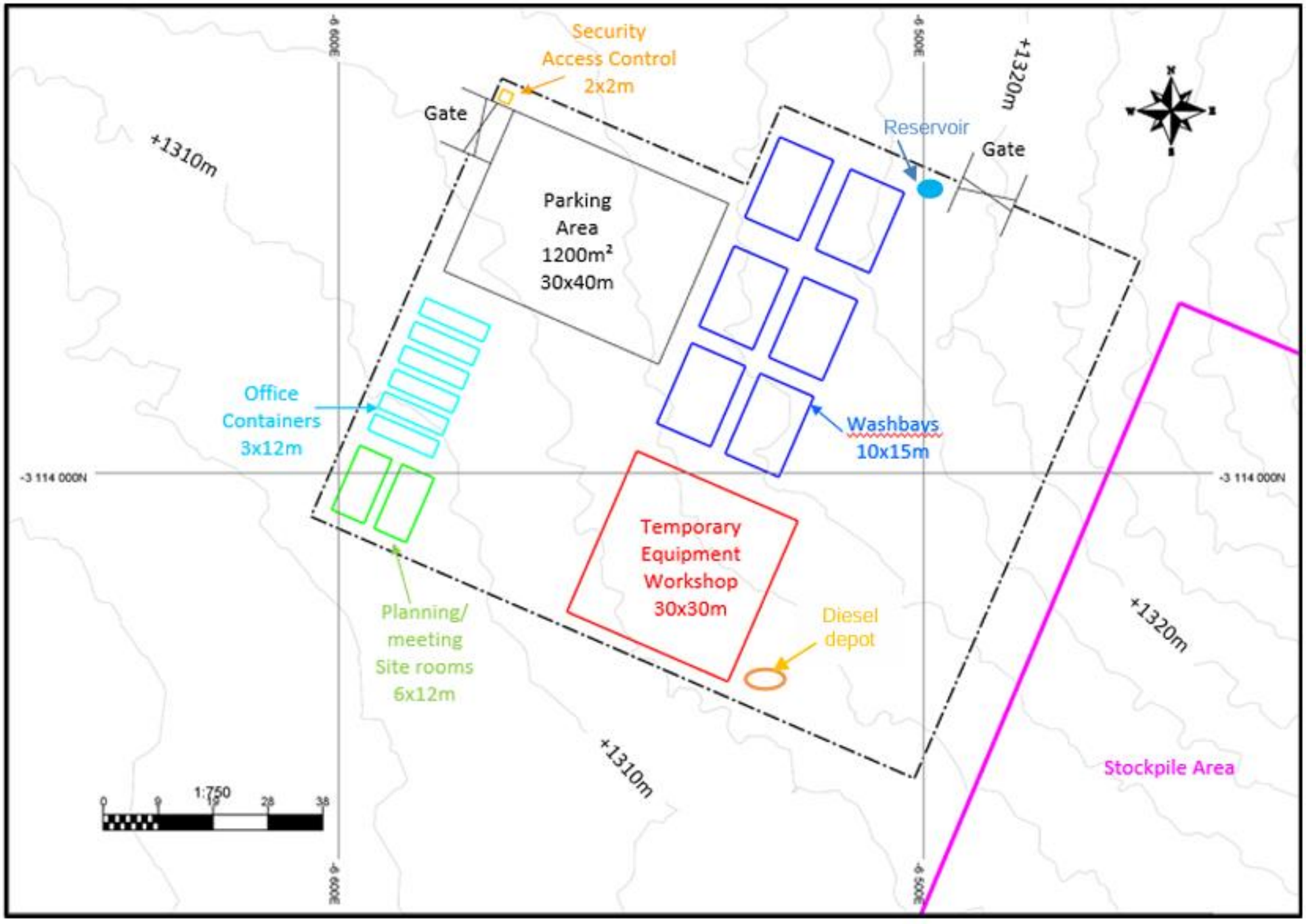

Figure 3: Preliminary Layout of the Infrastructure to be Developed on Site (final to be included in the EIAR)

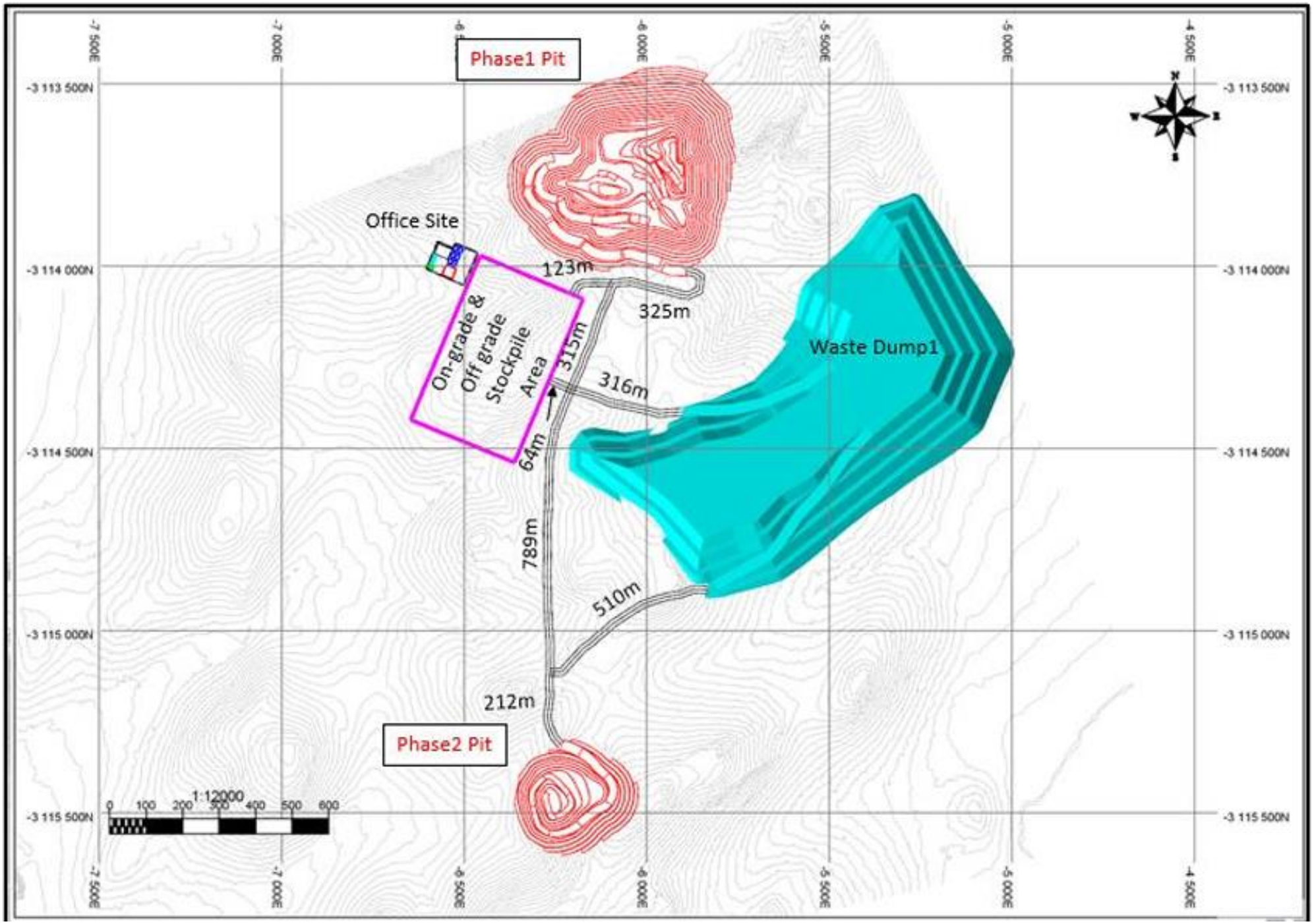

Figure 4: Proposed Mine Design Layout

2.3 Assessment Alternatives

2.3.1 Site Alternatives

The proposed Makganyane Mining Right application covers ~1 549.61 ha across four portions of the farm Makganyene No. 667, located within the Tsantsabane Local Municipality. The current project footprint was determined based on historical prospecting outcomes (NC 2292 PR) and geological modelling conducted through the Mining Work Programme (MWP).

Due to the fixed location of the mineralised ore body, genuine alternative site options are limited. Applicants can only apply for mining rights in areas where such rights are not already held and where the target mineral resource is confirmed.

One potential site-level refinement, however, involves the possible omission of the far south-western portion (±292 ha) of the Remainder of Makganyene No. 667. This portion is presently not earmarked for mining infrastructure and may be excluded from the final project footprint. The inclusion or exclusion of this area is subject to further consideration during the EIA phase and will be informed by specialist input and stakeholder feedback.

From a visual perspective, omission of this southwestern area could marginally reduce the spatial extent of visual exposure from receptors situated to the west and south-west of the mining right boundary.

Figure 5: Satellite view of the south-western portion (light green polygon) of the Remainder of Makganyane No 667 presently not earmarked for Development

2.3.2 Type of Activity Alternatives

The Applicant proposes to undertake conventional open pit mining, using drilling, blasting, and excavation techniques. The only realistic land use alternative considered is the continuation of agricultural activities, including livestock grazing and game farming, which currently dominate land use across the farm. This option would preserve the rural character of the area and avoid any visual transformation of the landscape.

However, the feasibility of continuing agricultural land use versus the potential socio-economic return from mining will be further assessed in the EIA. From a visual perspective, agricultural use would retain the area's current landscape character, avoiding the introduction of large-scale anthropogenic infrastructure such as pit excavations, waste rock dumps, and haul roads.

2.3.3 Design and Layout Alternatives

The initial project planning phase considered two alternative layout scenarios:

- **Option 1: Phase 1 & 2 Scenario:**

  This is the preferred and current layout, involving two open pits (Pit 1 and Pit 2) with a combined footprint of ~36ha. Mining operations are planned over a 38-month Life of Mine (LoM).

  Due to the sub-surface location of the ore bodies, a significant waste stripping campaign is required before ore can be accessed. Pit development will result in increased surface disturbance during the early months of mining.

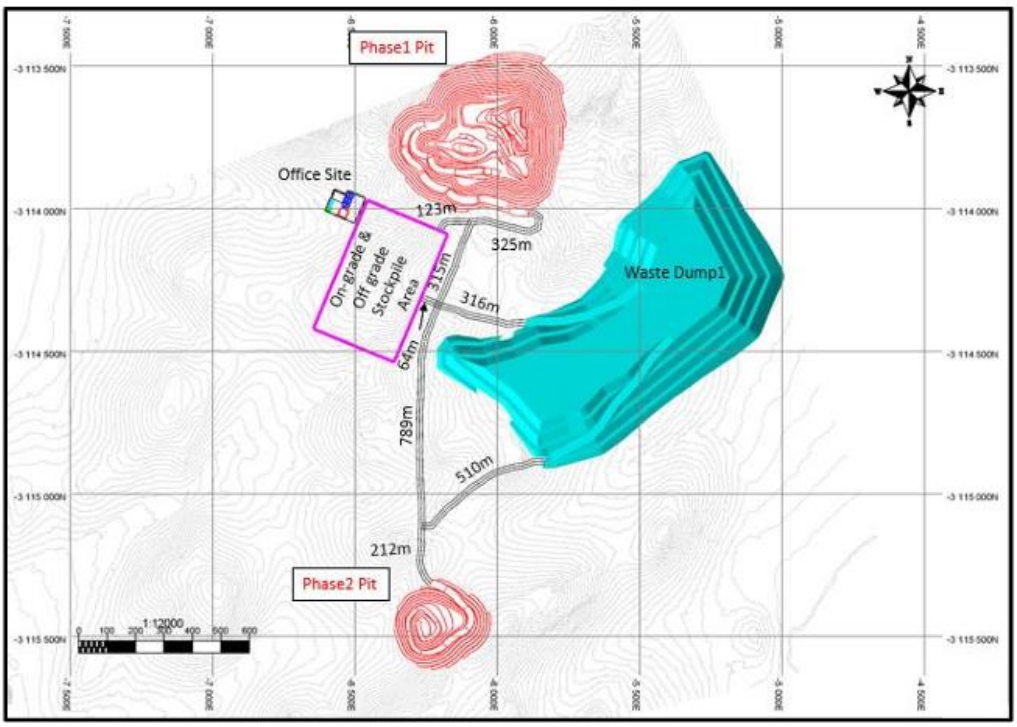

Figure 6: Preferred Layout of Pit 1 (north) and Pit 2 (south)

- **Option 2: Phase 1–4 Scenario:**
  - This extended layout proposed further pushbacks of Pit 1 and Pit 2 into Phases 3 and 4. While initially promising from a resource extraction perspective, this option was found to be economically unviable due to excessive waste generation. As such, it was not carried forward.

    Visually, this option would have increased the scale and duration of surface disruption, resulting in a greater cumulative visual footprint and higher potential for long-term exposure.

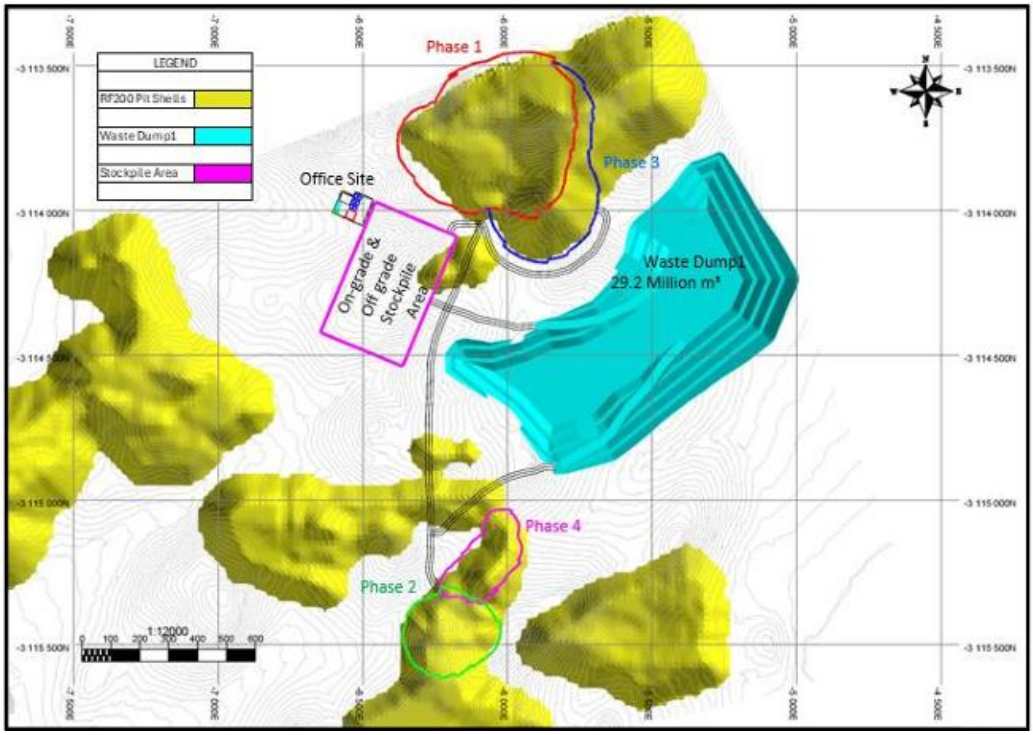

Figure 7: Alternative Layout of Mining Area through Phases 1 – 4

- **Final Layout Considerations:**
  - The present layout may still be refined during the EIA process. For example, the owner of Portion 3 of Makganyene No. 667 has raised concerns over the current location of the waste rock dump, which could affect grazing capacity.

    The potential repositioning of the waste rock dump — a significant visual element — is particularly relevant to this VIA. Its final location will directly influence the intensity and extent of visual impact on nearby receptors, including adjacent landowners and users of the R385.

2.3.4 Technology Alternatives

No complex processing infrastructure or alternative mining technologies are proposed. The operation will use conventional surface mining equipment suited to open pit environments.

As processing will occur off-site at Beeshoek Mine, there is no need for on-site beneficiation technology.

2.3.5 No-Go Alternative

Under the no-go alternative, the proposed mining operation would not proceed. The land would continue to be used for agricultural purposes, with the mineral resources remaining unextracted.

From a visual standpoint, this scenario would result in no change to the existing rural landscape character, and no additional anthropogenic structures would be introduced. It would avoid all landscape transformation, dust plumes, night-time lighting, and the visibility of large-scale infrastructure such as pit voids and waste rock dumps.

However, the no-go option also implies the loss of socio-economic benefits, including employment opportunities and regional economic development, in a municipality facing significant unemployment and poverty challenges.

The trade-offs between landscape preservation and socio-economic advancement will be assessed in detail through the broader EIA process, with the visual implications of each option clearly described in this VIA.

3 Requirement for a VIA

As outlined in Table 4, the requirement for visual input may arise from the characteristics of both the receiving environment and the project itself. The following indicators are identified as potential signals for the necessity of visual input:

The nature of the receiving environment:

- Areas with protection status, such as national parks or nature reserves;
- Areas with proclaimed heritage sites or scenic routes;
- Areas with intact wilderness qualities, or pristine ecosystems;
- Areas with intact or outstanding rural or townscape qualities;
- Areas with a recognized special character or sense of place;
- Areas lying outside a defined urban edge line;
- Areas with sites of cultural or religious significance;
- Areas of important tourism or recreation value;
- Areas with important vistas or scenic corridors; and
- Areas with visually prominent ridgelines or skylines.

