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CLOSURE AND FINANCIAL PROVISION ASSESSMENT

GLENCORE KROONDAL MINE INFRASTRUCTURE ON PORTION 62 OF THE FARM RIETFONTEIN 338 JQ (WESTERN CHROME MINES)

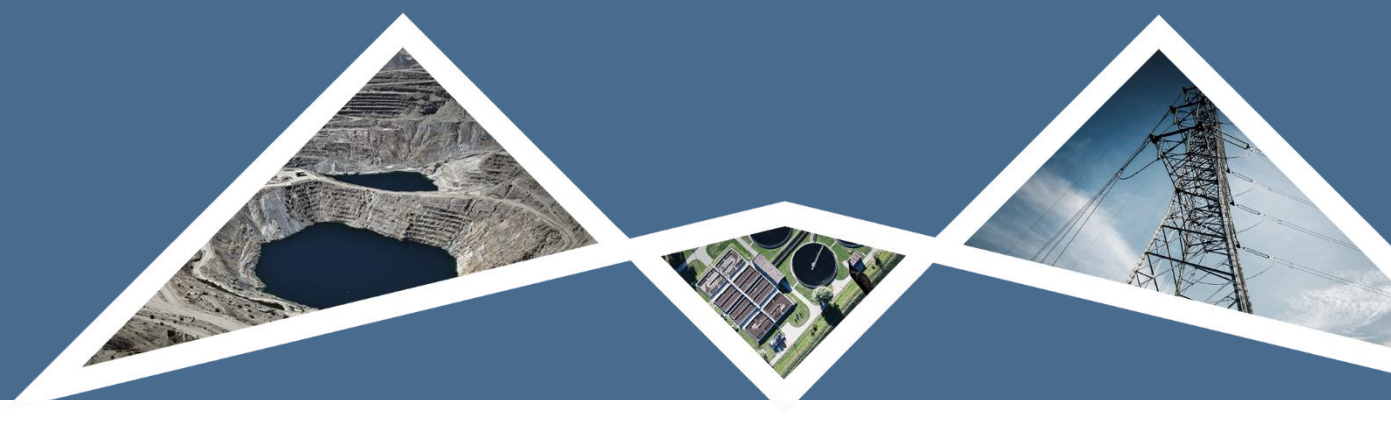

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Table of Contents

List of Figures

List of Tables

Appendices

EXECUTIVE SUMMARY

Environmental Impact Management Services (Pty) Ltd (EIMS) has been appointed by Glencore Operations South Africa (Pty) Ltd – Western Chrome Mines (hereafter referred to as Glencore), to conduct a Closure and Financial Provisions Assessment for the acquisition of certain mining and surface rights (Portion 62 of the Farm Rietfontein 338 JQ) from Clover Alloys Rustenburg Chrome Mine (Hereafter referred to as Clover Alloys). Glencore wishes to construct additional facilities and/or infrastructure (listed in Table 4) which, under relevant environmental legislation, require approval by a competent authority.

The portion of land (Portion 62 of the Farm Rietfontein 338 JQ) currently under Clover Alloy's Mining Right (336MR), will be incorporated into Glencore's existing mining right (254MR). Since 254MR was applied for and approved before the 2015 financial provisioning regulations, its closure financial quantum was determined using the MPRDA Guidelines. The same methodology will be used to calculate the quantum for the new facilities on the acquired land. This approach is allowed under the transitional arrangements of the NEMA Financial Provisioning Regulations (GNR 1147). These regulations will become the main framework for future financial quantum determinations once they come into effect on a date yet to be promulgated.

A crucial aspect of the MPRDA is the requirement for financial provisions to provide for the environmental rehabilitation and closure of mining operations. Section 41 of the MPRDA, in conjunction with Regulations 53 and 54 (recently repealed by the National Environmental Management Act), provides detailed guidelines for these financial provisions.

Section 6 of this report provides a detailed discussion on the mine closure objectives, and Section 7.2 provides the closure methodologies and assumption, and is summarised as:

- Dismantling of processing plant and related structures (power lines);
- Demolition of steel buildings and structures Demolition of reinforced concrete buildings and structures;
- Demolition of housing and facilities;
- Rehabilitation of access roads;
- General surface rehabilitation, including grassing of all denuded areas;
- Fencing (dismantling, etc.); and
- 2 to 3 years of maintenance and aftercare.

Closure risks are also discussed in Section 6.2 and although a detailed risk assessment was not conducted for this project, the following high-level risk were identified:

- Insufficient rehabilitation budget and consequent failure to rehabilitate and close the mine sustainably;
- Possibility of not implementing the final Land Use Plan for the disturbed areas, and consequent loss of biodiversity, increased soil erosion, increased siltation of watercourses, etc;
- Potential negative impact on biodiversity and consequent failure of re-established indigenous/endemic vegetation on rehabilitated areas;
- If not properly managed, demolition waste and debris can contaminate water bodies, affecting wetland/aquatic ecosystems and potentially posing risks to human health; and
- Failure to demolish housing and facilities, resulting in abandoned buildings that could pose additional risks, such as fire hazards, safety and security issues, etc.

The quantum for financial provisions has been estimated using the "rule-based" approach, defined in the DMR Guideline, consisting of the following steps and associated determinations:

- Step 1: Determine the mineral mined and saleable by-products.

- The mine is classified as a chrome mine, according to the DMR guidelines.

- Step 2: Determine the risk class
    - The Kroondal mine (254MR) is classified as a Class A (High Risk) mine, as it is considered as a large chrome mine that includes the mine, mine waste, plant and plant waste.
- Step 3: Determine the Environmental risk class
    - The environment risk class is determined to be medium.
- Step 4.1: Identify the closure components
    - 1: Dismantling of processing plant and related structures (including overland conveyors and power lines)
    - 2(A): Demolition of steel buildings and structures
    - 2(B): Demolition of reinforced concrete buildings and structures
    - 3: Rehabilitation of access roads
    - 5: Demolition of housing and facilities
    - 10: General surface rehabilitation, including grassing of all denuded areas
    - 12: Fencing
    - 14: 2 to 3 years of maintenance and aftercare
- Step 4.2: Identify the unit rates for the closure components
    - The closure rates are provided in Table 5, and the DMR Master Rates used to obtain the closure rates can be found in Appendix 1.
    - The DMR rates were escalated with the CPI to obtain the subtotals of the closure rates.
- Step 4.3: Identify and apply the weighting factors
    - Weighting factor 1, the nature of the terrain, is determined to be overall flat.
    - Weighting factor 2, the proximity of the mine to an urban centre, is determined to be Urban.
- Step 4.4: Identify the areas of disturbance
    - The dimensions of the identified closure components can be found in Table 4.
    - The dimensions are based on a KML file provided by Glencore with spot verifications undertaken by EIMS to confirm accuracy.
- Step 4.5: Identify closure costs from specialist studies
    - Since the Mine is considered a Class A (high risk) mine, it was determined in the DMR Guidelines that a quantified risk assessment is required, and a costing was included for an ecologist specialist.
- Step 4.6: Calculate closure costs
    - The closure cost is provided in Table 5.