The nature of the project:

- High intensity type projects including large-scale infrastructure;
- A change in land use from the prevailing use;
- A use that is in conflict with an adopted plan or vision for the area;
- A significant change to the fabric and character of the area;
- A significant change to the townscape or streetscape;
- Possible visual intrusion in the landscape; and
- Obstruction of views of others in the area.

These indicators can help determine whether a visual impact assessment is necessary for a particular project. It's important to note that this list is not exhaustive and other factors may also suggest the need for visual input.

3.1 Components of Visual Studies

As per Western Cape Department of Environmental Affairs & Development Planning: Guideline for Involving Visual and Aesthetic Specialists in EIA Processes Edition 1 (CSIR, 2005), the typical components of visual studies according to Box 8 are as follows:

Table 4: Typical Components of Visual Studies

Box 8: Typical Components of Visual Studies
• Identification of issues and values relating to visual, aesthetic and scenic resources through involvement of I&APs and the public. • Identification of landscape types, landscape character and sense of place, generally based on geology, landforms, vegetation cover and land use patterns. • Identification of viewsheds, view catchment area and the zone of visual influence, generally based on topography. • Identification of important viewpoints and view corridors within the affected environment, including sensitive receptors. • Indication of distance radii from the proposed project to the various viewpoints and receptors. • Determination of the VAC of the landscape, usually based on topography, vegetation cover or urban fabric in the area. • Determination of the relative visibility, or visual intrusion, of the proposed project. • Determination of the relative compatibility or conflict of the project with the surroundings. • A comparison of the existing situation with the probable effect of the proposed project, through visual simulation, generally using photomontages.

The approach to visual assessment should be based on both quantitative and qualitative aspects. Quantitative aspects often make use of landscape resource classification methods. These may include combinations of landforms (geomorphology), vegetation cover, and land use mapping.

The actual approach and method used would depend on the level of visual input required in the EIA process. Effective interaction with other specialists should be facilitated by the EIA practitioner to ensure that an integrated approach is adopted, where the various components of the environment are seen.

This visual guideline document is therefore an attempt to develop a 'best practice' approach for visual specialists, EIA practitioners and authorities involved in the EIA process.

4 Legislation and Policy Review

A vital aspect of this process involves assessing the suitability of a proposed development in relation to key planning and policy documents.

It is worth noting the following points: Although there is limited legislation specifically addressing VIAs, there exist guidelines that offer guidance for conducting visual assessments. Additionally, several laws are in place to safeguard visual resources, as well as regulations applicable to specialists in various fields.

This report adheres to the following legal requirements and guideline documents:

- International Good Practice.
- National Legislation and Guidelines; and
- Policy Fit.

4.1 International Good Practice

The following documentation provides good practice guidelines, specifically:

- Guidelines for Landscape and VIA[4].
- Millennium Ecosystem Assessment (MEA);
- AfDB - While they do not provide specific guidelines for VIAs, their general environmental and social guidelines may be relevant.

4.1.1 Guidelines for Landscape and Visual Impact Assessment, Second Edition

These guidelines establish principles that promote consistency, credibility, and effectiveness in landscape and VIA within the EIA process. According to the guidelines, landscape encompasses the entirety of our external environment, whether in urban or rural areas, including buildings, streets, open spaces, trees, and their interconnected relationships. The guidelines highlight the importance of landscape for various reasons, including being a natural resource, containing archaeological and historical evidence, providing habitats for plants and animals (including humans), evoking sensual, cultural, and spiritual responses, and contributing to our quality of life in urban and rural settings. Additionally, landscapes offer valuable opportunities for recreation and resources.

4.1.2 Millennium Ecosystem Assessment

According to the Ecosystems and Human Well-being document compiled by the MEA in 2005, ecosystems play a vital role in supporting human well-being through their provisioning, regulating, cultural, and supporting services. The document highlights the increasing evidence of human

4 The Western Cape Guidelines are the only official guidelines for VIA reports in South Africa and can be regarded as best practice throughout the country.

activities negatively impacting ecological systems globally, raising concerns about the potential consequences of these ecosystem changes on human well-being.

The MEA defined the following non-material benefits that can be obtained from ecosystems.

- **Inspiration:** Ecosystems provide a rich source of inspiration for art, folklore, national symbols, architecture, and advertising.
- **Aesthetic values:** Many people find beauty or aesthetic value in various aspects of ecosystems, as reflected in the support for parks, scenic drives, and the selection of housing locations.
- **Sense of place:** Many people value the "sense of place" that is associated with recognised features of their environment, including aspects of the ecosystem.
- **Cultural heritage values:** Many societies place high value on the maintenance of either historically important landscapes ("cultural landscapes") or culturally significant species; and
- **Recreation and ecotourism:** People often choose where to spend their leisure time based in part on the characteristics of the natural or cultivated landscapes in a particular area. (MEA, 2005)

The MEA Ecosystems and Human Well-being: Synthesis report indicates that there has been a "rapid decline in sacred groves and species" in relation to spiritual and religious values, and aesthetic values have seen a "decline in quantity and quality of natural lands". (MEA, 2005).

4.2 National Legislation and Guidelines

To comply with the Visual Resource Management requirements, it is necessary to clarify which National and Regional planning policies govern the proposed development area to ensure that the scale, density and nature of activities or developments are harmonious and in accordance with the sense of place and character of the area.

4.2.1 National Environmental Management Act (Act 107 of 1998), EIA Regulations

The specialist report is in accordance with the specification on conducting specialist studies as per Government Gazette (GN) R 982 of the National Environmental Management Act (NEMA) (Act 107 of 1998). The mitigation measures as stipulated in the specialist report can be used as part of the EMPr and will be in support of the EIA and Appendix 6 of the EIA Regulations 2014, as amended on 7 April 2017.

Specialist Screening Protocols are also required by the 2014 EIA Regulations. These were taken into consideration for this project.

4.2.2 NEMA: Protected Areas Act 57 of 2003

- Management of declared World Heritage Sites (WHS) and buffer areas within South Africa;

- The purpose of the National Environmental Management: Protected Areas Act (Act 57 of 2003) (NEMPAA) is to, inter alia, provide for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes. To this end, it provides for the declaration and management of various types of protected areas;
- Section 39 of NEMPAA requires the preparation and submission of a management plan for a protected area declared in terms of the Act. The objective of a management plan, as stated in Section 41 of NEPAA, is to ensure the protection, conservation and management of the protected area concerned in a manner that is consistent with the objectives of NEMPAA and for the purpose it was declared;
- Section 50(5) of NEMPAA states that "no development, construction or farming may be permitted in a nature reserve or world heritage site without the prior written approval of the management authority;
- The management authority for a WHS is established through a NEMPAA process. The Management Authority (MA) is located within and funded by the DFFE; and
- The MA is tasked with ensuring that activities within the WHS and its buffer area comply with the approved Conservation Management Plan developed for the WHS.

4.2.3 Western Cape DEA: Guideline for Involving Visual and Aesthetic Specialists in EIA Processes Edition 1 (CSIR, 2005)

Although the guidelines were specifically compiled for the Province of the Western Cape, they provide guidance that is appropriate for any EIA process within South Africa. According to the Western Cape Department of Environmental Affairs & Development Planning's guideline on involving visual and aesthetic specialists in EIA processes, the following information is relevant for our visual impact assessment report:

- Current South African environmental legislation governing the EIA process includes the National Environmental Management Act (NEMA) (Act No. 107 of 1998) and the EIA regulations under the Environment Conservation Act (Act No. 73 of 1989).
- The Protected Areas Act (NEMA) (Act 57 of 2003, Section 17) aims to protect natural landscapes.
- The National Heritage Resources Act (Act No. 25 of 1999) and associated provincial regulations provide legislative protection for listed or proclaimed sites, such as urban conservation areas, nature reserves, and scenic routes.
- Visual pollution is controlled, to a limited extent, by the Advertising on Roads and Ribbons Act (Act No. 21 of 1940), which deals mainly with signage on public roads.
- The Municipal Systems Act (Act 32 of 2000) requires municipalities to undergo an Integrated Development Planning (IDP) process, including the preparation of a five-year strategic development plan. The IDP process, particularly the spatial component known

as the Spatial Development Framework, follows a bioregional planning approach in the Western Cape Province. Bioregional planning aims to achieve landscape continuity, protect natural areas, and integrate social, environmental, and economic criteria in local planning initiatives.

Specialists should refer to the relevant provincial or local authority to determine the existence of policies, by-laws, or other restrictions regarding visual impact or the protection of scenic, rural, or cultural resources.

4.3 Policy Fit

Policy fit refers to the extent to which the proposed changes to the landscape align with planning and policy at the International, National, Provincial, and Local levels.

Regarding international best practices, the proposed landscape modifications do not meet the criteria for triggering best practice guidelines, as there are no significant cultural or landscape resources within the site or its immediate surroundings.

ETC followed the United States Bureau of Land Management's Visual Resource Management method (USDI, 2004) to determine the significance of the landscape. This method, based on mapping and Geographical Information System (GIS) techniques, enhances objectivity and consistency by utilising standardised assessment criteria.

5 Approach and Methodology

5.1 Purpose of the Study

The purpose of the study is to document the baseline and to ensure that the visual/aesthetic consequences of the proposed Makganyane Mining Right are understood. The report therefore aims to identify scenic resources and visually sensitive areas or receptors. It also aims to identify key concerns or issues relating to potential visual impacts arising from the project, which must be addressed in the assessment phase.

5.2 Approach to Study

Assessing the effects of the development on landscape resources and visual amenities involves a combination of quantitative and qualitative evaluations. Visual impact is evaluated based on the worst-case scenario, while landscape and visual assessments are distinct but interconnected processes. The landscape analysis and assessment of impacts contribute to the baseline for VIA studies. The assessment of potential landscape impacts focuses on the physical landscape as an environmental resource. In contrast, visual impacts are evaluated as the effects on viewers when an object is introduced into a view or scene.

To conduct the study, Geographic Information System (GIS) software was utilised as a tool for generating viewshed analysis and applying relevant spatial criteria to the proposed infrastructure. A detailed Digital Terrain Model (DTM) of the study area was created using topographical data provided by the Japan Aerospace Exploration Agency (JAXA), specifically the ALOS Global Digital Surface Model "ALOS World 3D - 30m" (AW3D30) elevation model.

The scope of work for this report includes.

- Identify the scope of work/assessment required;
- Establish the baseline profile of the Environment;
- Identify potentially sensitive visual receptors within the receiving environment;
- Determine visual distance/observer proximity to the facility;
- Determine viewer incidence/viewer perception;
- Determine the VAC of the landscape;
- Determine significance of identified impacts;
- Propose mitigation to reduce or alleviate potential adverse visual impacts;
- Conclude with an impact statement of significance and a project recommendation; and
- Comply with the IFC standards.

The VIA is determined according to the nature, extent, duration, intensity or magnitude, probability, and significance of the potential visual impacts, and will propose management actions

and/or monitoring programs and may include recommendations related to the proposed Makganyane Mining Right .

The visual impact is determined for the highest impact-operating scenario (worst-case scenario) and varying climatic conditions (i.e., different seasons, weather conditions, etc.) are not considered. The VIA considers potential cumulative visual impacts, or alternatively, the potential to concentrate visual exposure/impact within the region.

5.3 Site Verification and Specific VIA Approach

Selecting the appropriate approach for a VIA is a crucial step in the process. The method and input for a VIA should be determined based on the expected level of visual impact, the nature of the project, and the characteristics of the receiving environment– that is the baseline landscape and visual conditions.

This in turn will form the basis from which the magnitude and significance of the landscape and visual effects of the development may be identified and assessed.

Table 5 provides the site verification report for an analysis of the existing landscape features, characteristics, the way the landscape is experienced, and the condition and the value or importance of the landscape and visual resources in the vicinity of the proposed development as well as the level of assessment deemed suitable for the Makganyane Mining Right.

Based on the evaluation conducted, the findings from the site verification report indicate that a Level 4 Visual Assessment will be required.

Table 5: Categorisation of Approaches and Methods Used for Visual Assessment

Approach and Method	**Type of Issue**				
	Little or No Visual Impact Expected	**Minimal Visual Impact Expected**	**Moderate Visual Impact Expected**	**High Visual Impact Expected**	**Very High Visual Impact Expected**
Level of Visual Assessment Recommended	Level 1 Visual Assessment	Level 2 Visual Assessment	Level 3 Visual Assessment	Level 4 Visual Assessment	

5.4 Significance of Visual Impact

Having established the specific type of VIA required, it is now crucial to delve into the generic aspects and themes associated with a VIA. These elements will be examined at a site-specific level within this report, enabling us to accurately identify and understand the unique impacts associated with the site under consideration[5].

[5] *Themes and Elements discussed in 5.4.1 to 5.4.9 will be site specifically addressed in Session 6.*

A combined quantitative and qualitative methodology, as supplied by the Environmental Practitioner, was used to describe the significance of impacts.

- **Significance** of impact is rated as consequence of impact multiplied by the probability of the impact occurring; and
- **Consequence** is determined using intensity, spatial scale, and duration criteria.

A summary of each of the qualitative descriptions along with the equivalent quantitative rating scale is given in Figure 8 below.

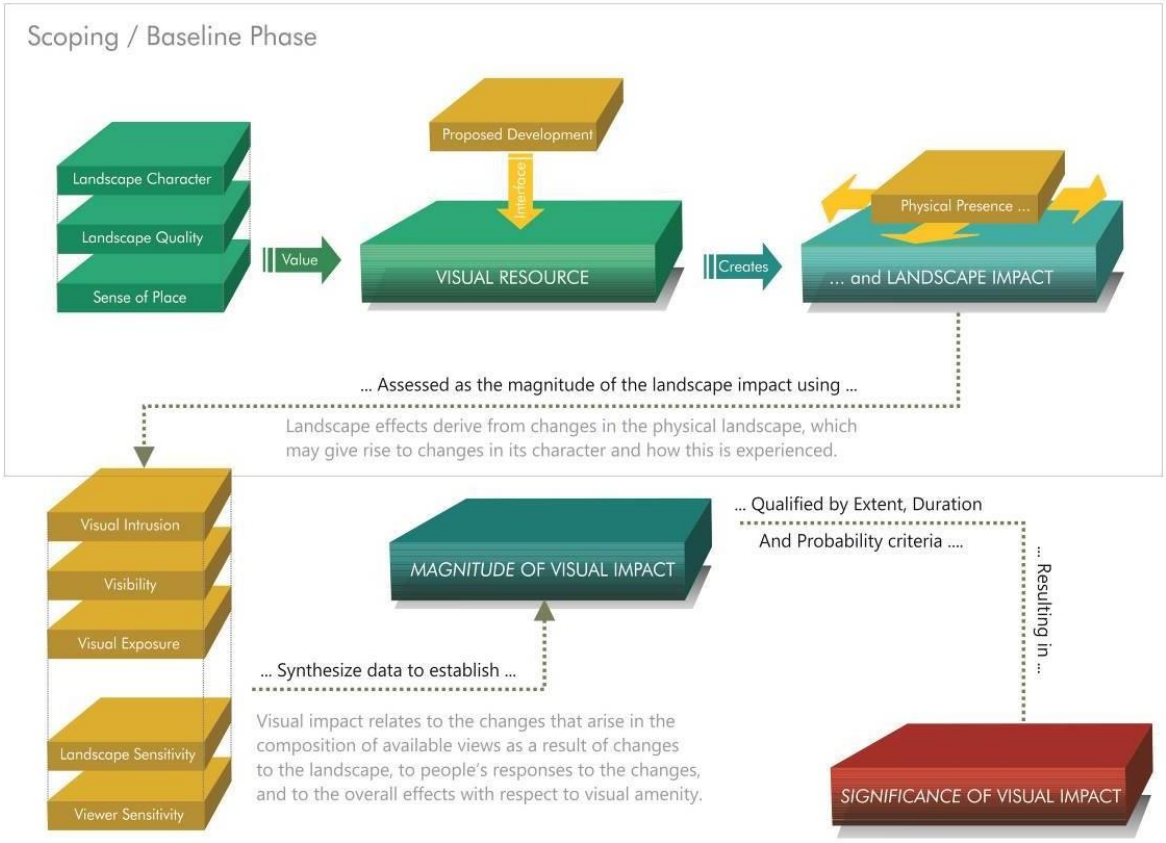

Figure 8: VIA Process

5.4.1 Landform (Topographical) and Micro-Topographical Context

The visibility of a feature within a landscape is significantly influenced by its landform context. Factors such as the feature's placement (e.g., valley bottom or ridge top), the viewer's location, and the slope's morphology can either enhance or obstruct visibility. Micro-topographical elements like buildings or vegetation can also screen views, potentially eliminating visual impact. Therefore, a comprehensive understanding of the topographical context is crucial in assessing visual impact.

5.4.2 Landscape Development Context

The presence/existence of other anthropogenic objects associated with the built environment may influence the perception of whether a new development is associated with a visual impact. Where buildings and other infrastructure exists, the visual environment could be already altered from a natural context and thus the introduction of a feature into this setting may be considered to be less of a visual impact than if there was no existing built infrastructure visible.

5.4.3 Receptor Type and Nature of the View

Visual impacts can be perceived by various types of receptors, including individuals driving along roads or residing/working in the vicinity where the structural feature is visible. The type of receptor influences the typical "view" of a potential source of visual impact, with views being constant in the case of residences or permanent human habitats, and transient in the case of vehicles moving along a road. The nature of the view encountered directly influences the intensity of the visual impact experienced.

5.4.4 Presence of Receptors

It is important to note that visual impacts are only experienced when there are receptors present to experience the impact; thus, in a context where there are no human receptors or viewers present there are not likely to be any visual impacts experienced.

5.4.5 Viewing Distance

The distance between the viewer or receptor location and an object is the primary factor influencing the perception of visual impacts. Beyond a certain distance, even large structural features become less visible and blend into the surrounding landscape. The visibility of an object tends to decrease exponentially as the distance from the object increases. The maximum impact is typically felt by receptors within a distance of 500m or less.

As one moves away from the source of impact, the visual impact diminishes exponentially. At a distance of 1000m, the impact is approximately one-quarter of that experienced at 500m. At distances of 5000m or more, the impact becomes negligible.

5.4.6 Sense of Place

According to Lynch (1992), a sense of place is the extent to which a person can recognize or recall a place as being distinct from other places - as having a vivid, unique, or at least particular character of its own. The sense of place for the study area derives from a combination of the local landscape types described above, their relative ‘intactness’, and their impact on the senses.

Sense of place goes hand in hand with place attachment, which is the sense of connectedness a person/community feels towards certain places. Place attachment may be evident at different geographic levels, e.g., site-specific (e.g., a house, burial site, or tree where religious gatherings take place), area-specific, and physiography specific (e.g., wetlands). Territorial behaviour is viewed as a set of behaviours and cognition a group exhibits based on perceived ownership. The

concept of sense of place attempts to integrate the character of a setting with the personal emotions and memories associated with it.

Much of what is valuable in a culture is embedded in place, which cannot be measured in monetary terms. It is because of a sense of place and belonging that people loath to be moved from their dwelling place, despite the fact that they will be compensated for the inconvenience and impact on their lives. Places/natural resources should be assessed in terms of its cultural value by studying visiting and consumption patterns, behaviour patterns, etc.

5.4.7 Viewer Perception

The perception of visual impact by viewers is subjective and influenced by various factors, including the aesthetic value, identity, and sense of place associated with a landscape. The way development is perceived can vary; it may be viewed positively if it is seen as linked to progress or human upliftment, or negatively if it disrupts a cherished landscape.

The character of the landscape, its scenic value, and the surrounding land use context all play a role in determining whether new developments are seen as unwelcome intrusions. Areas of natural conservation or scenic beauty are often more sensitive to visual impacts since the natural or scenic character of the landscape contributes to its overall appeal. In such areas, structural features like high-voltage power lines may be perceived as incongruous within a natural setting, often resulting in a perceived visual impact.

5.4.8 Visual Character

Visual character is shaped by human perception and the observer's response to the relationships and composition of the landscape, including the land uses and identifiable elements within it. The assessment of visual character involves describing the scenic attractiveness of the landscape, considering the landscape attributes that hold aesthetic value and make significant contributions to the visual quality of the views, vistas, and viewpoints within the study area (ALA, 2013).

5.4.9 Weather and Visibility

Meteorological factors, such as weather conditions like haze or heavy mist, can influence the nature and intensity of a potential visual impact associated with a structural feature. These factors directly impact visibility, potentially altering the way the structural feature is perceived and affecting the extent of its visual impact.

Vegetation, particularly trees and shrubs, can serve as an effective visual screen for such facilities, helping to mitigate the visual impact on surrounding receptors. By strategically placing vegetation around the facility, it can obscure or soften the view of the development, blending the facility more harmoniously into the natural landscape. However, it's crucial to ensure that the vegetation is positioned at an appropriate distance from the proposed development. Therefore, while vegetation can significantly contribute to visual impact mitigation, its placement requires careful planning to balance aesthetic considerations of the Makganyane Mining Right.

5.5 Methodology

The following methodology was employed for the assessment:

- A comprehensive field survey was conducted to accurately document and describe the receiving environment. **Refer to Section 6.**
- The physical characteristics of the project components were described and depicted based on information provided by Exigent. **See Section 2 and Section 6 for a detailed overview.**
- The visual resource general landscape characterisation, representing the receiving environment, was mapped using data from the field survey, Google Earth imagery, and Mucina and Rutherford's (2006) reference book, *"The Vegetation of South Africa, Lesotho, and Swaziland"*. The landscape description focused on the natural features of the land rather than subjective viewer responses (refer to Appendix A).
- The landscape's character was evaluated and rated based on its aesthetic appeal, utilising established research in perceptual psychology as the foundation, and its sensitivity as a landscape receptor. **See Section 6 for a detailed overview.**
- The unique and distinct sense of place in the study area was described, considering the spatial form and character of the natural landscape, as well as the cultural transformations associated with the historical and current land use. **Section 6.1 for a detailed overview.**
- Viewshed analysis was conducted from the proposed project site to determine visual exposure and assess the topography's capacity to absorb potential visual impacts. The analysis considered the dimensions of the proposed structures and activities. **See Section 7.1 for a detailed overview.**
- The potential impacts of the proposed projects on the visual environment were identified and rated using Greenmined's significance rating criteria. **More information can be obtained in Section 8.2.**
- Recommendations were provided for mitigating the negative impacts of the proposed projects. **See Section 8.2 and 0 for a detailed overview.**

5.6 Project Phases and Activities

Activities to be undertaken during each of the phases are described in the following sections.

5.6.1 Environmental Authorisation and Public Participation

The stakeholder consultation process is an essential component of this VIA. Rather than conducting a separate consultation, we have integrated this process with the public participation for the environmental authorisation documents. This integrated approach provides stakeholders, government authorities, and other interested parties with a 30-day period to review the VIA document and provide feedback.

All comments received during this consultation period will be carefully considered and incorporated into the final VIA report. This ensures that the assessment is comprehensive, accurate, and addresses stakeholder concerns effectively.

5.6.2 Construction Phase

The construction phase of the proposed Makganyane Mining Right will entail the establishment of all necessary infrastructure to support the commencement of mining operations. This phase will take place within the footprint of the approved mining right area, which is located on both sides of the R385 provincial road, ~20km north-west of Postmasburg. Activities during this phase will be undertaken progressively, as mining is only expected to commence from Year 5 of the mining right. Prior to this, extensive site preparation and civil works will be required to facilitate the development of haul roads, access points, and operational infrastructure.

Initial construction activities will include the demarcation of the mining area and all sensitive no-go zones, including those associated with identified drainage lines, potential ecological buffers, and cultural heritage sites. Vegetation clearance will follow in a phased manner, with topsoil stripping limited to the upper A-horizon (typically 100–200mm), or deeper in areas where natural horizon differentiation is unclear. The stripped topsoil will be stored in designated stockpile areas for future use during rehabilitation. Construction equipment including excavators, graders, dump trucks, and drilling rigs will be brought to site during this period. Dust control measures, including the frequent use of water sprays, will be applied throughout to limit wind-blown sediment.

As site clearing progresses, internal haul roads and access ramps to the two planned open pits will be developed. These roads will be constructed from compacted materials sourced on-site and will connect key operational areas including the waste rock dump, stockpile zones, and central office complex. Infrastructure established during this phase will include a crushing plant, weighbridge, fuel depot, water storage dams for dewatering purposes, security and access control points, ablution and wash bay facilities, and office containers. A diesel generator-based power supply will be implemented, with the potential for future grid connection from the nearby 132kV line. Septic tanks or equivalent systems will be used for sanitation. No mineral processing will occur on site, as all ore will be transported via side tipper trucks to the existing Beeshoek Mine facility for beneficiation. The R385 will serve as the primary haul route, and a Traffic Impact Assessment will be undertaken during the EIA phase to confirm the adequacy of this corridor for long-term ore transport.

5.6.3 Operational Phase

The operational phase of the Makganyane Mining Right is projected to span ~38 months and will commence after the full establishment of infrastructure. Mining activities will be carried out via conventional opencast methods, utilising drilling, blasting, excavation, and truck-and-shovel operations. Two pits—Pit 1 (north) and Pit 2 (south)—will be mined over this period. The design of the pits incorporates 10m benches with highwall angles of 45° to 55°, and access ramps with 8% gradients to accommodate mining vehicles. Free-digging will be limited to shallow depths (up to ~5m), after which controlled blasting will be employed.

Run-of-mine (RoM) ore will be excavated and transported to a crushing plant within the mining right area, where it will be stockpiled and prepared for off-site transport. From there, ore will be moved along the R385 to the Beeshoek Mine processing plant. The waste rock removed during stripping operations will be deposited in a centrally located waste rock dump covering ~64ha. Dewatering systems will operate continuously to ensure the pits remain dry, with the recovered water to be used on-site for dust suppression and related operational requirements.

During the operational phase, ~50 permanent workers and an additional 30 contract workers are expected to be employed. The site will operate on a three-shift system, allowing for continuous mining and ore transportation activities. The operational infrastructure, including the office complex, weighbridge, and haul roads, will be maintained throughout this period. Dust and noise management protocols will be implemented, and continuous environmental monitoring will form part of routine operations, in alignment with the Environmental Management Programme and future closure planning.

5.6.4 Decommissioning Phase

Once the economically viable resource has been extracted, the site will enter a decommissioning and closure phase. The objective during this phase will be to stabilise the landscape, remove remaining infrastructure, and implement rehabilitation measures that restore the land to a condition aligned with the approved post-mining land use. Decommissioning will include the dismantling and removal of all above-ground infrastructure, including the crushing plant, offices, stockpiles, and haul roads not intended for retention. Materials suitable for recycling will be recovered, and waste will be disposed of in accordance with municipal and national regulations.

Where feasible, backfilling may be undertaken in parts of the pits using waste rock. However, full backfilling is not proposed, and pit walls will be reshaped to reduce erosion risks. Stockpiled topsoil will be replaced across disturbed areas to a depth of approximately 300 mm, followed by seeding with indigenous vegetation or an appropriate seed mix recommended by the rehabilitation specialist. The site will be monitored for regrowth success and for the emergence of invasive alien plant species. Any invasive species will be actively removed in accordance with national environmental regulations. A formal closure application will be submitted to the Department of Mineral Resources and Energy (DMRE) within the prescribed period, following completion of final rehabilitation activities.

6 Baseline Environmental Profile

6.1 Character and Nature of Environment

The proposed Makganyane Mining Right is located within the Tsantsabane Local Municipality, which falls under the jurisdiction of the ZF Mgcawu District Municipality in the Northern Cape Province. The area surrounding the development site is typified by a semi-arid, rural landscape with predominantly agricultural land uses and patches of natural vegetation. The natural setting includes low-lying plains interspersed with gently undulating terrain and occasional rocky outcrops.

Vegetation in the region reflects the transition between Kuruman Mountain Bushveld, Olifantshoek Plains Thornveld, and Postmasburg Thornveld, with each biome contributing to the area's visual heterogeneity. Historically, the region has been shaped by both farming and mining activities, with several active and legacy mining operations evident in the broader landscape. This blend of natural and anthropogenic features defines the unique visual and environmental character of the project area.

6.1.1 Climate Conditions

The area surrounding the proposed Makganyane Mining Right, situated near Postmasburg in the Northern Cape Province, is characterised by a semi-arid climate with marked seasonal variations in temperature and precipitation. These climatic patterns influence both the environmental conditions on site and the visual character of the landscape throughout the year.

Summer: The summer season in Postmasburg extends from approximately November to March and is typified by hot, dry days and relatively mild nights. During this period, daytime temperatures commonly exceed 29°C, with January being the hottest month of the year, reaching average highs of 32°C. Rainfall is concentrated within the summer months, although total precipitation remains modest. February typically sees the highest rainfall, averaging 47 mm, while humidity remains low. These summer conditions support a relatively green and vibrant landscape following precipitation events, which temporarily enhance the visual appeal of the area. However, vegetation cover remains sparse and predominantly shrub-based due to the arid nature of the region.

Winter: The winter period, which spans from late May to mid-August, brings cooler and notably drier conditions. The coldest month is July, with average high temperatures around 18°C and lows dropping to approximately 3°C. Frost may occur during early mornings, contributing to the subdued and desaturated visual quality of the landscape during these months. Rainfall during winter is minimal, often not exceeding 3 mm in July, resulting in dry ground conditions and reduced vegetation cover, which exposes the underlying soil and rock, altering the visual texture of the terrain.

The region experiences mostly clear skies throughout the year, with the clearest months being from May to September. Wind is a notable feature, particularly in spring and early summer, with average wind speeds peaking in October at around 17.3km/h. The prevailing wind direction is

predominantly from the north during most of the year. These climatic elements—dryness, seasonal vegetation change, and wind—are important considerations for understanding how the proposed mining activities will be visually integrated into the environment across different seasons.

6.1.2 Topography and Landscape

The topography of the proposed Makganyane Mining Right area is moderately undulating, featuring a combination of gradual inclines and defined elevation changes across different sections of the site. These variations in elevation contribute to a landscape that is visually dynamic and contextually significant for a VIA.

The north-to-south elevation profile of the site indicates an overall increase in elevation, beginning at ~1,261.36m and reaching a peak of 1,354.48m over a linear distance of nearly 7km. The profile shows a gain of 125.80m in elevation, with a notable peak occurring around the 4,000m mark, after which the terrain gradually descends again. The average elevation is 1,291.74m. Although the slope remains relatively moderate overall, the steepest sections reach a maximum incline of 11.78% and a maximum decline of -19.48%. This suggests that certain portions of the terrain may partially obscure infrastructure depending on its siting, particularly if placed at lower elevations relative to the central ridgeline.

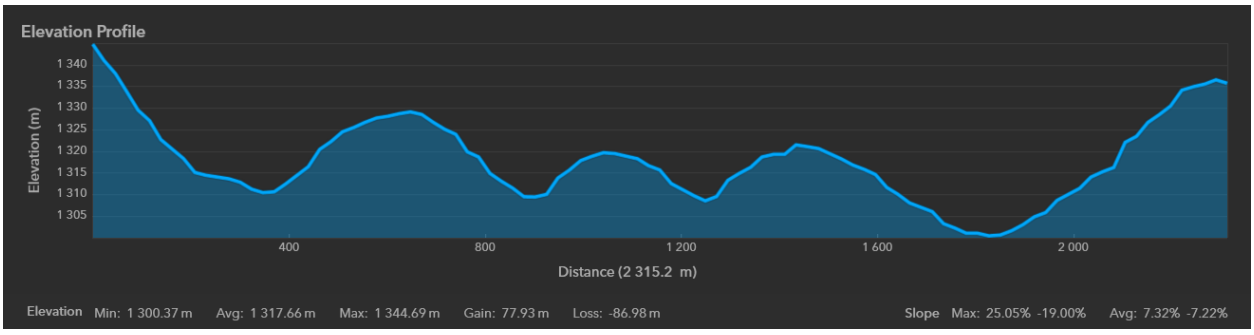

Figure 9: North to South Elevation Profile

The west-to-east elevation profile presents a shorter but more varied terrain profile over a distance of ~2.3km. Elevations range from a minimum of 1,300.37m to a maximum of 1,344.69m, with alternating rises and dips contributing to a more segmented terrain. The average elevation for this cross-section is 1,317.66m, with a total elevation gain of 77.93m and a total loss of 86.98m. The slope variation is more pronounced in this direction, with peak gradients reaching 25.05% in certain sections, which may limit long-distance visibility across certain valleys or low-lying areas within the site.

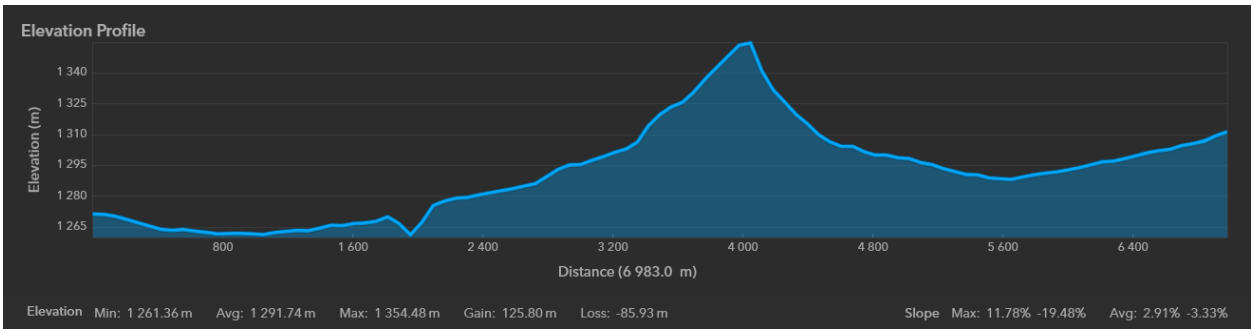

Figure 10: West to East Elevation Profile

The broader landscape in which the Makganyane Mining Right is situated exhibits a mixed terrain character—neither completely flat nor excessively rugged. Instead, it features undulating rises, modest ridgelines, and shallow depressions. While the terrain is not steep enough to significantly limit viewshed potential, certain areas of higher ground are likely to form prominent visual elements within the landscape. The variation in elevation may provide limited natural screening in some areas, but overall, much of the infrastructure associated with the proposed mining operation is expected to remain visible from medium to long distances unless artificial or vegetative screening measures are introduced. Integrating infrastructure into this varied topography will therefore require careful planning to align with the natural landscape structure and mitigate the overall visual prominence of the development.