Appendix 3 provides an overview of the detailed costing. The closure liability estimate for the Glencore Kroondal Clover RCM Project in 2024 is determined to be **R R19 657 888.64 (inc VAT).**

1 INTRODUCTION

Environmental Impact Management Services (Pty) Ltd (EIMS) has been appointed by Glencore Operations South Africa (Pty) Ltd – Western Chrome Mines (hereafter referred to as Glencore), to conduct a Closure and Financial Provisions Assessment for the acquisition of the mining and surface rights from Clover Alloys Rustenburg Chrome Mine (Hereafter referred to as Clover Alloys).

Glencore wishes to acquire a specific Portion 62 of the Farm Rietfontein 338 JQ under their current Mining Right (NW30/5/1/2/2/354MR, 254MR). The portion currently falls under Clover Alloys' Mining Right (NW30/5/1/2/2/336MR, 336MR). Glencore wishes to construct additional facilities and/or infrastructure (listed in Table 4) which, under relevant environmental legislation, require approval by a competent authority.

As part of this assessment, a Quantum of Financial Provision for Rehabilitation and Closure has been prepared for the additional developments on the portion to be acquired by Glencore. The primary objective of this report is to define the specific rehabilitation and closure commitments and subsequently calculate the necessary financial provision quantum, adhering to the guidelines outlined in the Department of Mineral Resources (DMR) 'Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision' (DMR Guideline).

The Mineral and Petroleum Resources Development Act (MPRDA) of 2002 (Act No. 28 of 2002) and its associated regulations, which came into effect on 1 May 2004, mandate financial provisions for environmental rehabilitation and mine closure. Section 41 of the MPRDA, in conjunction with Regulations 53 and 54, outlines the specific requirements for such financial provisions. Holders of rights, as defined within the MPRDA and its regulations, are obligated to submit adequate financial provisions to the Department of Mineral Resources and Energy (DMRE).

Furthermore, as stipulated in Section 24P of the National Environmental Management Act (Act 107 of 1998), all mine operators are required to conduct annual assessments of their environmental liability in accordance with prescribed methodologies. Subsequently, financial provisions must be augmented to the satisfaction of the Minister responsible for mineral resources.

It is important to note that this report does not currently align with the requirements stipulated in the Financial Provisioning Regulations (GNR1147 of November 2015) promulgated under the National Environmental Management Act (Act 107 of 1998 - NEMA) due to the transitional provisions within the Regulation (see Regulation 17B below). Consequently, Glencore will be subject to the provisions of GN1147 Regulations, effective from the date of publication in the Government Gazette. However, at the time of compilation of this report, no such publication of a date in the Government Gazette has taken place.

2 LEGAL FRAMEWORK

The environmental regulatory landscape governing the planning, operation, and eventual closure of mining operations in South Africa has recently undergone a transitional phase, shifting from the Mineral and Petroleum Resources Development Act (MPRDA) to the National Environmental Management Act (NEMA). The Financial Provision Regulations (GNR 1147, 2015) state the following under section 17:

17B[1]. Extension of the transitional period

Unless regulation 17A applies, a holder, or holder of a right or permit, who applied for such right or permit prior to 20 November 2015, regardless of when the right or permit was obtained-

(a) must by no later than a date published in the Government Gazette comply with these Regulations; and

(b) *shall, until such date published in the Government Gazette contemplated in paragraph (a), be regarded as complying with the provisions of these Regulations, if such holder complies with the provisions and arrangements regarding financial provisioning, approved as part of the right or*

[1] Reg. 17B inserted by GN 991/2018, and substituted by GN 24/2020, GN 495/2021, GN 2087/2022 w.e.f. 19 May 2022, GN 3841/2023 w.e.f. 1 September 2023 and GN 4296/2024 w.e.f. 1 February 2024

permit issued in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).

As per the above, this report therefore adheres to the requirements of the MPRDA, a comprehensive overview of the legislative context for mine closure will be provided, encompassing both the MPRDA and NEMA frameworks.

2.1 MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT

The Mineral and Petroleum Resources Development Act (MPRDA) of 2002 (Act No. 28 of 2002) and its associated regulations came into effect on 1 May 2004. A critical component of the MPRDA mandates financial provision for environmental rehabilitation and closure of mining operations. Specifically, Section 41 of the MPRDA, along with Regulations 53 and 54, outlines the requirements for such financial provisions.

Holders of rights, as defined in the relevant sections of the MPRDA and its regulations, are obligated to provide the Department of Mineral Resources and Energy (DMRE) with adequate financial provisions. DMRE regional office officials are tasked with the responsibility of assessing, reviewing, and approving the quantum of submitted financial provisions to ensure their sufficiency in covering both current environmental liabilities and future mine closure costs. Specific sections and regulations of the MPRDA is extracted below.

Section 41: Financial provision for remediation of environmental damage

(a) An applicant for a prospecting right, mining right or mining permit must, before the Minister approves the environmental management plan or environmental management programme in terms of section 39(4), make the prescribed financial provision for the rehabilitation or management of negative environmental impacts.

(b) If the holder of a prospecting right, mining right or mining permit fails to rehabilitate or manage, or is unable to undertake such rehabilitation or to manage any negative impact on the environment, the Minister may, upon written notice to such holder, use all or part of the financial provision contemplated in subsection (1) to rehabilitate or manage the negative environmental impact in question.

(c) The holder of a prospecting right, mining right or mining permit must annually assess his or her environmental liability and increase his or her financial provision to the satisfaction of the Minister.

(d) If the Minister is not satisfied with the assessment and financial provision contemplated in this section, the Minister may appoint an independent assessor to 15 conduct the assessment and determine the financial provision.

(e) The requirement to maintain and retain the financial provision remains in force until the Minister issues a certificate in terms of section 43 to such holder, but the Minister may retain such portion of the financial provision as may be required to rehabilitate the closed mining or prospecting operation in respect of latent or residual 20 environmental impacts.

Regulations 53. Methods for Financial Provision

(1) Financial provision required in terms of section 41 of the Act to achieve the total quantum for the rehabilitation, management and remediation of negative environmental impacts must be provided for by one or more of the following methods:

(a) An approved contribution to a trust fund as required in terms of section 10(1)(cH) of the Income Tax Act, 1962 (Act No. 58 of 1962) and must be in the format as approved by the Director-General from time to time;

(b) a financial guarantee from a South African registered bank or any other bank or financial institution approved by the Director-General guaranteeing the financial provision relating to the environmental management programme or plan in the format as approved by the Director-General from time to time;

(c) a deposit into the account specified by the Director-General in the format as approved by the Director-General from time to time; or

(d) any other method as the Director-General may determine.

(2) In the case of subregulation (1)(c), proof of payment must be submitted to the office of the relevant Regional Manager prior to the approval of the environmental management plan or environmental management programme, as the case may be.

Regulations 54. Quantum of financial provision

(1) The quantum of the financial provision as determined in a guideline document published by the Department from time to time, include a detailed itemization of all actual costs required for-

(a) premature closure regarding-

(i). the rehabilitation of the surface of the area;

(ii). the prevention and management of pollution of the atmosphere; and

(iii). the prevention and management of pollution of water and the soil; and

(iv). the prevention of leakage of water and minerals between subsurface formations and the surface.

(b) decommissioning and final closure of the operation; and

(c) post closure management of residual and latent environmental impacts.

(2) The holder of a prospecting right, mining right or mining permit must annually update and review the quantum of the financial provision –

(a) in consultation with a competent person;

(b) as required in terms of the approved environmental management programme or environmental management plan; or

(c) as requested by the Minister.

(3) Any inadequacies with regard to the financial provision must be rectified by the holder of a prospecting right, mining right or mining permit –

(a) in an amendment of the environmental management programme or environmental management plan, as the case may be;

(b) within the timeframe provided for; or

(c) as determined by the Minister.

Section 43. Issuing of a closure certificate

(1) The holder of a prospecting right, mining right, retention permit, mining permit, or previous holder of an old order right or previous owner of works that has ceased to exist, remains responsible for any environmental liability, pollution, ecological degradation, the pumping and treatment of extraneous water, compliance to the conditions of the EA and the management and sustainable closure thereof, until the Minister has issued a closure certificate in terms of this Act to the holder or owner concerned.

(4) An application for a closure certificate must be made to the Regional Manager in whose region the land in question is situated within 180 days of the occurrence of the lapsing, abandonment, cancellation, cessation, relinquishment or completion contemplated in subsection (3) and must be accompanied by the required information, programmes, plans and reports prescribed in terms of this Act and the National Environmental Management Act, 1998.

(5) No closure certificate may be issued unless the Chief Inspector and each government department charged with the administration of any law which relates to any matter affecting the environment have confirmed in writing that the provisions pertaining to health and safety and management pollution to water resources, the pumping and treatment of extraneous water and compliance to the conditions of the EA have been addressed.

(7) The holder of a prospecting right, mining right, retention permit, mining permit, or previous holder of an old order right or previous owner of works that has ceased to exist, or the person contemplated in sub-section (2) must plan for, manage and implement such procedures and such requirements on mine closure as may be prescribed.

(8) Procedures and requirements on mine closure as it relates to the compliance of the conditions of an EA, are prescribed in terms of the National Environmental Management Act, 1998.

2.2 NATIONAL ENVIRONMENTAL MANAGEMENT ACT

Prior to December 8, 2014, the environmental aspects of mining operations were governed by the Mineral and Petroleum Resources Development Act (MPRDA). Subsequent legislative amendments and the broader movement towards a unified environmental regulatory framework have necessitated the incorporation of rehabilitation, decommissioning, and closure planning, along with related financial provisions, into the National Environmental Management Act (NEMA). Specific sections of NEMA concerning rehabilitation and closure are extracted below.

24P. Financial provision for remediation of environmental damage

(1) In this section, 'review' means a formal assessment of the financial provisioning with the intention of instituting change, if necessary.

(2) The Minister, or an MEC in concurrence with the Minister, may prescribe the instances for which financial provision must be set aside.

(3) Where prescribed, an applicant, must, before the competent authority issues an environmental authorisation, determine the financial provision which is required for undertaking progressive rehabilitation, decommissioning, closure and post-closure activities, including the pumping and treatment of extraneous and polluted water, where relevant.

(4) Where prescribed, the applicant, holder of an environmental authorisation, holder or holder of an old order right must provide financial provision for progressive rehabilitation, mitigation, decommissioning, closure and post-closure activities, including the pumping and treatment of extraneous and polluted water, where relevant, to ensure the mitigation and rehabilitation of adverse environmental impacts, including latent environmental impacts.

(5) A holder of an environmental authorisation, holder or holder of an old order right must annually undertake, as prescribed, the mitigation, remediation and rehabilitation measures.

(6) The financial provisioning vehicles which must be used when providing the financial provision include-

(a) cash deposited into an account administered by the Minister responsible for mineral resources;

(b) insurance from an institution that is registered in terms of the applicable insurance sector legislation;

(c) a financial guarantee from an institution that is registered in terms of the applicable financial sector legislation;

(d) a trust fund established for the sole purposes of subsection (4); and

(e) any other vehicle, including any condition applicable to such a vehicle, identified by the Minister by notice in the Gazette in concurrence with the Minister of Finance and the Minister responsible for mineral resources, and including, but not limited to-

(i). a closure rehabilitation company;

(ii). a parent company guarantee; and

(iii). an affiliate company guarantee.

(7) The financial provisioning vehicles contemplated in subsection (6) may be used in combination as required.

(8) (a) Where the Minister, the Minister for mineral resources or the MEC is not satisfied with the determination or review of the financial provision, the Minister, the Minister responsible for mineral resources or the MEC may appoint an independent party to conduct an assessment of the determination or review on their behalf.