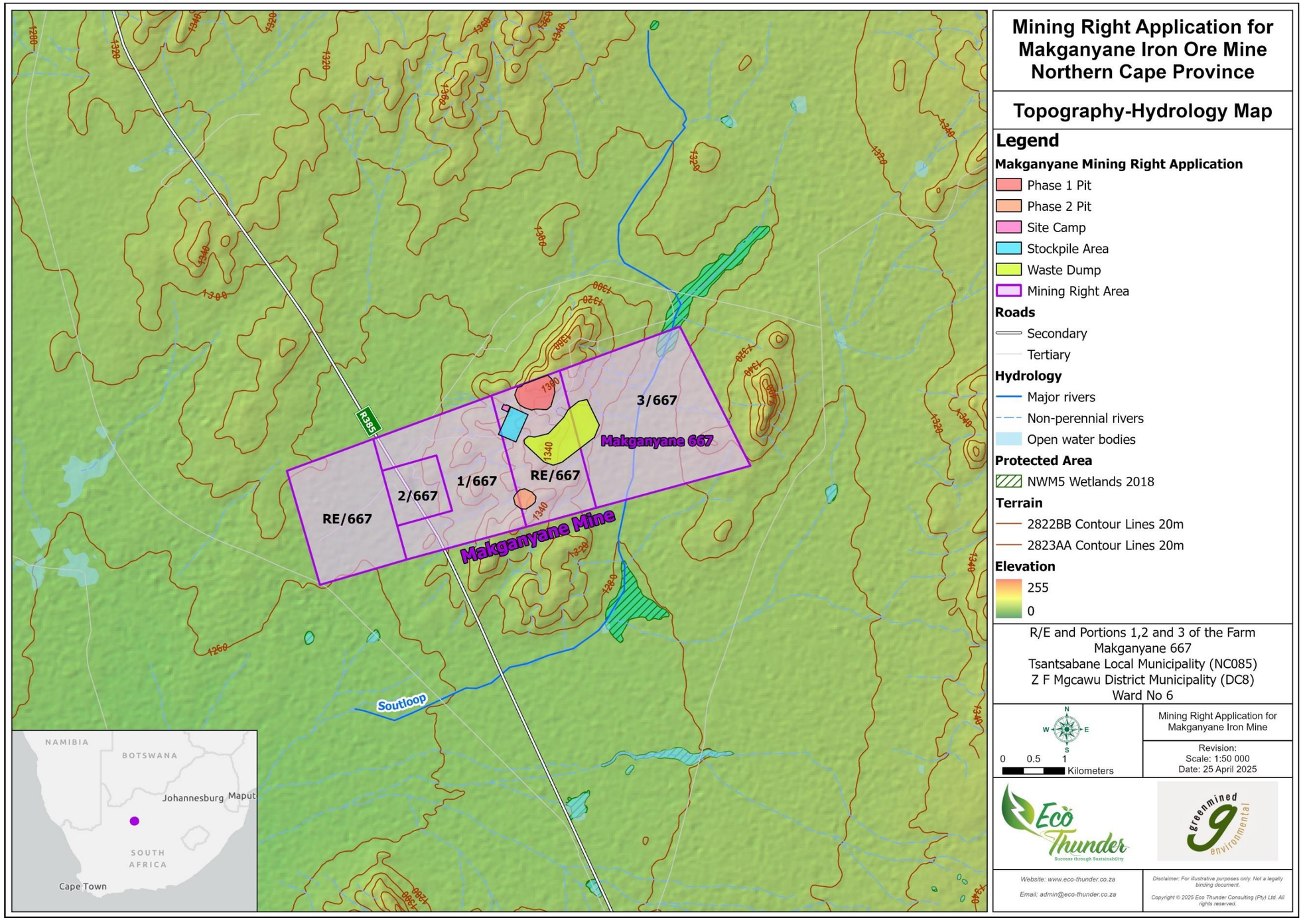

Figure 11: Map of Topographical-Hydrological Profile of the Proposed Makganyane Mining Right Area

6.1.3 Natural Landscapes

The natural landscape surrounding the proposed Makganyane Mining Right is ecologically diverse and visually varied. The area encompasses several vegetation types, including Kuruman Mountain Bushveld, Kuruman Thornveld, Olifantshoek Plains Thornveld, and Postmasburg Thornveld — all classified as Least Concern (LC) in the National List of Threatened Terrestrial Ecosystems (VEGMAP 2018). This mosaic of bushveld and thornveld contributes to the textured visual character of the area, with dense woody vegetation in places, interspersed with open grassland and scattered trees.

The central portion of the site is dominated by the Kuruman Mountain Bushveld, known for its rocky outcrops and thicket vegetation, while the surrounding thornveld areas transition into more open savanna systems. Although some sections offer moderate visual absorption capacity, widespread disturbance from grazing, informal tracks, and historical land uses has reduced the landscape's natural screening potential. Seasonal variation also affects visibility — with lusher cover during the summer months and more exposed terrain in winter.

The site falls within a mapped Critical Biodiversity Area (CBA1) and includes portions classified as having the highest biodiversity importance under the national Mining and Biodiversity Guideline. These designations highlight both the ecological value and the landscape sensitivity of the region, particularly where intact bushveld and biodiversity corridors remain.

Hydrologically, the site is crossed by several non-perennial drainage lines, which become visually prominent during the rainy season. The Soutloop River, located within the eastern portion of the proposed site area, is a key feature that contributes to the area's scenic value. In the southern portion of the site, a mapped wetland area further adds to the visual sensitivity of the broader landscape.

Geologically, the site is located on the Ghaap Plateau and underlain by mineral-rich lithologies of the Koegas and Rooinekke Subgroups, along with remnants of the Ongeluk lava and Makganyene diamictite. While these features are not overtly visible, they shape landform and vegetation patterns and contribute to the region's rugged natural appearance.

In summary, the Makganyane Mining Right area comprises a visually sensitive landscape shaped by ecological diversity, hydrological features, and underlying geology. Future development must respond sensitively to this setting, with mitigation strategies that retain key visual elements and minimise transformation of intact natural areas.

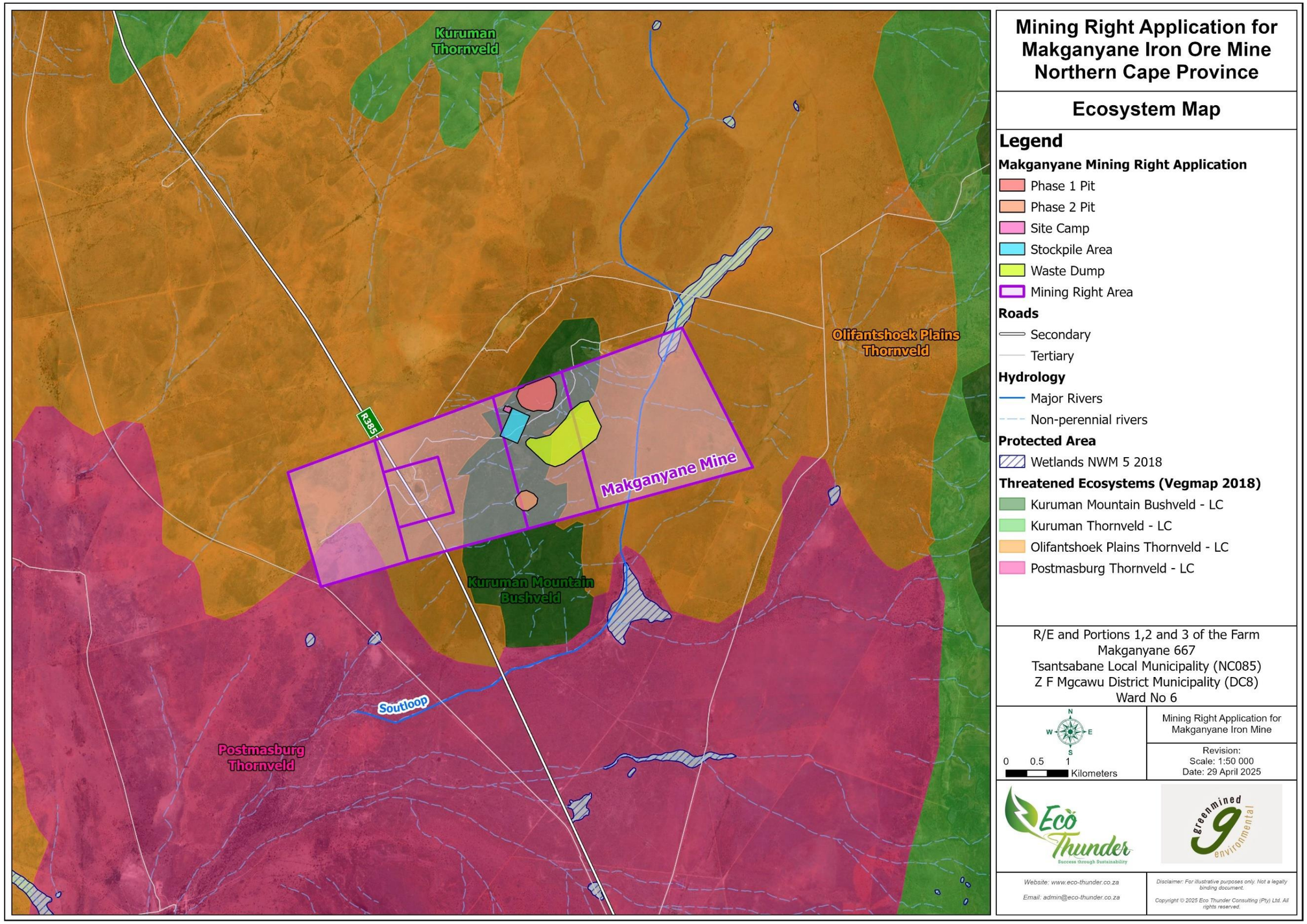

Figure 12: Protected Ecosystems Map

Photograph 1: Open Water Body located within the Proposed Makganyane Mining Right Area

Photograph 2: Landscape View 1 within the Proposed Makganyane Mining Right Area

Photograph 3: Landscape View 2 within the Proposed Makganyane Mining Right Area

Photograph 4: Vegetation Profile within the Proposed Makganyane Mining Right Area

Figure 13: Natural Landscape Site Photos

6.1.4 Cultural and Tourism Resource

The proposed Makganyane Mining Right area lies within a landscape that has been historically shaped by livestock farming and limited past mining activities. The cultural landscape is largely modern, consisting primarily of farm fences, informal tracks, wind pumps, and other farming infrastructure, with minimal remaining elements of historical or cultural significance. The area does not contain any formally protected heritage sites, museums, or known tourism destinations.

A Heritage Impact Assessment (HIA) conducted in 2019 for the same footprint identified a few isolated heritage features. These include two informal cemeteries, a stone cairn that may mark a pre-colonial burial, and several scattered stone tools found out of context and deemed to be of low significance. No rock art, historical farmsteads, or colonial-era dwellings or kraals were recorded. As such, the broader cultural significance of the site is considered to be low, provided that known features are avoided and protected.

The geology of the site does not favour the formation of natural rock shelters, further reducing the likelihood of significant archaeological finds. The broader region, however, is archaeologically rich, with numerous Stone Age and Iron Age sites recorded to the north and east of the study area, including known sites near Kathu and Postmasburg. While these regional features contribute to the historical narrative of the area, they do not form part of the immediate project landscape.

The site does not fall within any designated cultural or tourism nodes, and no recreational facilities or scenic heritage routes are noted within the vicinity of the mining right boundary. As such, tourism sensitivity is considered low. However, care should be taken during construction to avoid known burial sites, and a Chance Find Procedure must be implemented should any unrecorded heritage resources be encountered.

In conclusion, while the proposed mining right area intersects a landscape with some isolated heritage features, it is not considered to be of high cultural or tourism value. The visual impact of the project on cultural or recreational assets is therefore expected to be limited, but mitigation must include the protection of known graves and ongoing monitoring during site clearance and construction activities.

6.1.5 Land Use

The landscape surrounding the proposed Makganyane Mining Right reflects a rural environment predominantly shaped by livestock and game farming. The land is sparsely developed, with natural veld and scattered farming infrastructure such as fences, water troughs, and windmills defining the character of the area. Within the broader study area, historic mining activity has also left visual traces—most notably an abandoned open-cast diamond pit and associated spoil heaps located on Portion 2 of the Makganyene property. These features contribute to a landscape where agricultural and former mining uses are layered over a natural, semi-arid setting.

The R385 provincial road bisects the mining right area and functions as both a physical access route and a visual corridor, with intermittent views of the mining footprint anticipated from road

users. This corridor is likely to become a primary interface between the public and the proposed mining infrastructure. In the south-western corner of the site, the IOEC (Iron Ore Export Channel) railway line also intersects the landscape, reinforcing the area's association with extractive industries.

Although no formal residential or commercial land uses are present within the mining right boundary, several farm buildings and dams are located within the greater study area. These existing elements, while limited in extent, form part of the local land use mosaic and may influence the visual reception of the development. The area’s current use for grazing and occasional game hunting reinforces its rural land use character, while also contributing to its open and minimally altered visual aesthetic.

As the proposed mining activities will temporarily alter large portions of this landscape, particularly through infrastructure development and vegetation clearing, consideration must be given to how these changes will visually integrate with the existing land uses. Areas previously disturbed by past mining may offer opportunities for visual assimilation, while undisturbed grazing lands and open vistas may require targeted mitigation to maintain the rural character and sense of place.

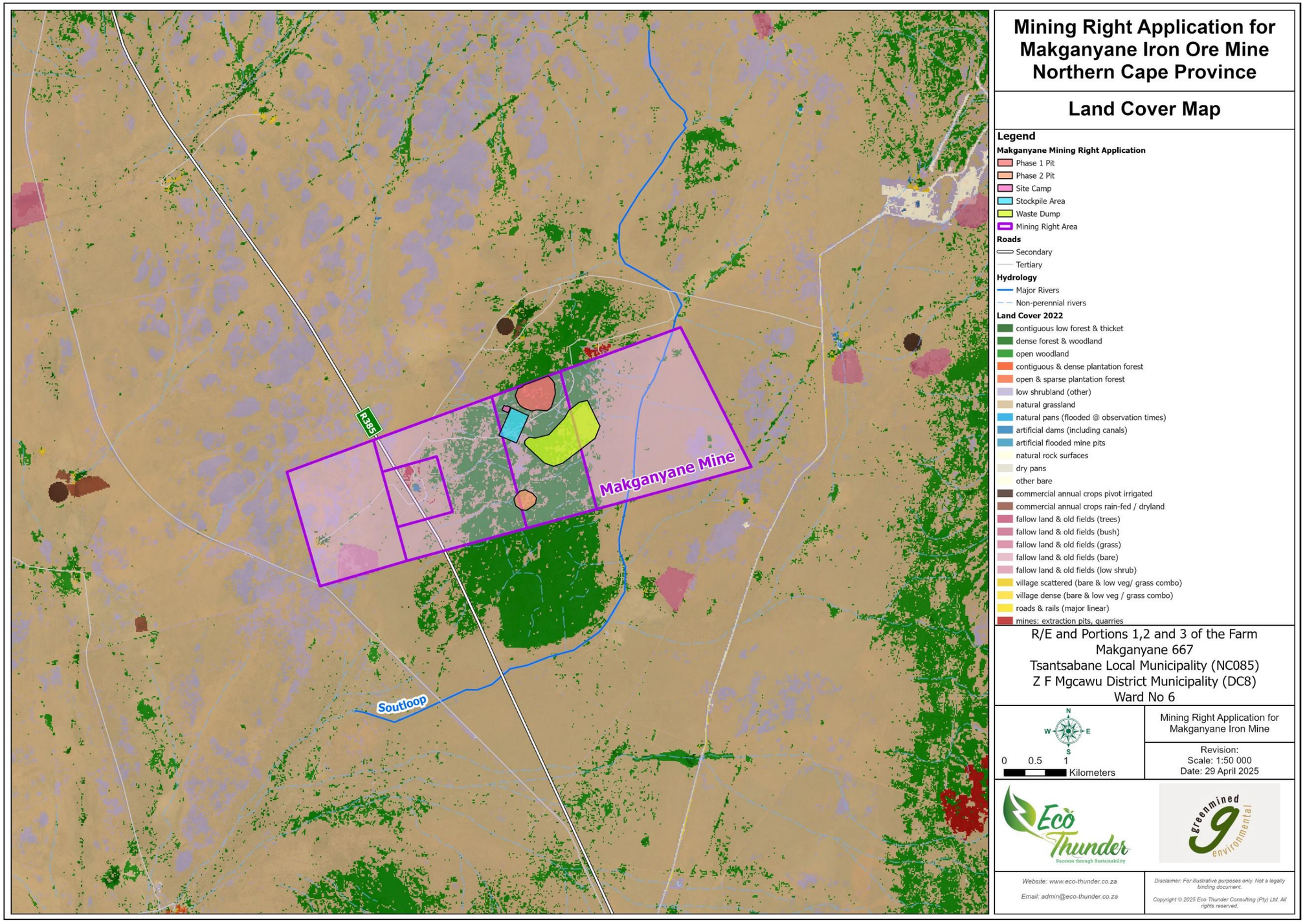

Figure 14: Land Cover Map of the Proposed Makganyane Mining Right Area

6.1.5.1 Mixed Land Uses

The land surrounding the proposed Makganyane Mining Right is characterised by a mix of livestock and game farming, historical mining remnants, and key transport infrastructure. This setting contributes to a predominantly rural landscape, punctuated by traces of past mineral extraction and the movement of goods and people across the region.