(b) Any costs in respect of such assessment must be borne by the applicant, holder of the environmental authorisation, holder or holder of an old order right.

(9) If any holder of an environmental authorisation, holder or holder of an old order right fails to undertake such mitigation, remediation and rehabilitation of such impact, as prescribed, the Minister responsible for mineral resources, the Minister responsible for water affairs or MEC may, upon written notice to such holder, use all or part of the financial provision contemplated in this section to undertake mitigation, remediation and rehabilitation as the Minister, the Minister responsible for mineral resources or the MEC deems appropriate.

(10) The financial provision may only be used for the purposes of progressive rehabilitation, decommissioning, closure, post closure, as prescribed, to ensure mitigation, remediation and rehabilitation of adverse environmental impacts for which it was provided and shall not be used for any other purposes.

(11) The Insolvency Act, 1936 (Act No. 24 of 1936), does not apply to any form of financial provision contemplated in subsection (2) and all amounts arising from that provision.

Section 24R. Mine closure on environmental authorisation

(1) Every holder, holder of an environmental authorisation for a mining activity, holder of an old order right and owner of works remain responsible for any environmental liability, pollution or ecological degradation, the pumping and treatment of polluted or extraneous water, the management and sustainable closure thereof notwithstanding the issuing of a closure certificate by the Minister responsible for mineral resources in terms of the Mineral and Petroleum Resources Development Act, 2002, to the holder or owner concerned.

(2) Every holder, holder of an environmental authorisation for a mining activity, holder of an old order right or owner of works must plan, manage and implement such procedures and requirements in respect of the closure of a mine as may be prescribed.

(3) The Minister may, in consultation with the Minister responsible for mineral resources and by notice in the Gazette, identify areas where mines are interconnected, or their impacts are integrated to such an extent that the interconnection results in a cumulative impact.

(4) The Minister may, by notice in the Gazette, publish strategies in order to facilitate mine closure where mines are interconnected, have an integrated impact or pose a cumulative impact.

On November 20, 2015, the Minister promulgated the Financial Provisioning Regulations under NEMA. These regulations aim to regulate the determination and implementation of financial provisions for the costs associated with managing, rehabilitating, and remediating environmental impacts arising from prospecting, exploration, mining, or production operations. This includes addressing both current and potential future latent or residual environmental impacts.

3 DETAILS OF THE REPORT SPECIALIST

EIMS was appointed by Glencore to develop the Financial Provision report inclusive of the Closure Quantum, in support of the Basic Assessment. The assessment was undertaken by Ms. Jessica Jordaan, who is an environmental consultant at EIMS and has been involved in numerous environmental projects. She holds a BSc degree in Geology and a BSc Honours degree in Environmental Soil and Soil Science. Her main undertaking is Financial Provisioning, Environmental Impact Assessments and Environmental Audits. Ms Jordaan is a registered Candidate Natural Scientist (124758) with the South African Council of Natural and Scientific Professions (SACNASP), as well as a registered Candidate Environmental Assessment Practitioner (2023/7087) with the Environmental Assessment Practitioners Association of South Africa (EAPASA). She is a registered ISO 14001:2015 Lead Auditor with the Chartered Quality Institute (CQI) and a member of the International Register of Certified Auditors (IRCA). The Curriculum Vitae is available upon request.

4 METHODOLOGY

It is understood that the Mining Right (254MR) under which Glencore wishes to acquire the portion, that is currently under Clover Alloy's Mining right (336MR), was approved prior to the 2015 NEMA Financial Provisioning Regulations (GNR 1147). Therefore, the current financial provisioning and closure quantum for 254MR was determined in line with the MPRDA Guidelines. Since the proposed Portion 62 of the Farm Rietfontein 338 JQ will be incorporated into the 254MR, the same methodology will be used to determine the quantum for closure for the related proposed facilities and infrastructure. It is important to note that the quantum calculation in this report only reflects the proposed infrastructure on Portion 62 of the Farm Rietfontein 338 JQ and does not reflect an annual update to the overall quantum for 254MR. However, since the proposed portion will be incorporated into the 254MR, the same parameters used in the 254MR will be applied in this Quantum calculation, i.e. the weighting factors, risk class, etc.

The quantum determination for this project will adhere to the methodology outlined in the DMR Guidelines. This approach is permissible under the transitional arrangements of the NEMA Financial Provisioning Regulations (GNR 1147), which will become the primary legislative framework for quantum determination upon the date to be published in the Government Gazette. The financial provision calculation process flow is presented in Figure 1 below.

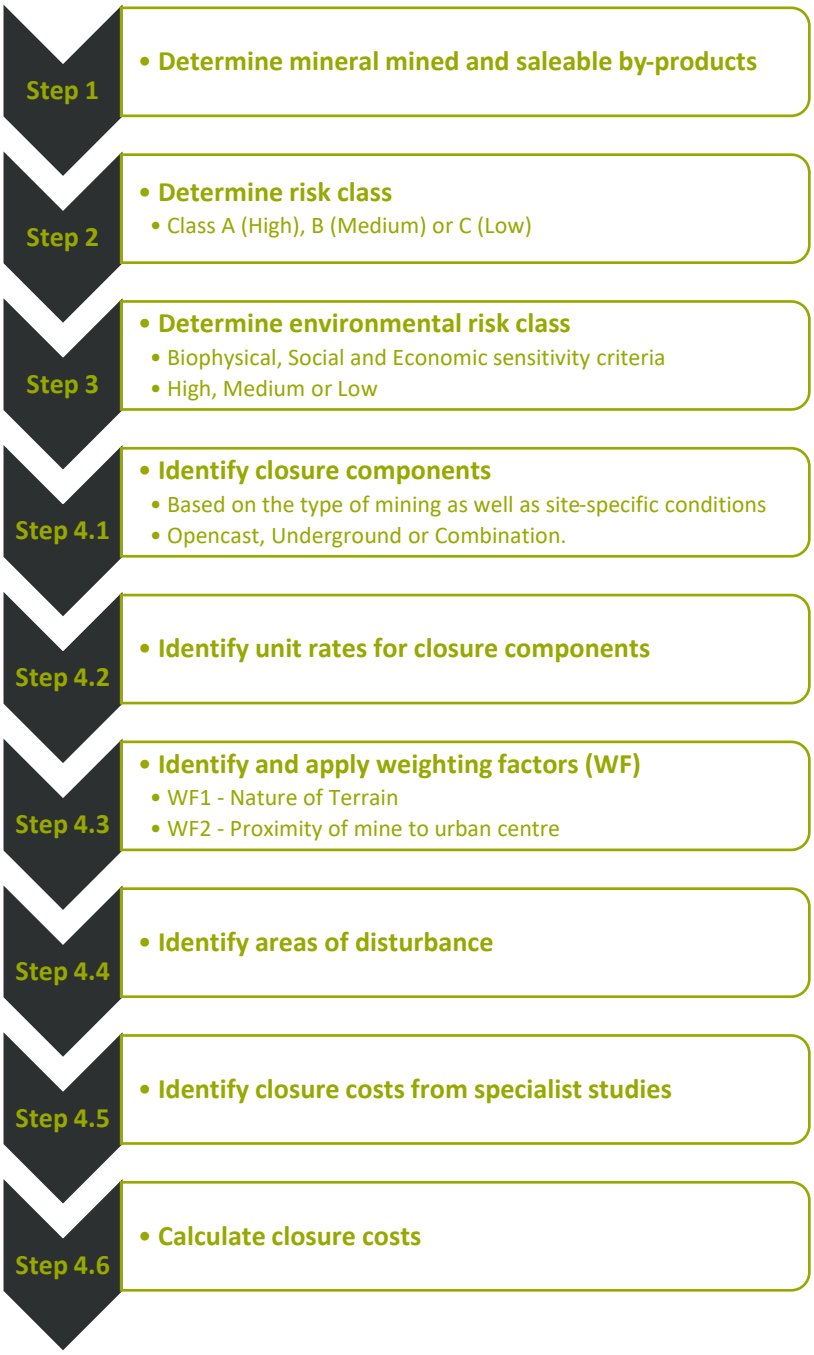


Figure 1: Process flow diagram for Quantum determination.

The approach and associated quantum determination are guided and defined by the following:

- The DMR Guideline document will be used as the base methodology for this assessment.
- The KML file provided by the client with the layout and dimensions of all the proposed facilities.
- Applying the CPI to escalate the DMR Guideline master rates.

- The weighting factors and risk classes applied in the 254MR's Quantum.

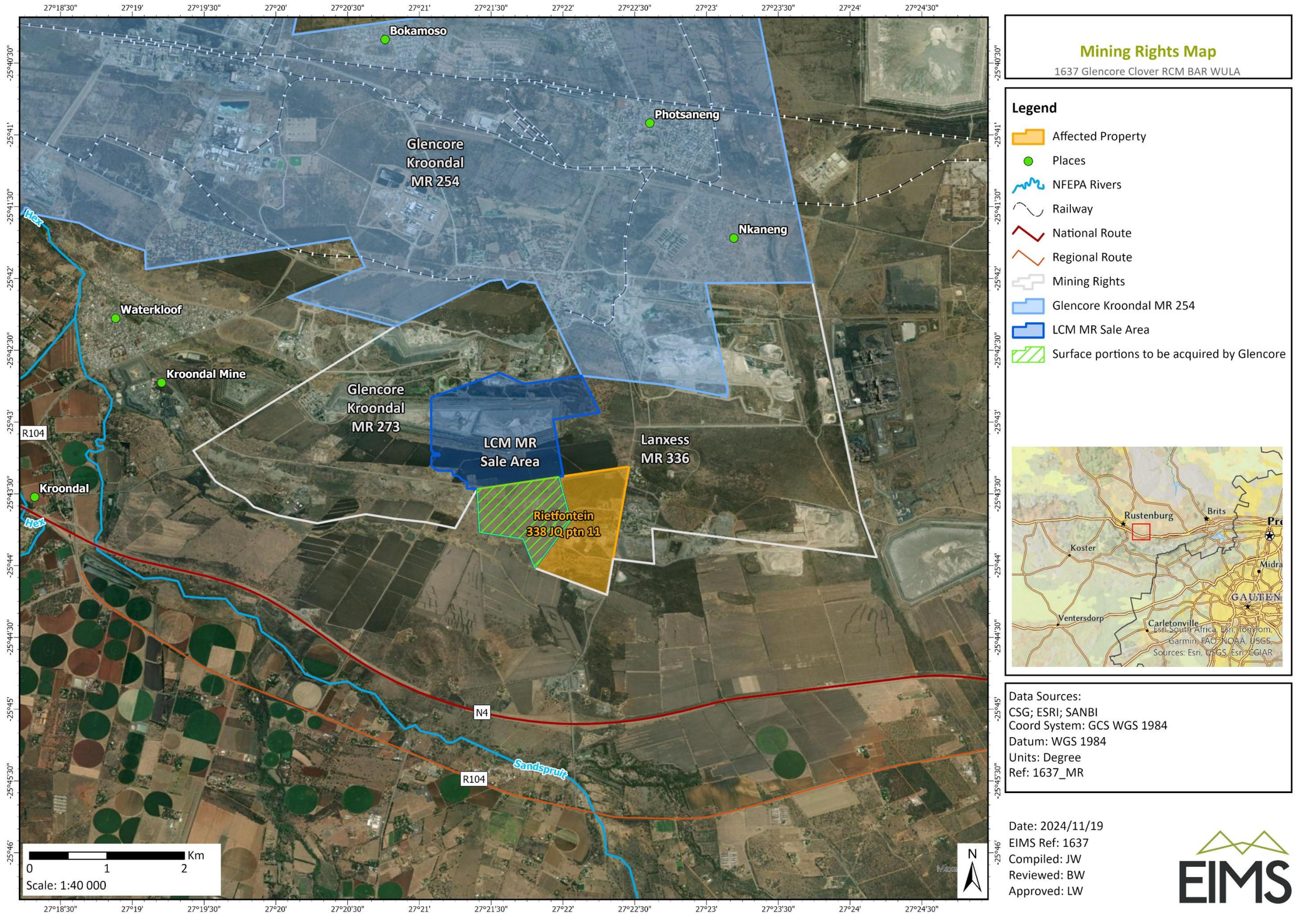
5 MINE OVERVIEW

Glencore's Kroondal Mine is an underground chrome mine located near Rustenburg in the Northwest Province of South Africa. It is part of the Western Limb of the Bushveld Igneous Complex, a geological formation known for its rich mineral deposits. Glencore wishes to acquire a Portion 62 of the Farm Rietfontein 338 JQ under their existing Mining Right, 254MR. The portion currently falls under Clover Alloys' Mining Right (336MR) the project locality can be seen in Figure 2. This acquisition aims to reduce travel time to the mining face at Kroondal Mine, thereby increasing mining facetime and overall productivity. In addition to utilising some of the existing infrastructure at Clover Alloys RCM, Glencore plans to develop additional facilities to support the mine's operational needs throughout its lifespan.