Livestock farming is the dominant land use across the mining right and adjacent properties. The land is privately owned and typically used for extensive grazing. This activity, along with scattered farmsteads, internal roads, windmills, and dams, shapes the visual texture of the area and reinforces its agricultural identity. While no large-scale crop farming is evident, small-scale irrigation and watering points are present, supporting animal husbandry.

Mining activities have also played a role in defining the land use and visual composition of the area. The remnants of a historic open-cast diamond mining pit on Portion 2 of Makganyene No. 667 serve as a visible landmark of former extraction activities. Additionally, the Metseatsididi Diamond Mine, situated along the northern boundary of the study area, and the Kumba Heuningkranz Mining Right, located just south of the project footprint, further reinforce the co-existence of mining and agriculture in the region.

Transport infrastructure also contributes to the mixed land use character of the site. The R385 provincial road bisects the property, providing primary access and forming a significant visual corridor. The IOEC (Iron Ore Export Channel) railway line intersects the southwestern corner of the mining right area, although its visibility is largely confined to the southern boundary.

Although the area retains a rural and agriculturally oriented sense of place, the overlapping presence of mining and transport infrastructure introduces a semi-industrial element into the visual landscape. This mixture of land uses requires that future development integrates sensitively with the existing visual character, particularly where receptors such as roads or nearby farmsteads may be exposed to long-distance views of the proposed mining activities.

Mitigation measures should focus on limiting the visual prominence of infrastructure within these multi-use zones. Design considerations should include careful siting of stockpiles, vegetative buffers along key view corridors such as the R385, and phased rehabilitation strategies that align with the existing land use mosaic.

Photograph 5: Land Use within the Proposed Makganyane Mining Right Area

Photograph 6: Illegal Dumping Site within close proximity to the Proposed Makganyane Mining Right Area

Photograph 7: Access Road to the Proposed Makganyane Mining Right Area

Photograph 8: Existing Infrastructure within close proximity to the Proposed Makganyane Mining Right Area

Figure 15: Mixed Land Use Site Photos

6.1.5.2 Natural and Conservation Areas

he proposed Makganyane Mining Right is located within a landscape that includes mapped environmental priority areas, although no formally proclaimed nature reserves or conservation areas are situated within or immediately adjacent to the project boundary. According to the relevant mapping resources, including the Northern Cape Critical Biodiversity Area (CBA) and Ecological Support Area (ESA) mapping, portions of the site intersect with a Critical Biodiversity Area (CBA1) and an Ecological Support Area (ESA), which reflect areas identified as important for maintaining ecological processes and landscape functionality. While these classifications are primarily ecological in nature, they also contribute to the visual value of the landscape due to the relative integrity and openness of the vegetation cover.

The Soutloop River, located within the eastern portion of the site, is accompanied by linear bands of riparian vegetation that contribute to the scenic quality of the surrounding area. These watercourse-associated areas, while not designated as conservation zones, play a role in shaping the natural character of the local landscape, particularly during the rainy season when vegetation density and surface water are more pronounced.

A mapped NFEPA Wetland (L4A classification) is located in proximity to the southern boundary of the mining right, overlapping with sections of ESA and falling within the broader Soutloop catchment. While the wetland and its adjacent vegetated areas hold ecological significance, their visual prominence is largely seasonal and context-dependent. Nonetheless, the relatively undeveloped nature of these areas, combined with their vegetative cover, lends a degree of visual sensitivity to the southern portion of the site.

Although the site is not adjacent to any formal protected areas, the presence of mapped CBAs, ESAs, and wetland features indicates that certain parts of the surrounding landscape maintain a relatively natural appearance. This should be taken into account when planning the visual integration of infrastructure, especially in locations where vegetation clearing or earthworks may interrupt otherwise intact landscape units.

In conclusion, while the Makganyane Mining Right is not located within a formally protected area, the presence of mapped biodiversity priority areas and natural features such as the Soutloop River and nearby wetlands contributes to a landscape that retains elements of visual intactness. The potential visual transformation of these areas through mining-related development should be managed sensitively to maintain the coherence of the surrounding natural setting.

6.1.5.3 Roads

The road network surrounding and intersecting the proposed Makganyane Mining Right area plays a significant role in shaping both site accessibility and the visual exposure of the project. The R385 provincial road, a key regional route connecting Postmasburg and Olifantshoek, passes directly through the proposed mining right footprint. This road serves as the primary access route

to the site and is expected to facilitate the movement of construction vehicles, haul trucks, and operational staff throughout the life of the mine.

The R385 is a prominent visual corridor, particularly due to its alignment through relatively open terrain with limited visual screening. Motorists and other road users traveling along this route are likely to have direct and sustained views of the mining activities, including the waste rock dump, stockpile area, and site infrastructure as these elements become established. The road's passage through the mining footprint increases the likelihood of close-range visual exposure, especially during site establishment and active mining operations.

In addition to the R385, several internal haul roads are planned to be constructed and progressively extended within the mining boundary as the operation advances. These roads will be developed using materials sourced from the waste rock dump and will be essential for linking the various functional components of the mine. Although these internal roads are unlikely to be visible from beyond the site itself, they will contribute to the overall modification of the site's internal visual landscape.

The increased traffic volumes associated with the transport of ore to the Beeshoek Mine processing facility, as well as the daily movement of personnel and materials, are expected to intensify activity along the R385. This will not only affect the road's functional role but will also contribute to visual movement in the landscape, which can heighten the perception of change for observers within and around the site.

Given the high degree of exposure from the R385, careful visual planning will be required to minimise the prominence of visually intrusive structures and dust-generating activities. Measures such as directional screening, material stockpile management, and the strategic placement of infrastructure away from the most visible sections of the R385 should be considered to reduce the project's overall visual footprint.

In conclusion, the R385's alignment through the mining right area makes it a critical vantage point from which the proposed development will be observed. As such, visual sensitivity along this corridor is high, and the design of surface infrastructure, as well as the management of operational visibility, will be key considerations in the visual impact assessment of the proposed Makganyane Mining Right.

6.2 With Visual Resource

6.2.1 Visual Receptors

Visual receptors, also known as viewer groups, are individuals or groups of individuals who have the potential to view or perceive the proposed development. The identification of visual receptors is a crucial step in the VIA process as it helps to understand who will be affected by the visual changes brought about by the project. Visual receptors that have been identified can be assessed in terms of ''beneficiaries and losers[6]'', resulting from the proposed development.

Beneficiaries may include the following:

- Residents or users of a project, such as a resort in a scenic area;
- Individuals or communities who will benefit from infrastructure development;
- Poor or unemployed individuals who will benefit from economic-type development and related job opportunities.

Losers may include the following:

- National parks, nature reserves, and other protected or pristine areas that rely on a wilderness experience for their visitors;
- Individuals and organisations who depend on scenic and recreation resources for their livelihood;
- Property owners who may rely on uninterrupted views and the absence of visual intrusions.

This comprehensive identification of visual receptors ensures that the assessment considers both positive and negative visual impacts, addressing the specific concerns of various stakeholders. For the proposed Makganyane Mining Right, a general recommendation is made to apply vegetation screening, landscaping, or other visual barriers where necessary to mitigate the visual impact on sensitive receptors—particularly those in proximity to, but not directly part of, the project site.

It is postulated that all structures, homes, or buildings within the buildable area are on land rented by the developer. These are deemed to have lower significance in the visual impact assessment. Conversely, where land or structures are owned or occupied by other parties, it is assumed that affected landowners have been engaged and that their properties have been appropriately avoided or buffered.

[6] *Landowners (those who financial benefit) who have agreed to leasing their land for this development are seen as Beneficiaries and therefore assessed at a lower impact class. Residents, neighbours, tourists, and settlers are identified as losers.*

- **Local Residents:** Scattered farmsteads and grazing activities occur on and adjacent to the mining right area. These receptors may include farm owners, workers, and seasonal labourers. Although most are located some distance from the mining footprint, some may experience direct views of the development, particularly from elevated positions or informal dwellings within the broader viewshed. While not part of densely populated settlements, these receptors exhibit moderate visual sensitivity due to the rural setting and reliance on the surrounding landscape.
- **Road Users:** The R385 provincial road passes directly through the mining right area and serves as a key access route and prominent visual corridor. It connects Postmasburg and Olifantshoek and will be used to transport materials during construction and operations. Travellers—such as local commuters, private motorists, and transport operators—will likely experience varying degrees of visibility depending on topography and proximity to operational areas. As such, the R385 represents one of the most critical viewing corridors in the visual landscape.
- **Adjacent Mining Operations and Industrial Users:** To the north and south of the site, the Metseatsididi Diamond Mine and Kumba Heuningkranz Mining Right are active operations. Workers and contractors associated with these facilities may have visibility of the proposed Makganyane development. However, the existing industrial land uses in the area reduce overall visual sensitivity for this receptor group:
- **Recreational or Cultural Users:** The site does not fall within any recognised cultural or recreational nodes. There are no protected heritage landscapes or tourism attractions in the immediate vicinity. Therefore, this receptor group is not considered relevant in the current context.

Each of these receptor groups will experience the development differently, depending on their location, the frequency and duration of views, and their cultural or social associations with the landscape.

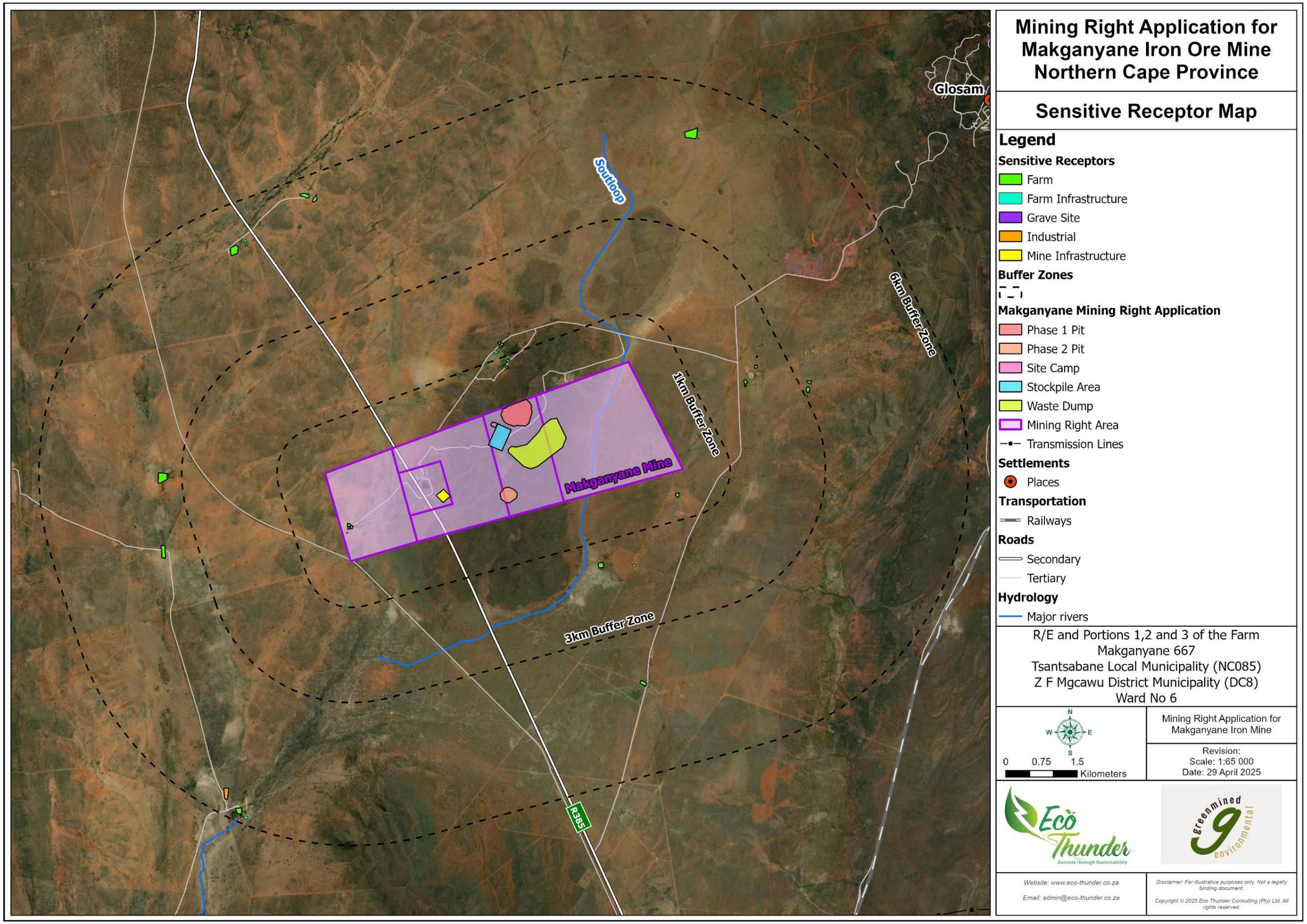

Figure 16: Visual Receptors for the Broader Study Area

6.2.2 Visual Absorption Capacity

Visual Absorption Capacity (VAC) refers to the ability of a landscape to visually accommodate new infrastructure or land use changes without substantially altering its visual character. It is influenced by a combination of biophysical and perceptual factors, including topography, vegetation structure, landform diversity, and the degree of existing human modification. A high VAC indicates a landscape with features that help visually integrate or conceal new development, while a low VAC indicates limited ability to do so.

The Makganyane Mining Right area presents a mixed VAC profile, shaped by its rugged topography, scattered vegetation, and areas of past disturbance. While sections of the site are moderately vegetated, particularly in areas covered by bushveld and thornveld, the vegetation is generally low to medium in height and interspersed with open spaces and bare ground. This limits its screening potential, especially from elevated viewpoints such as ridgelines and roads with direct line-of-sight toward active infrastructure.

From a landform perspective, the terrain exhibits moderate variability, with small ridges, outcrops, and shallow drainage lines. These features can offer some degree of visual containment, particularly in the central and southern portions of the site. However, flatter and more open sections, particularly along the R385 and the southern buffer zone, are visually exposed and offer limited natural absorption. The presence of non-perennial river systems, including the Soutloop River, contributes to a more textured visual landscape, although these features offer minimal screening outside the rainy season.

The site has undergone some modification through historic agricultural practices, informal access roads, and livestock grazing. These existing disturbances have already introduced a degree of anthropogenic influence, which marginally increases the site's tolerance to further change from a visual character perspective. However, this influence is not widespread or heavily industrialised, meaning that large-scale development such as mining infrastructure could still represent a marked change in local visual conditions.

Perceptually, the VAC is influenced by the presence of a primary regional route, the R385, which bisects the site and serves as a key visual corridor for travellers. While some sections of the road are flanked by vegetation or follow natural depressions, other segments are more elevated and exposed, increasing visibility across the site. The orientation of proposed mining components in relation to this route will strongly influence the project's visual integration.

In summary, the Makganyane Mining Right site is assessed as having a moderate to low VAC. While some natural topographic and vegetative features offer partial screening, the open and variable terrain, combined with limited tall vegetation and key vantage points such as the R385, means that visual mitigation will be essential. These may include the strategic orientation of infrastructure, the use of low-reflective materials, colour matching with the natural environment, and revegetation efforts in disturbed or peripheral zones to enhance absorption over time.

7 Identification of Visual Impacts

This section presents an evaluation of the potential visual impacts that may result from the establishment of the proposed Makganyane Mining Right. The assessment is structured around key visual impact criteria including visual intrusion, visibility, visual exposure, and viewer sensitivity. These factors collectively determine the likely intensity of visual change associated with the proposed development. Once the intensity of the impact is identified, it is refined further through consideration of spatial extent, duration, and probability in order to determine the overall significance of the visual impact.

The visual environment forms an integral part of the rural landscape in the Tsantsabane Local Municipality. It contributes to the area's sense of place, its identity as an agricultural and mining region, and the visual character experienced by local landowners, workers, and road users. The introduction of large-scale mining infrastructure has the potential to alter this landscape character, particularly where vegetation clearing, blasting, stockpiling, and access roads intersect previously undisturbed areas.