Glencore wishes to construct additional facilities which, under relevant environmental legislation, require approval by a competent authority. The proposed new developments as well as existing infrastructure include (but are not limited to):

- A parking area for permanent employees
- A parking area for visitors and contractors
- Employee drop-off/pick-up zone
- Salvage yard
- Sewage plant
- Use of existing Pollution Control Dam and licensing this dam under the NWA
- Shaft Laydown Area / Explosives Delivery Bay
- Surface laydown area
- Meeting venue hall (Lekgotla Hall)
- Access and escape roads
- Two water storage dams
- Compressor house
- One 11kV Powerline
- Administration Offices
- Change houses
- Engineering workshop
- Stores
- Temporary laydown area (currently a historic Chrome Mining village area)

Figure 3 provides the layout of the above-mentioned developments.



Mining Rights Map

1637 Glencore Clover RCM BAR WULA

Legend

- Affected Property
- Places
- NFEPA Rivers
- Railway
- National Route
- Regional Route
- Mining Rights
- Glencore Kroondal MR 254
- LCM MR Sale Area
- Surface portions to be acquired by Glencore

Data Sources:
CSG; ESRI; SANBI
Coord System: GCS WGS 1984
Datum: WGS 1984
Units: Degree
Ref: 1637_MR

Date: 2024/11/19
EIMS Ref: 1637
Compiled: JW
Reviewed: BW
Approved: LW

Figure 2: Overview of mining rights.

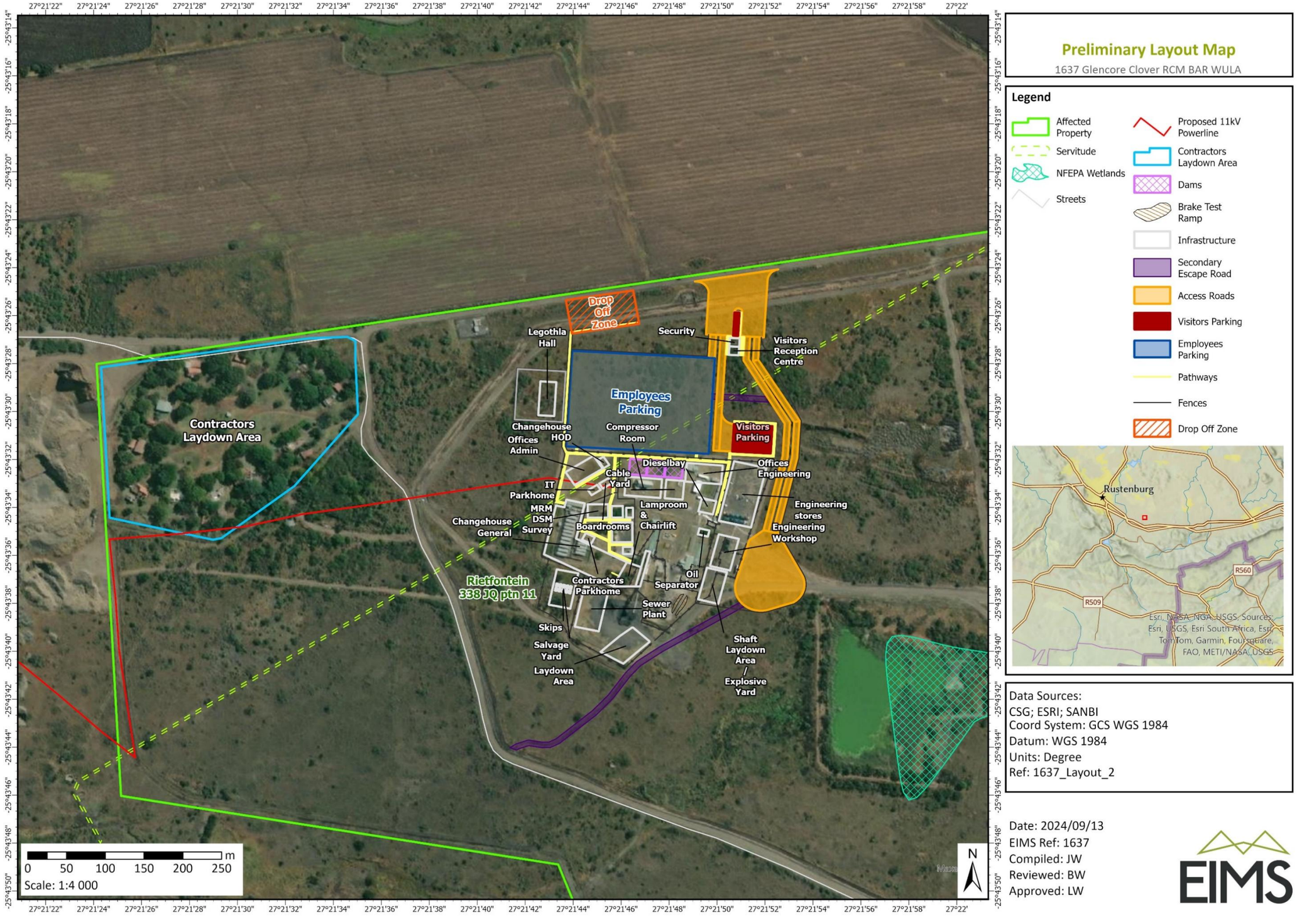


Figure 3: Layout of the proposed developments.

Mining at Kroondal has historically consisted of both opencast and underground mining. Currently only underground mining is undertaken, and the old opencast areas have been closed and rehabilitated. The current underground mining is taking place in close proximity to the Clover Alloys RCM mining right areas. The proposed project and related activities are described in Table 1 below.

Table 1: Project locality information.

Project area	Kroondal mining operations is situated approximately 10 km east of Rustenburg, and the closest town or point of interest is located approximately 5.3 km east of Kroondal, within North-West Province.
Application area	The application area consists of Portion 62 of the Farm Rietfontein 338 JQ, that Glencore wishes to incorporate into 254MR, which is approximately 77.5 ha.
Local Municipality	Rustenburg Local Municipality.
District Municipality	Bojanala Platinum District Municipality.
Farm name, number and portion	Portion 62 of the farm Rietfontein 338 JQ.
Co-ordinates	25°43'33.74"S, 27°21'41.65"E

6 MINE CLOSURE

Due to limited information, the "Rule-based" approach as described in the DMR Guidelines were followed and are described in the sub-sections below.

6.1 CLOSURE OBJECTIVES

The closure objectives for this proposed project are mainly demolishing and dismantling of surface infrastructure and buildings, and rehabilitation of the surface. The closure objectives are summarised in Table 2 below. The closure methods and assumptions are discussed in more detail in Section 7.2.

Table 2: Closure objectives.

Closure component	Description	Closure objectives
1	Dismantling of processing plant and related structures (including power lines)	- All infrastructure and concrete buildings should be broken down to natural ground level and buried adjacent to the plant site; - Foundations and structures should be broken down to natural ground level; and - The areas are to be covered with 1m subsoil, topsoiled with 300mm of topsoil and vegetation established, or as noted in the relevant EMP.
2(A) and 2(B)	Demolition of steel buildings and structures Demolition of reinforced concrete buildings and structures	- All structures should be demolished to 1m below ground level; - The rubble is to be buried adjacent to the sites, provided this adheres to the National Waste Management Strategy, or disposed of at a licenced waste facility;
5	Demolition of housing and facilities	

Closure component	Description	Closure objectives
		- The areas should be shaped, top soiled with 300mm of topsoil and vegetated or as stated in the relevant EMP document;
3	Rehabilitation of access roads	- Paved access roads and routes are to be removed, and the rubble is to be disposed of at a licenced waste facility; - Hazardous materials, such as old pavement materials or construction debris, are to be removed and disposed of at the relevant licenced waste facility; - If the road construction or maintenance practices have contaminated the soil, remediation measures should be implemented to remove or neutralize pollutants; - Indigenous and local vegetation is to be planted to restore the natural ecosystem and prevent erosion; and - The site is to be graded to create a stable surface and prevent erosion.
10	General surface rehabilitation, including grassing of all denuded areas	- Surface topography to emulate the surrounding areas and align to the general landscape characteristics. Steep slopes more than 6% should also be avoided if possible; - Landscaping should facilitate surface runoff and provide free draining areas. As far as possible, the drainage lines should be reinstated; - The rehabilitated area, devoid of unnecessary structural remnants and surface infrastructure, should present a clean and orderly appearance. Focus must be placed on the shaping and/or removal of excess material heaps, from remnants of prolonged mining and associated activities; and - Area should be suitable for revegetation.
12	Fencing	- Dismantle fences and associated infrastructure; - Remove material and dispose of at a licenced waste or recycling facility; and - Revegetation of denuded areas to be undertaken.

Closure component	Description	Closure objectives
14	2 to 3 years of maintenance and aftercare	- Maintenance to be undertaken on a regular basis; - Monitoring to be undertaken regularly; and - To institute a program of aftercare until a steady state is reached.
N/A	Additional closure objectives	- Achieve a final land use that is sustainable and meets both legislative requirements and stakeholder needs; - Comply with local, district and national regulatory requirements; - To meet prevailing legal requirement including requirements from the office of the inspector of mines; - Follow a comprehensive consultation and communication process with all stakeholders; - To minimise the negative impacts as identified in accordance with the proposed management plan; - To optimise post mining land use options; - Minimise the disturbance of the ecological system in the short term; - Create a long term ecologically stable system; - Create minimal environmental impacts including impacts on the aesthetic and socioeconomic environments; - To strive to reach a steady state in the shortest possible time to minimise unnecessary constraints on the ecological system; and - To optimise all ecological factors needed for a process towards a self-sustaining environment.

6.2 CLOSURE RISKS

A detailed environmental risk assessment was not undertaken for the closure of the proposed project area, however the following high-level risks are identified

- Insufficient rehabilitation budget and consequent failure to rehabilitate and close the mine sustainably;
- Possibility of not implementing the final Land Use Plan for the disturbed areas, and consequent loss of biodiversity, increased soil erosion, increased siltation of rivers;
- Potential negative impact on biodiversity and consequent failure of re-established vegetation on rehabilitated areas;

- Water pollution; if not properly managed, demolition waste and debris can contaminate water bodies, affecting aquatic ecosystems and potentially posing risks to human health; and
- Failure to demolish housing and facilities, resulting in abandoned buildings that could pose additional risks, such as fire hazards.

7 FINANCIAL PROVISIONS

The quantum for financial provision was determined in line with the DMR 'Guideline Document for the Evaluation of the Quantum of Closure-Related Financial Provision' (DMR Guideline).

7.1 RULE-BASED CLOSURE ASSESSMENT

The "rule-based" method, for determining the quantum of financial provision are presented below in Table 3. It is important to note that the quantum for the proposed area to be incorporated in 254MR (Portion 62 of Farm Rietfontein 338 JQ) will be calculated using the same factors as those employed for the 254MR Quantum. The complete Quantum calculation can be found in Appendix 3.

Table 3: Rule-based closure assessment and mine classification.

DMR Guidelines steps	Glencore Kroondal 254MR Mine classification
Step 1: Determine mineral mined and saleable by-products	
Identify the type of mineral mined or quarried and the saleable mineral by- products (not trace elements) to determine the primary risk class.	A chrome mine with no saleable by-products.
Step 2: Determine risk class	
Identify the risk class of the mineral. The risk class will be either: • **Class A (High risk) - a high probability of the occurrence of the impact with a severe consequence;** • **Class B (Medium risk) - a moderate probability of occurrence of the impact with a manageable consequence; or** • **Class C (Low risk) - a low probability of occurrence of the impact with a negligible consequence.**	The Kroondal mine (254MR) is a large chrome mine consisting of a mine, mine waste, a plant and plant waste, therefore it is defined as a Class A (High Risk) mine.
Step 3: Determine environmental risk class	
The mining operation can be in a Low, Medium or High sensitivity area based on the biophysical, social and economic situation. Table B.4 provides criteria to aid with the determination of the sensitivity of the area within which the mine is located. This step thus involves the following: • **Assess and rank the sensitivity of the area by individually assessing the biophysical situation, then the social situation and then the economic situation,** • **Establish the overall sensitivity of the area, by accepting the most sensitive of the three**	The environmental risk class is determined to be Medium.