The landscape currently reflects a mosaic of semi-natural bushveld, historical agricultural activity, and increasing mining presence in the region. The proposed mining right footprint overlays a terrain that is topographically varied, with ridgelines, open valleys, and existing access routes. These characteristics will influence how the project components are visually perceived from different vantage points, particularly along the R385 and from scattered nearby homesteads and outcrops.

The assessment identifies key visual receptors, evaluates their sensitivity, and considers the nature and extent of change expected from the mining operation. This includes consideration of the proposed opencast pits, haul roads, waste rock dumps, and supporting infrastructure, and how these elements will interact with the existing land cover and terrain. Where relevant, mitigation measures will be recommended to reduce visual intrusion and enhance compatibility with the broader visual context.

Given the rural character of the region, the presence of visually exposed road corridors, and the proximity of sensitive receptors such as farm dwellings and informal residences, the visual impact assessment plays a critical role in ensuring that development is undertaken in a visually responsible manner. The findings of this section contribute to a balanced understanding of how the proposed Makganyane Mining Right may influence the visual resource of the area, and how best to minimise disruption to the established landscape character.

7.1 The Viewshed

The viewshed analysis for the Makganyane Mining Right identifies zones of visual influence surrounding the proposed development, highlighting areas where the mining infrastructure will be

most visible. The site lies within a visually open landscape shaped by thornveld and bushveld vegetation, with limited natural screening due to grazing and informal land use.

The analysis categorises visibility into 'Very High,' 'High,' 'Medium,' 'Low,' and 'Very Low' zones. The 'Very High' visibility zone is confined to the immediate vicinity of the proposed Makganyane Mining Right, where the plant components will be highly visible, especially to the south and southeast, where rural settlements and informal dwellings are predominant. These areas will experience a noticeable change in their visual environment.

7.1.1 Very High Visual Impact Zone (Under 1km)

Within this zone, the visual impact of the proposed Makganyane Mining Right is expected to be most pronounced. The proximity of infrastructure such as pits, waste dumps, and stockpiles, combined with a lack of consistent vegetation screening, means that visual change will be immediate and unavoidable for receptors within this radius.

Viewers most affected include farm workers, residents of adjacent properties, and road users along the R385, which traverses the site and falls almost entirely within this high-exposure zone. Isolated farmsteads and farm infrastructure located north and south of the project footprint—particularly near the Phase 1 and Phase 2 pit areas—are also positioned to experience clear and continuous views of construction and operational activities.

The Soutloop River, located within the eastern section of the site, introduces a natural linear element to the landscape. Although it does not provide substantial screening at close range, the contrast between its riparian corridor and the adjacent mining infrastructure contributes to the sharp transformation in the area's visual character.

The visual intrusion during the construction phase will be intensified by temporary infrastructure, increased vehicle movement, stockpiling, and vegetation clearance. The transformation of the local visual character from rural to industrial will be stark, particularly due to the contrast between the undisturbed areas and the exposed mining activities.

Mitigation within this zone should prioritise the use of natural vegetative screening, bunding where feasible, and context-sensitive site layout to reduce exposure. Regular communication with adjacent land users and landowners, especially those falling within the 1km viewshed, will be essential to manage visual expectations and foster cooperative engagement.

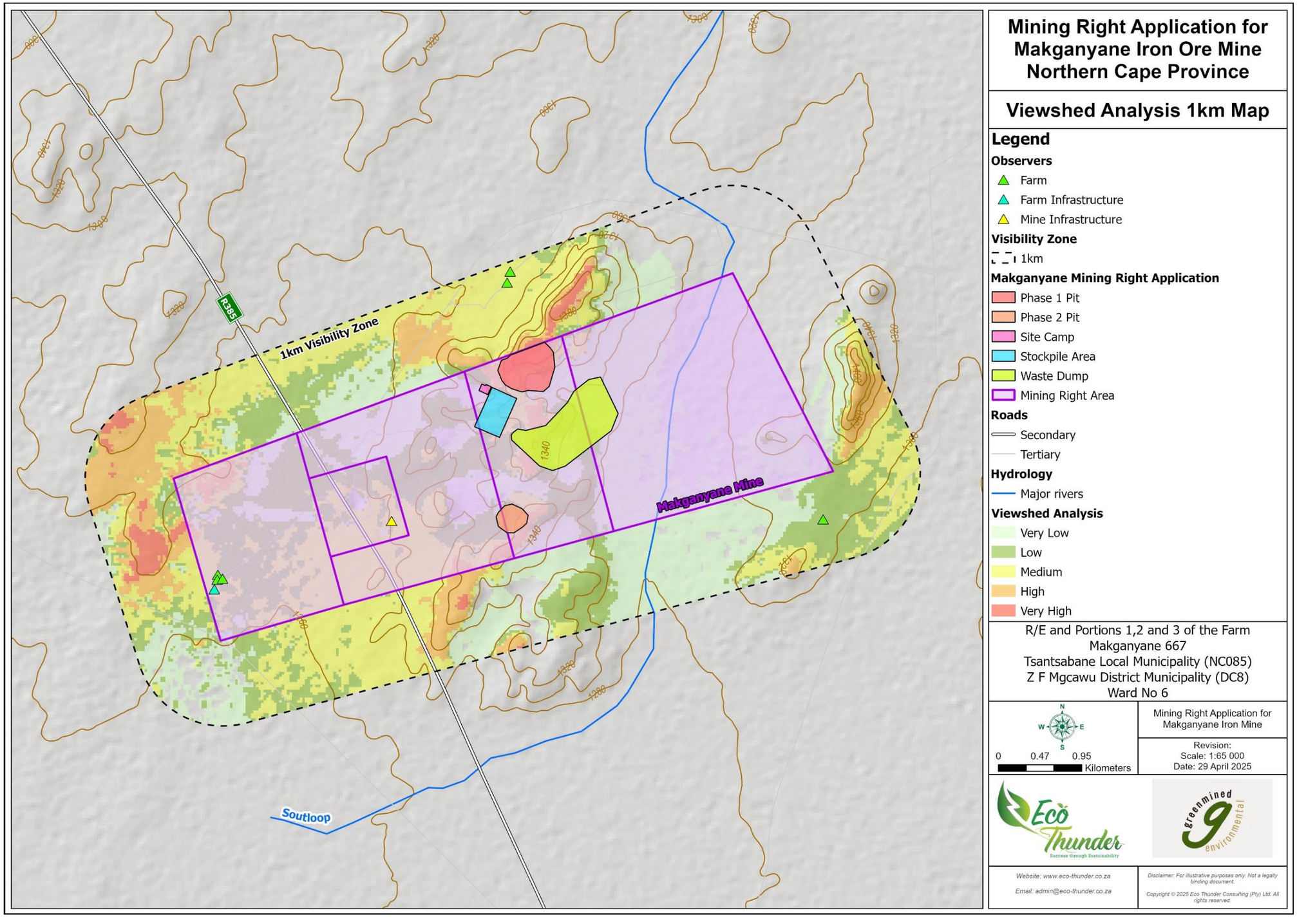

Figure 17: Viewshed Analysis - Very High (Under 1km)

7.1.2 High Visual Impact Zone (1-3km)

In this zone, the visual impact of the Makganyane Mining Right remains prominent but begins to diminish with distance. While natural landforms and vegetation provide some degree of screening, several receptors—including scattered farmsteads, infrastructure, and rural access roads—still fall within clear line-of-sight of the mining footprint.

The topography within this range features exposed ridgelines and gentle slopes, particularly toward the north and southeast, that allow for broader views of the waste dump, pit areas, and stockpile infrastructure. Although visibility is partially mitigated by the landscape's bushveld character, elevated viewpoints may still yield uninterrupted views of the mine.

The Soutloop River and its associated drainage features continue to influence the visual experience in this zone. While offering some landscape segmentation, especially toward the south, the river does not significantly obscure infrastructure but contributes to the layered complexity of the visual scene.

Travellers on the R385 and smaller gravel routes within the zone will intermittently encounter views of mining activities. While these views may be less direct than within the 1 km zone, they are still significant enough to alter the rural visual experience, especially in areas with sparse vegetation.

Mitigation efforts in this range should focus on the softening of visual edges through rehabilitation, progressive revegetation, and strategic placement of infrastructure to blend with landform contours. As the mining activity will remain discernible, even at this distance, maintaining visual harmony with the surrounding environment remains critical.

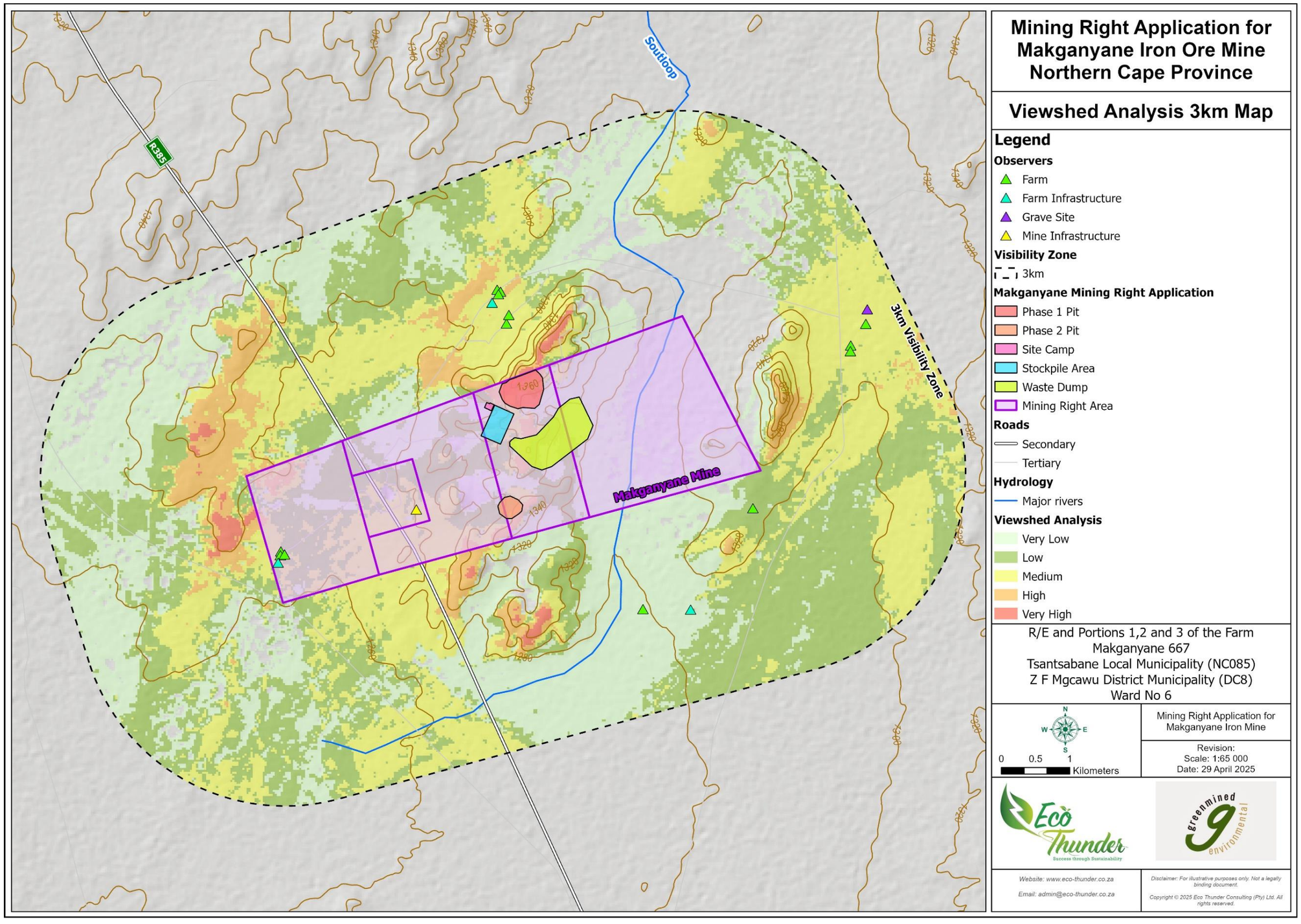

Figure 18: Viewshed Analysis - High (1-3km)

7.1.3 Medium Visual Impact Zone (3-6km)

At distances between 3 and 6 km, the visual prominence of the Makganyane Mining Right noticeably diminishes. While certain elevated ridgelines and slopes within this zone retain partial visibility of the site, the intervening terrain, scattered vegetation, and broader scale of the landscape significantly reduce the overall impact. Mining infrastructure becomes visually smaller and more blended into the distant horizon.

This zone includes low-density rural areas, with farmsteads and minor infrastructure located at scattered intervals. The visual experience for these receptors is generally less direct, with the mining development forming only a minor part of the wider landscape view. In flatter terrain or behind ridges, the site may be entirely obscured from view.

Road users travelling along the southern sections of the R385, as well as those navigating tertiary gravel roads within the southern and eastern buffer areas, may encounter brief, low-intensity views of the operation. These views are unlikely to dominate the visual landscape.

The Soutloop River and its associated riparian zones further fragment sightlines in this zone, offering increased visual absorption capacity. These natural landscape elements, along with the wider visual context of an expansive and sparsely populated environment, serve to reduce the potential for significant visual disruption.

Overall, the visual impact within the Medium Zone is considered low to moderate and can be effectively managed through strategic infrastructure placement and long-term rehabilitation efforts that blend the development into the broader landscape.

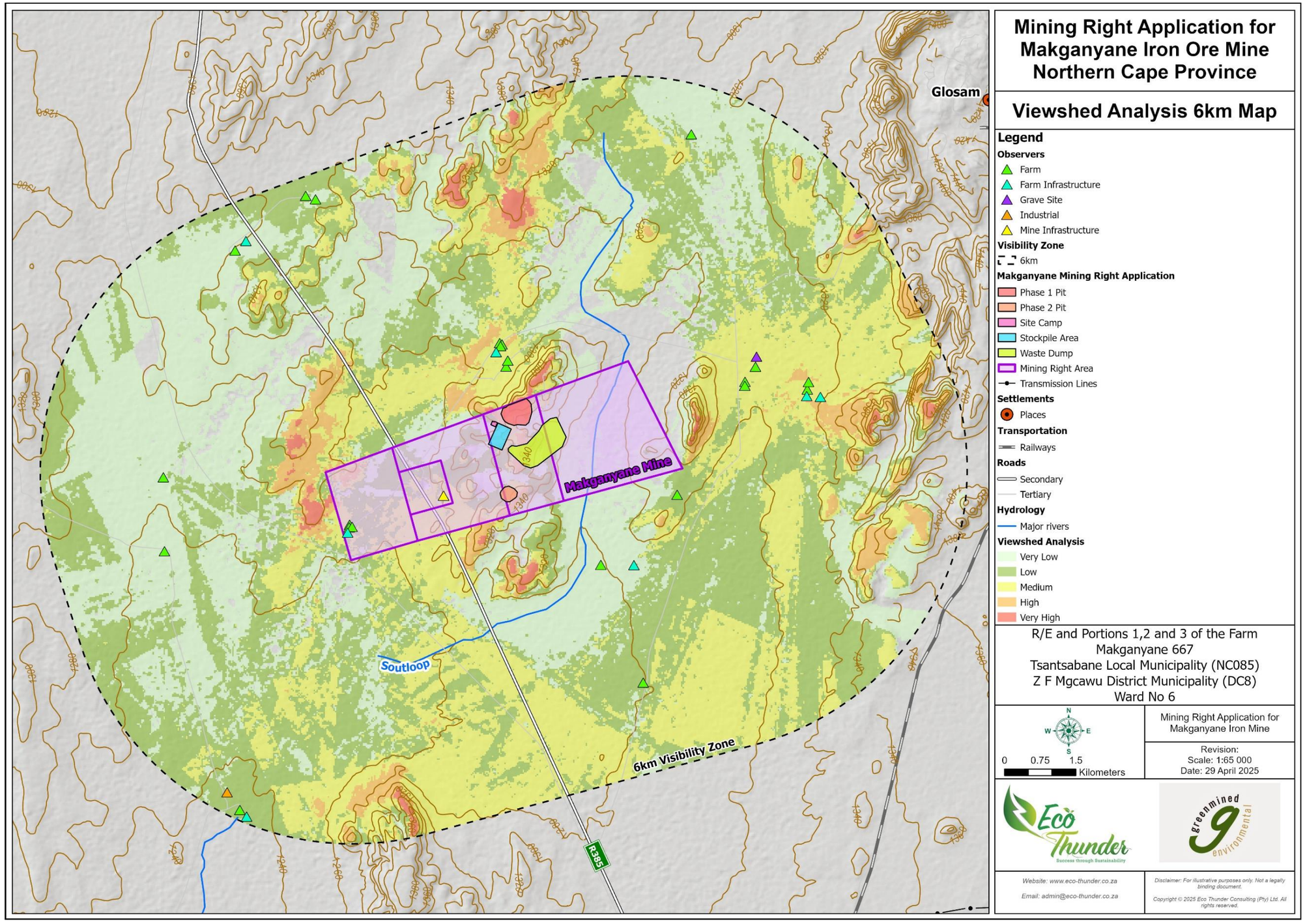

Figure 19: Viewshed Analysis – Low – Medium (3-6km)

7.2 Impact Index

The Visual Impact Index (VII) for the proposed Makganyane Mining Right provides an integrated analysis of three key variables: Viewer Sensitivity (VS), Project Visibility (PV), and Magnitude of Change (MC). This index is used to evaluate how the project's visibility and its potential to alter the landscape interact with viewer perception and land use context.

Viewer Sensitivity (VS): Viewer sensitivity refers to how different receptor groups are likely to respond to visual changes in their environment. For the Makganyane Mining Right, viewer sensitivity varies across land use types and proximity to the development. The primary receptor groups include:

- Residents and farm workers located within close proximity to the site, including isolated homesteads and farmsteads to the north, west, and southeast of the mining footprint. These receptors are considered to have high sensitivity, as they are likely to experience persistent and direct views of the mining activities, particularly those within the very high and high visibility zones.
- Road users, particularly those travelling along the R385, traverse all three impact zones. While their sensitivity is moderate, the regular passage along this provincial route—often through scenic rural areas—means that their exposure to visual change will be repetitive, especially where vegetation screening is sparse.
- Agricultural landowners are expected to have medium to high sensitivity, as their operations are closely tied to the visual integrity and perceived value of the land. Long-term occupation and attachment to the rural landscape heighten sensitivity to industrial changes, especially in previously undisturbed areas.

Project Visibility (PV): Project visibility has been assessed through a viewshed analysis extending 6 km from the proposed mining footprint. The results indicate that:

- Within 1 km, visibility is very high due to the open character of the terrain, sparse vegetation, and minimal topographic shielding. Key infrastructure such as the Phase 1 and Phase 2 pits, stockpile areas, and waste dumps will be clearly visible from receptors in this zone.
- In the 1–3 km range, visibility is high but begins to reduce with increased distance and the influence of intermittent ridges, bushveld patches, and variations in slope. Elevated viewpoints retain clear sightlines, while lower-lying areas benefit from partial screening.
- From 3–6 km, visibility is moderate to low, with the terrain, vegetation, and scale of the landscape significantly reducing the prominence of mining features. The Soutloop River and associated riparian vegetation contribute to this screening effect, especially to the southeast and along the river corridor.

Overall, visibility varies spatially but is expected to be highest for receptors closest to the site and along major visual corridors such as the R385 and elevated ridgelines surrounding the site.

Magnitude of Change (MC): The magnitude of visual change associated with the Makganyane Mining Right is informed by the scale and intensity of the proposed infrastructure, as well as the contrast introduced into the existing visual landscape.

- Within the very high impact zone (0–1 km), the magnitude of change is high. The landscape will transition from semi-natural bushveld and agricultural patterns to an active opencast mining operation, with large exposed earthworks, visible haul roads, and intermittent dust and vehicle movement. This stark shift will be clearly perceived by close-proximity receptors.
- In the high impact zone (1–3 km), the magnitude of change is moderate to high, particularly in elevated areas or those with unobstructed sightlines. The mining infrastructure will be a discernible feature but less dominant due to spatial separation and partial screening.
- In the medium impact zone (3–6 km), the magnitude of change is low to moderate. At this range, infrastructure appears as minor components within a broader visual context. The site becomes more visually assimilated into the landscape, particularly when viewed from behind ridges or through vegetated areas.

The presence of natural landscape elements such as the Soutloop River, local ridgelines, and existing agricultural infrastructure plays a significant role in modulating the visual impact across all zones.

The VII indicates a moderate to high visual impact in the immediate vicinity of the Makganyane Mining Right, decreasing with distance and visual obstruction. The greatest impacts are anticipated for high-sensitivity receptors within 1–3 km of the site, where the transformation of the landscape will be most apparent.

To minimise visual disruption, mitigation measures should prioritise:

- The strategic placement of infrastructure along existing contours;
- Vegetation preservation and the creation of visual buffers using indigenous plantings;
- Progressive rehabilitation of disturbed areas using topsoil stockpiling and reseeding;
- Ongoing engagement with landowners to address visual concerns and promote transparency.

With the application of context-sensitive design and mitigation strategies, the visual footprint of the mine can be effectively reduced, particularly for distant receptors and transient viewers.

8 Impacts and Risks Assessment

This section aims to rate the significance of the identified potential impacts pre-mitigation and post-mitigation. The potential impacts identified in this section are a result of both the environment in which the Project activity takes place, as well as the activity itself. The identification of potential impacts is performed by determining the potential source, possible pathways and receptors. In essence, the potential for any change to a resource or receptor (i.e., environmental aspect) brought about by the presence of a Project component or by a Project-related activity has been identified as a potential impact.

The potential impacts are discussed per environmental feature/aspect and according to each phase of the Project i.e., the Construction, Operational and Decommissioning/Post Closure Phases. The significance, probability and duration of these potential impacts have been assessed based on the detailed specialist studies undertaken on the sensitivity of the receiving environment.

8.1 Impacts and Risk Methodology

The EIA Methodology assists in evaluating the overall effect of a proposed activity on the environment. Determining of the significance of an environmental impact on an environmental parameter is determined through a systematic analysis.

8.1.1 Assessment Criteria

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 recognised from the various interpretations:

- Significance is a value judgment
- The degree of 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).

8.1.2 Methodology

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 6: 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 7: 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 8: 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 summarised below, and then dividing the sum by 3.

Table 9: 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 10: 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 11: 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 summarised below, and then dividing the sum by 2.

Table 12: 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 Significance

The multiplication of overall consequence with overall likelihood will provide the **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 13: Determination of Overall 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 Significance

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

Table 14: Description of 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 certainly be better, in one or a number of ways, than this means of achieving the benefit.
- **INSIGNIFICANT** There would be no impact at all, not even a very low impact on the system or any of its parts.

8.2 Impacts and Mitigation

8.2.1 Construction Phase

Table 15 to Table 18 summarise the consequence and significance of the visual impact of the Makganyane Mining Right. These results are based on worst-case scenario when the impacts of all aspects of the Project are taken together. Consequence of impact is a function of intensity, duration, and spatial extent. Intensity of impact is taken from the worst-case situation. These facilities are rated together, from a visual impact perspective, as the one would not exist without the other and they must be understood as the collective / cumulative.

Table 15: Potential Impacts during Construction Phase

Impact: Altered Landscape and Sense of Place during Construction		
Nature: The introduction of construction activities and infrastructure for the proposed Makganyane Mining Right Development will temporarily alter the visual character of the landscape. The current landscape will be interspersed with construction equipment, temporary storage, and initial mining structures.		
	Before Mitigation	**After Mitigation**
Extent	4	4
Duration	4	4
Severity	3	2
Overall Consequence	3.67	3.33
Frequency	5	5
Probability	4	3
Overall Likelihood	4.5	4
Significance	Medium-High (16.52)	Medium (13.32)
Status:	Negative - The construction phase will introduce temporary visual disturbances that could be perceived as out of harmony with the existing landscape.	
Reversibility:	High - post-construction, with proper landscaping and mitigation measures, the site can regain a semblance of its original character, although some permanent changes, like the mining infrastructure, will remain.	
Irreplaceable loss of resources?	No - While the landscape's visual character might be altered, with proper mitigation, there won't be an irreplaceable loss. However, care should be taken to ensure that no unique or endangered flora is affected during construction.	
Can impacts be mitigated?	Yes	
Mitigation Measures: • Minimise Land Disturbance: Limit the construction footprint to the minimum necessary for the proposed development. Use only the required area to preserve the existing landscape and unique sense of place. • Use of Natural Colours and Materials: Use materials and colours that blend with the existing landscape for any temporary structures or construction materials. Mimic the texture and colours of the natural environment.		

- Vegetative Screens: At key points of sensitivity, native vegetation may be planted around the construction site's perimeter to act as a natural screen.
- Localised Construction: Focus construction activities in smaller, localised areas rather than spreading out across the entire site simultaneously.
- Revegetation for Restoration: Post-construction, prioritise revegetation efforts, especially in areas where native vegetation was disturbed.
- Community Engagement: Engage with the local community and stakeholders in the surrounding area to understand their values and concerns related to the landscape and sense of place.
- Minimise Night-time Activities: Limit construction activities during the night to reduce light pollution, for nearby sensitive receptors.

Cumulative Impact: Medium - When combined with other existing infrastructure like the nearby Eskom installations and industrial structures, the cumulative visual impact during construction could be more pronounced. However, with mitigation measures in place, this can be managed.

Residual Risk: Low - With the proposed mitigation measures, the residual visual impact during the construction phase is expected to be reduced. However, some temporary visual disturbances will be unavoidable.

Impact: Visibility of the Facility to Residents during Construction

Nature: The proposed Makganyane Mining Right development, during its construction phase, will introduce a variety of structures and activities that will be visible to nearby residents and travellers. For resident, workers and travellers within approximately 1km, this will be especially prominent.

	Before Mitigation	**After Mitigation**
Extent	4	4
Duration	4	4
Severity	3	2
Overall Consequence	3.67	3.33
Frequency	5	5
Probability	4	3
Overall Likelihood	4.5	4
Significance	Medium-High (16.52)	Medium (13.32)
Status:	Negative - The visibility of construction activities could be perceived as a visual intrusion into the daily lives of nearby residents.	

Reversibility:	Medium - While the construction activities are temporary, the mining infrastructure, once erected, will be a permanent addition to the landscape. However, over time, residents might acclimatise to the new visual elements.
Irreplaceable loss of resources?	No - The visual change does not result in the loss of any irreplaceable resources. However, the familiar visual character for residents might be altered.
Can impacts be mitigated?	Yes

Mitigation Measures

- Make use of landscaping techniques and visual screening to reduce the impact as best possible.
- Site Screening: Use natural topography, existing vegetation, or temporary screens to shield construction activities from viewers. Situate construction activities in lower-lying areas or behind hills. Use screens made of materials that blend with the natural environment.
- Minimise Structure Heights: Keep temporary structure heights to a minimum to reduce their visibility, where possible. Use materials and colours that blend with the surrounding landscape.
- Lighting Control: Minimise light pollution by directing lights downwards, using shields to prevent light spill, and turning off lights when not in use.
- Strategic Placement: Where possible, prioritise the placement of taller construction equipment and initial mining structures in areas less visible to the majority of residents.

Cumulative Impact: Medium - The combined visual impact of the construction activities, along with existing structures like the nearby Eskom installations and industrial infrastructure, could be more noticeable for nearby residents and travellers. However, with mitigation measures, this cumulative impact can be managed.

Residual Impact: Medium - Even with mitigation measures, the visibility of certain construction activities to residents will be evident. However, as the construction phase progresses and residents become more accustomed to the changes, the perceived impact would reduce.

Impact: Dust and Construction Impact during Construction		
Nature: The construction activities for the proposed Makganyane Mining Right Development will inevitably disturb the soil, leading to dust generation. This dust can be carried by winds, affecting the immediate surroundings. Nearby residents, workers and travellers would experience a temporary increase in dust levels. This could affect their daily activities, health, and overall quality of life. Additionally, the movement of construction vehicles, machinery operations, and groundwork would cause noise and vibrations, further adding to the disturbances experienced by nearby residents, workers and travellers.		
	Before Mitigation	**After Mitigation**
Extent	4	3

Duration	4	4
Severity	4	3
Overall Consequence	4	3.33
Frequency	5	5
Probability	4	3
Overall Likelihood	4.5	4
Significance	Medium-High (18)	Medium (13.32)
Status:	Negative - The dust and other disturbances from construction activities can be perceived as nuisances by nearby residents, workers and, travellers can have potential health implications.	
Reversibility:	High - The dust and construction-related disturbances are temporary and will cease once construction is completed. The environment is expected to return to its pre-construction state in terms of dust levels.	
Irreplaceable loss of resources?	No - The dust and construction disturbances do not result in the loss of any irreplaceable resources. However, there might be a temporary decline in air quality and ambient noise levels.	
Can impacts be mitigated?	Yes	

Mitigation Measures:

- Dust Suppression: Regularly water down the construction site, especially during dry and windy conditions, to minimise dust generation.
- Vehicle Speed Limits: Implement strict speed limits for construction vehicles within the site to reduce dust kick-up.
- Use of Dust Screens: Install dust screens or barriers around the construction site, particularly in areas close to sensitive receptors, to contain dust within the site.
- Rehabilitation of Disturbed Areas: Promptly rehabilitate areas where construction activities have ceased. Re-vegetate with native species or suitable ground cover to stabilise the soil and reduce dust generation.
- Machinery Maintenance: Ensure construction machinery is well-maintained to minimise excessive noise and vibrations.
- Work Hours: Where possible, restrict the noisiest construction activities to daytime hours and avoid work during early mornings, late evenings, or weekends when residents are more likely to be at home, where feasible.
- Community Communication: Keep the local community informed about construction schedules, especially during particularly disruptive activities. This allows residents to prepare or adjust their schedules accordingly.

Cumulative Impact: Medium - The combined impact of dust, noise, and other construction-related disturbances, along with existing activities in the area, could be more noticeable for residents, workers and travellers. However, with mitigation measures, this cumulative impact can be managed.
Residual Risk: Low to Medium - With the proposed mitigation measures, the residual impact of dust and construction disturbances should be significantly reduced. However, occasional spikes in dust or noise might still be experienced during certain construction activities.

Impact: Impact on Local Infrastructure and Traffic during Construction		
Nature: The construction of the proposed Makganyane Mining Right Development will place additional stress on local infrastructure, particularly roads, due to the movement of heavy construction vehicles, equipment, and materials. This increased traffic can lead to wear and tear on local roads and may necessitate the widening of access roads. The increased construction traffic can also lead to congestion, delays, and potential safety hazards for local residents, and travellers along the R385.		
	Before Mitigation	**After Mitigation**
Extent	4	3
Duration	4	4
Severity	3	2
Overall Consequence	3.67	3
Frequency	4	3
Probability	4	3
Overall Likelihood	4	3
Significance	Medium (14.67)	Low-Medium (9)
Status:	Negative - The construction phase will introduce temporary disturbances to local infrastructure and traffic that could be perceived as out of harmony with the existing infrastructure and traffic patterns.	
Reversibility:	High - Post-construction, with proper restoration and mitigation measures, local infrastructure and traffic flow can be returned to their original condition, although some temporary disruptions will have occurred.	
Irreplaceable loss of resources?	No - The impact on local infrastructure and traffic is temporary and does not result in the loss of irreplaceable resources. However, there might be temporary inconveniences and disruptions for the local community, travellers and nearby facilities.	
Can impacts be mitigated?	Yes	

Mitigation Measures: • Construction Traffic Management Plan: Develop and implement a plan to manage the movement of construction vehicles and minimise disruption to local traffic. Schedule deliveries and heavy vehicle movements outside of peak traffic times. • Traffic Control Measures: Implement traffic control measures, such as flaggers, temporary traffic signals, and signage, to ensure safe and efficient traffic flow around the construction site. • Infrastructure Protection Measures: Implement measures to protect local infrastructure from damage. Use appropriate vehicles and equipment to minimise wear and tear on local roads. • Post-Construction Rehabilitation: Repair any damage caused to local infrastructure after construction. Restore the area to its pre-construction condition by repairing roads, replacing damaged vegetation, and removing temporary structures or equipment.
Cumulative Impact: Medium - The combined impact of the construction activities, along with existing infrastructure usage and traffic, could be more noticeable for the local residents, workers and nearby travellers. However, with mitigation measures, this cumulative impact can be managed
Residual Risk: Low - With the proposed mitigation measures, the residual impact on local infrastructure and traffic during the construction phase is expected to be minimal. However, some temporary disruptions might still be experienced during certain construction activities.

8.2.2 Operation Phase

Table 16: Potential Impacts during the Operation Phase

Impact: Altered Landscape and Sense of Place during Operation		
Nature: The operational phase of the Makganyane Mining Right Development will introduce a new visual element to the landscape, characterised by the presence of large industrial structures and infrastructure. The presence of these structures can alter the visual harmony and the intrinsic sense of place that residents, workers and visitors associate with the region.		
	Before Mitigation	**After Mitigation**
Extent	4	4
Duration	5	5
Severity	3	2
Overall Consequence	4	3.67
Frequency	5	5
Probability	4	3
Overall Likelihood	4.5	4

Significance	Medium-High (18)	Medium (14.68)
Status:	Negative - The transformation of the landscape due to the presence of the mining infrastructure can be perceived as a visual intrusion by some.	
Reversibility:	Medium - While the landscape alteration is long-term during the facility's operational phase, post-decommissioning, there's potential for the land to be restored to a more natural state, albeit with some lasting changes.	
Irreplaceable loss of resources?	No - The sense of place is subjective and can evolve over time. While the landscape's visual character changes, no tangible resources are irrevocably lost.	
Can impacts be mitigated?	Yes	

Mitigation Measures:

- Minimise Visual Impact: Use low-reflectivity materials and colours that blend with the natural landscape to reduce the visual impact of the structures where possible.
- Landscaping and Screening: Plant vegetation that blends with the existing landscape around the perimeter of the facility to screen views of the structures where required.
- Minimise Lighting: Use minimal lighting at the facility and ensure that any necessary lighting is directed downwards and shielded to reduce light pollution.
- Regular Maintenance: Regularly maintain the facility and the surrounding landscape to ensure that it remains in good condition and blends in with the natural environment.
- Community Engagement: Engage with the local community to understand their concerns and incorporate their feedback into the design and operation of the facility, where feasible.

Cumulative Impact: Medium - The facility, in combination with other developments and infrastructure in the area, contributes to a changing landscape character. However, with mitigation measures, the cumulative visual impact can be managed.

Residual Risk: Low - With the proposed mitigation measures, the residual impact on the landscape and sense of place should be significantly reduced. However, the presence of the Makganyane Mining Infrastructure will still be a noticeable change in the landscape during its operational phase.

Impact: Visibility of the Facility to Residents during Operation		
Nature: During the operational phase, the proposed Makganyane Mining Right Development will become a prominent feature in the landscape. Nearby residents, workers and travellers will have varying degrees of visibility of the facility. This increased visibility can influence their daily visual experience, potentially altering their sense of place and connection to the landscape.		
	Before Mitigation	**After Mitigation**
Extent	4	4

Duration	5	5
Severity	3	2
Overall Consequence	4	3.67
Frequency	5	5
Probability	4	3
Overall Likelihood	4.5	4
Significance	Medium-High (18)	Medium (14.68)
Status:	Negative - For nearby residents, workers and travellers who value the nature of the landscape, the visibility of the mining infrastructure can be perceived as a visual intrusion.	
Reversibility:	Medium - The visual impact is persistent during the facility's operational phase. However, once decommissioned, and if the land is restored, the visibility factor can be reversed.	
Irreplaceable loss of resources?	No - While the visual character of the area changes, there's no permanent loss of tangible resources. The sense of place, though altered, can evolve and adapt over time.	
Can impacts be mitigated?	Yes	

Mitigation Measures:

- Enhanced Landscaping and Screening: Focus on implementing landscaping and natural screening methods only where practically feasible to reduce the visibility of the mining infrastructure from local residents, travellers along the R385, and key viewpoints.
- Vegetative Screening: At key points of sensitivity, native trees and shrubs may be planted to create natural screens that obscure the view from nearby residents and travellers along the R385.
- Regular Maintenance: Regular maintenance of the mining infrastructure and its surroundings can help to ensure that it remains as unobtrusive as possible. This would include keeping structures clean and in good repair, and maintaining vegetative screening.
- Periodic Review: Conduct a periodic review of the effectiveness of the mitigation measures and make necessary adjustments. This is particularly important given the long operational phase of the project.

Cumulative Impact Medium - The facility's visibility, combined with other infrastructural elements in the area, contributes to a changing visual landscape. However, with mitigation measures in place, the cumulative visual impact can be moderated.

Residual Risk: Low to Medium - Implementing the proposed mitigation measures should significantly reduce the facility's visibility impact on nearby residents, workers and travellers along R385. However, some level of visibility will remain, especially from certain vantage points.

Impact: Potential Visual Impact of Operational, Safety, and Security Lighting during Operation		
Nature: Operational, safety, and security lighting are essential components of the proposed Makganyane Mining Right Development to ensure safe and efficient operations, especially during nighttime hours. However, this lighting can introduce a new source of light in the area, potentially causing light pollution. This can be particularly noticeable in areas that previously had minimal artificial lighting, altering the nocturnal landscape and potentially affecting the night sky visibility for nearby residents and travellers along R385		
	Before Mitigation	**After Mitigation**
Extent	4	4
Duration	5	5
Severity	3	2
Overall Consequence	4	3.67
Frequency	5	5
Probability	3	2
Overall Likelihood	4	3.5
Significance	Medium-High (16)	Medium (12.85)
Status:	Negative - The introduction of artificial lighting can be perceived as a visual disturbance, especially if it contrasts starkly with the existing ambient light levels.	
Reversibility:	High - The impact is directly tied to the operational phase. Once the facility is decommissioned or if lighting practices are modified, the impact can be quickly reversed.	
Irreplaceable loss of resources?	No - While the night-time visual character might change, there's no permanent loss of resources. However, the natural night sky, if significantly affected, can be considered a non-renewable resource in the context of the project's lifespan.	
Can impacts be mitigated?	Yes	
Mitigation Measures: • Downward-facing Lights: Use fixtures that direct light downwards to minimise upward light spill, preserving the night sky. • Motion Sensors: Install motion sensors so that lights are only activated when necessary, reducing the duration of light emissions. • Low-intensity Lighting: Opt for low-intensity lighting that provides sufficient illumination for safety without being overly bright.		

• Shielding: Use shields on lights to direct illumination to the intended areas and prevent light spill into unintended areas. • Educate Staff: Ensure that staff are aware of the importance of minimising light pollution and are trained to use lighting efficiently. • Periodic Reviews: Conduct periodic reviews of lighting practices to identify and rectify any unnecessary light emissions.
Cumulative Impact: Medium - The Proposed Project's lighting, when combined with other light sources in the area, could contribute to an overall increase in light pollution. However, with effective mitigation, this cumulative impact can be managed.
Residual Risk: Low - With the proposed mitigation measures in place, the residual risk of significant light pollution from the facility should be minimised. Some localised light spill might still occur, but its impact should be limited.

8.2.3 Decommissioning Phase

Table 17: Potential Impacts during Decommissioning Phase

Impact: Landscape Character and Visual Amenity during Decommissioning		
Nature: The decommissioning phase involves the removal of the proposed Makganyane Mining Right infrastructure, and any other related structures from the site. This process will temporarily disrupt the landscape, potentially leading to a transient alteration in the visual character of the area. The removal process might expose previously covered or altered grounds, leading to a temporary visual contrast in the landscape.		
	Before Mitigation	**After Mitigation**
Extent	4	4
Duration	2	2
Severity	3	2
Overall Consequence	3	2.67
Frequency	5	5
Probability	4	3
Overall Likelihood	4.5	4
Significance	Medium (13.5)	Medium (10.68)
Status:	Negative initially, transitioning to Neutral – The initial stages of decommissioning will involve dismantling, which might appear disruptive. However, as the site is restored, the visual amenity will gradually return to its pre-construction state.	

Reversibility:	High – The visual changes due to decommissioning are temporary. Once restoration efforts are complete, the landscape is expected to revert to its original state or a state close to it.
Irreplaceable loss of resources?	No – The decommissioning process is designed to restore the landscape, ensuring no permanent loss of visual or environmental resources.
Can impacts be mitigated?	Yes

Mitigation/Enhancement Measures:

- Gradual Dismantling: Instead of removing all infrastructure at once, consider a phased approach.
- Re-use of Infrastructure: Where possible, consider re-using some of the infrastructure for other purposes. For example, access roads could be left in place for use by local landowners, if appropriate and agreed upon.
- Site Restoration: Prioritise immediate restoration of areas once the infrastructure is removed, including re-vegetation with native species.
- Minimise Ground Disturbance: Use techniques that minimise ground disturbance during the removal of infrastructure.
- Waste Management: Ensure all materials, especially non-biodegradable ones, are properly disposed of or recycled, leaving no remnants behind.
- Monitoring: Post-decommissioning, monitor the site's recovery and implement any necessary interventions to ensure successful landscape restoration.

Cumulative Impact: Low - Given that the goal of decommissioning is to restore the site, the cumulative visual impact is expected to be minimal, especially when combined with other existing structures and developments.

Residual Risk: Low - With the proposed mitigation measures and a focus on site restoration, the residual risk of significant visual disruption from the decommissioning process should be minimal.

Impact: Site Restoration during Decommissioning		
Nature: Site restoration refers to the process of returning the project site to its original or near-original state after the decommissioning of the proposed Makganyane Mining Right Development . This involves the removal of infrastructure, remediation of any disturbed soils, and re-establishment of native vegetation. The aim is to ensure that the land can revert to its prior use, whether that be agriculture, natural habitat, or another purpose.		
	Before Mitigation	**After Mitigation**
Extent	2	2
Duration	2	2
Severity	3	4

Overall Consequence	2.33	2.67
Frequency	5	5
Probability	3	4
Overall Likelihood	4	4.5
Significance	Low-Medium (9.32)	Medium (12.02)
Status:	Positive - The intention behind site restoration is to benefit the environment by rehabilitating the land and minimising long-term visual and ecological impacts.	
Reversibility:	High - The changes made during the decommissioning and restoration phase are intended to be permanent, with the land reverting to its original state or a state close to it.	
Irreplaceable loss of resources?	No - Proper site restoration ensures that there's no permanent loss of resources, and the land can be used as it was before the project commenced.	
Can impacts be mitigated?	Yes	

Enhancement Measures:

- Native Vegetation: Use native and local plant species for re-vegetation to ensure ecological compatibility and enhance biodiversity.
- Soil Conservation: Employ techniques to prevent soil erosion and promote soil health during and after restoration.
- Water Management: Ensure proper drainage and water management to prevent waterlogging or erosion.
- Regular Monitoring: Conduct regular site inspections to assess the success of restoration efforts and intervene where necessary.
- Community Engagement: Engage with the local community to gather feedback on restoration efforts and address any concerns.
- Waste Management: Ensure all decommissioned materials are properly disposed of or recycled, leaving no remnants behind.

Cumulative Impact: Low - The restoration process aims to negate the impacts of the Makganyane Mining Right Project, resulting in minimal cumulative effects when combined with other developments or natural features.

Residual Risk: Low - With diligent restoration efforts and ongoing monitoring, the residual risk of negative impacts from the restoration process should be minimal.

8.3 Cumulative Impact Assessment

The potential cumulative impacts that were identified for the construction, operational and decommissioning phases, are discussed in Table 8

Table 18: Cumulative Impacts identified for the Construction, Operational and Decommissioning Phases

Impact: Cumulative Impact		
Nature: The potential cumulative visual impact of the Makganyane Mining Right on the visual quality of the landscape.		
	Overall impact of the proposed project considered in isolation (with mitigation)	**Cumulative impact of the project and other projects within the area (with mitigation)**
Extent	4	4
Duration	4	4
Severity	2	4
Overall Consequence	3.33	4
Frequency	5	5
Probability	3	4
Overall Likelihood	4	4.5
Significance	Medium (13.32)	Medium-High (18)
Status (positive, neutral, or negative)	Negative	Negative
Reversibility	Reversible (1)	Reversible (1)
Irreplaceable loss of resources?	No	No
Can impacts be mitigated?	No, only best practise measures can be implemented	
Generic best practise mitigation/management measures:		

Planning: Retain/re-establish and maintain natural vegetation (if present) immediately adjacent to the development footprint where possible. Operations: Maintain the general appearance of the facility. Decommissioning: Remove infrastructure not required for the post-decommissioning use. Rehabilitate all affected areas. Consult an ecologist regarding rehabilitation specifications.
Residual Impacts
The visual impact will be removed after decommissioning, provided the Makganyane Mining Right Project infrastructure is removed. Failing this, the visual impact will remain.

The cumulative effect of multiple minig projects within a relatively confined area requires a comprehensive visual impact management strategy. This strategy must consider the cumulative visual impact and include the strategic placement of plant components, landscaping, and ongoing monitoring throughout the lifespan of these projects.

Maintaining the visual integrity of the region hinges on the careful implementation of mitigation measures across all developments. The collective presence of multiple mining facilities creates a visual impact that needs careful management to balance the region's economic and environmental priorities with the preservation of its visual character. The ultimate goal is to ensure that mining projects, including the proposed project, harmonise with the existing landscape, preserving the visual quality for current and future generations.

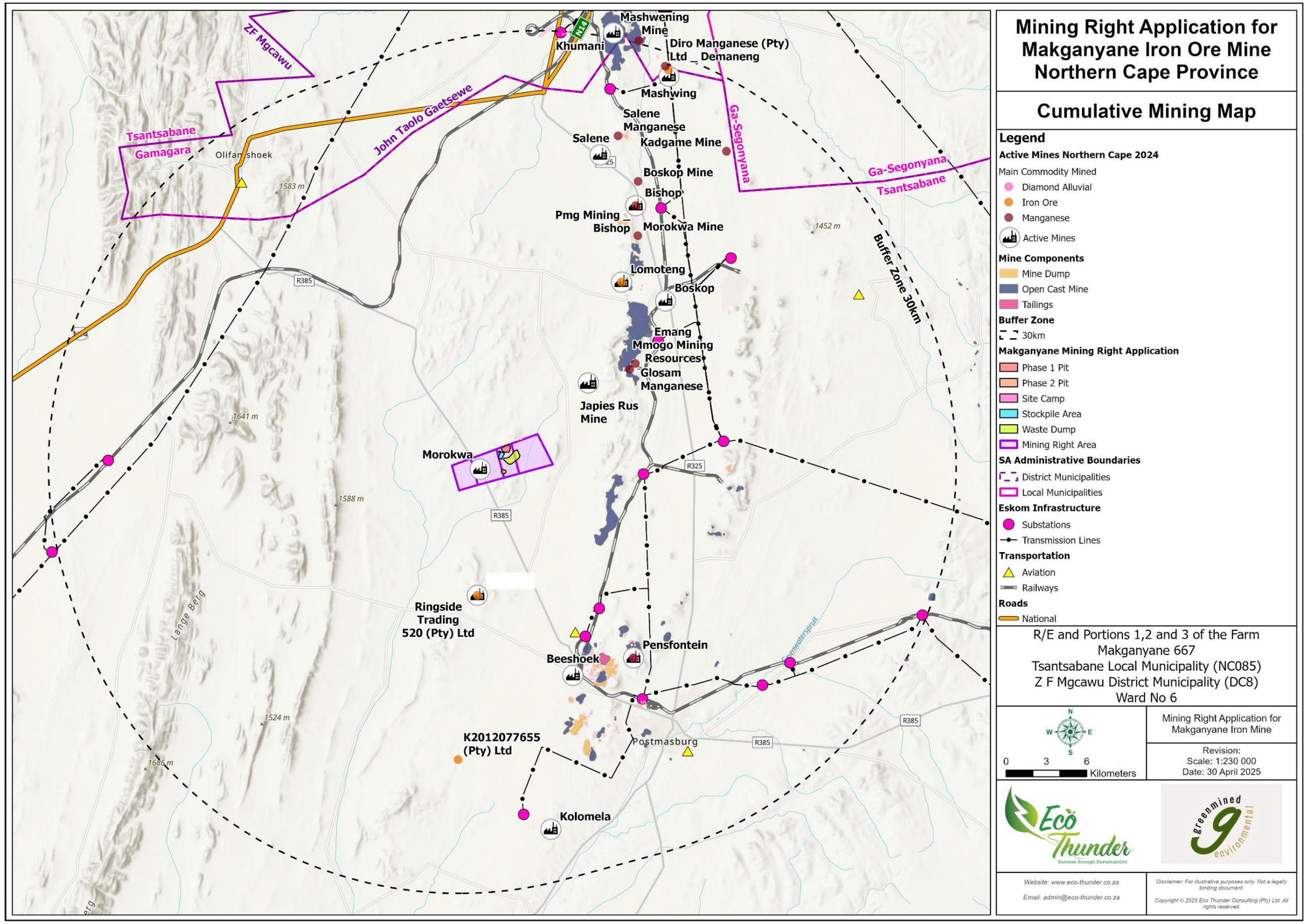

Figure 20: Cumulative Map

9 Environmental Impact Statement and Conclusion

The VIA undertaken for the proposed Makganyane Mining Right has assessed the visual implications of the project in the context of the local landscape and surrounding receptors. The site is situated in an area already influenced by agricultural activities and mining infrastructure, which has altered the natural landscape to a moderate degree. While the proposed mine will introduce additional elements such as open pits, a substantial waste rock dump, stockpiles, haul roads, and support infrastructure, these features will largely consolidate within an environment already characterised by human modification.

The assessment identified that visual impacts will be most pronounced within the immediate vicinity of the mining area. Receptors along the R385 provincial road, as well as nearby farmsteads and agricultural holdings, are likely to experience the highest degree of visual change, particularly within a radius of up to 1 kilometre from the active mining areas. Beyond this distance, the visibility and significance of the project diminish considerably due to intervening vegetation, subtle topographic variations, and the general distance decay effect. While cumulative visual impacts, in combination with other mining and agricultural activities in the region, were considered, the additional contribution from the proposed Makganyane Mining Right is not expected to fundamentally alter the broader landscape character.

Mitigation measures have been proposed to address and reduce the visual impacts associated with the project. These include careful siting and design of infrastructure, retention and enhancement of vegetation buffers, use of visually sympathetic materials and colours where feasible, minimisation of night-time lighting impacts, and progressive rehabilitation of disturbed areas. Furthermore, final closure and rehabilitation measures, including the reshaping of landforms and re-vegetation with appropriate indigenous species, will assist in softening the long-term visual footprint of the mine and integrating it more naturally into the receiving environment.

The VIA concludes that, with the full implementation of the recommended mitigation measures and responsible visual management throughout the life of the project, no fatal flaws exist that would prevent the authorisation of the proposed Makganyane Mining Right from a visual perspective. The project is therefore supported on the basis that visual impacts will be effectively managed to remain within acceptable levels. It is recommended that the mitigation measures outlined in this report be integrated into the Environmental Management Programme (EMPr) and Closure Plan to ensure that visual objectives are met during the construction, operational and decommissioning phases.

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Appendix A: Specialist CV

Appendix B: VIA Best Practice Guideline