individual assessments, e.g. if the area has a Medium biophysical sensitivity, a High social sensitivity and a Low economic sensitivity, the overall sensitivity will be High.	
Step 4.1: Identify closure components	
• **Identify the applicable closure components, based on the type of mining as well as site-specific conditions.**	The following applicable closure components based on site-specific conditions were identified: 1: Dismantling of processing plant and related structures (including overland conveyors and power lines) 2(A): Demolition of steel buildings and structures 2(B): Demolition of reinforced concrete buildings and structures 3: Rehabilitation of access roads 5: Demolition of housing and facilities 10: General surface rehabilitation, including grassing of all denuded areas 12: Fencing 14: 2 to 3 years of maintenance and aftercare
Step 4.2: Identify unit rates for closure components	
Use the risk class (Class A, B or C) from Step 2 and the sensitivity of the area where the mine is located (Low, Medium or High) from Step 3 to determine the unit rates for the applicable closure components identified in Step 4.2. **The Master Rate for each closure component is based on the "generally accepted closure methods" for each of the closure components listed in Table B.4. In instances where these closure methods will not be applied (e.g. where in the approved EMP indicates different closure methods) then the costs for this closure component must be determined by a specialist study.**	The mine (MR254) is defined as Class A (High risk) and the Environmental sensitivity is determined to be Medium. The closure rates are provided in Table 5, and the DMR Guideline Master Rates used to obtain the closure rates can be found in Appendix 1.
Step 4.3: Identify and apply weighting factors	
Identify the applicable weighting factors, based on the specific mine location. The two applicable weighting factors are as follows: **Weighting Factor 1: The nature of the terrain where the mine is located. This factor is applicable as it is more difficult (and hence more costly) to undertake work related to mine closure in areas that are undulating or rugged. Weighting Factor 1 is applied to each of the closure components.** **Weighting Factor 2: The proximity of the mine to an urban centre. This factor is applicable as there will**	Weighting factor 1, the nature of the terrain, is determined to be overall flat. Weighting factor 2, the proximity of the mine to an urban centre, is determined to be Urban.

be increased costs to transport machinery, goods and personnel to more remote mine sites. Weighting Factor 2 is applied to the Preliminary and General items only.	
Step 4.4: Identify areas of disturbance	
Identify areas, volumes or lengths of disturbance and/or development from the mining operations, for each of the applicable closure components. The base information can be identified from suitably scaled topographical maps, which will be augmented by one or more site visits to the mining operation.	The dimensions of the closure components determined can be found in Table 4.
Step 4.5: Identify closure costs from specialist studies	
Identify closure costs from site-specific specialist studies that have been submitted by the mining operation permit holder. Table B.9 of the DMR Guideline provides details of specialist studies that should be requested from the mine operator, if not already available, depending on the risk class of the mineral mined.	Given the Risk Class for the mine is Class A (High risk), a quantified risk assessment is required. It has been determined that an ecologist specialist will be required to undertake this assessment, and the costs are provided in Table 5.
Step 4.6: Calculate closure costs	
two sets of quantum figures for financial provision, using the "rules based" approach and the applicable closure components, unit rates, areas of disturbance and closure costs from specialist studies. Table B.10 of the DMR Guideline provides a template for calculating the quantum under the "rules-based" approach. The quantum figures to calculate include: **A quantum for financial provision to cover the current environmental liability. The "Grand Total" in Table B.10 will be used for this calculation, as this assumes that the work will be done by a Third Party (as the mining operation will be in premature closure), and the quantum for financial provision to cover final closure of the mine.** **The "Sub-Total 1" in Table B.10 of the DMR Guideline will be used for this calculation, which assumes that the mine does the closure and rehabilitation work themselves**	The closure cost is provided in Table 5.

7.2 CLOSURE METHODS AND ASSUMPTIONS

The DMR Guideline provided the methodological basis for determining Master Rates for various closure components in the "rules-based" approach. Where necessary, site-specific conditions and requirements relevant to closure objectives were considered. Table 4 includes a list of the proposed facilities and infrastructure, with the area size, that will be used along with the Master Rates for the closure cost. The following section outlines the specific components and their associated DMR Guideline Master Rates, as prescribed by the DMR Guideline.

Table 4: Proposed infrastructure.

Developments	Area size / length	Developments	Area size / length
Access roads	21 230m^2	**Chairlift**	232m^2
Boardroom	195.8m^2	**Lamproom**	630m^2
Brake test ramp	170.7m^2	**Technical office**	400m^2
Cable yard	500m^2	**Survey offices**	200m^2
Changehouse general	3 458m^2	**Office admin**	750m^2
Changehouse HOD	98.6m^2	**Engineering offices**	1 000m^2
Compressor	1 000m^2	**Mining offices**	600m^2
Contractors' laydown area	58 000m^2	**Oil separator**	100m^2
Contractors parkhome	112m^2	**Undercover parking**	13 500m^2
Control room	100m^2	**Salvage yard**	1 200m^2
Diesel bay	300m^2	**Sewer plant**	1 500m^2
Engineering workshop and stores	4 000m^2	**Dam**	1 200m^2
Explosive / shaft laydown	1 000m^2	**Fences**	3 566m
IT offices	100m^2	**Powerline**	900m
Pipeline servitude	2 000m^2	**Security offices**	249m^2
Laydown area	1 314m^2	**Walkways**	1 164m^2
Lekgothla hall	800m^2	**Turnstiles**	16m^2

7.2.1 COMPONENT 1: DISMANTLING OF PROCESSING PLANT AND RELATED STRUCTURES

In accordance with the DMR Guideline, the common method of valuation to determine the Master Rate for dismantling of processing plant and related structures (including overland conveyors and power lines), is that:

- All infrastructure and concrete buildings should be broken down to natural ground level and buried adjacent to the plant site;
- Foundations, structures and conveyors should be broken down to natural ground level;
- The areas are to be covered with 1m subsoil, topsoiled with 300mm of topsoil and vegetation established, or as noted in the relevant EMP;
- The monitoring and maintenance of these areas has been costed under the appropriate areas;
- The concrete hardstand is the area between the plant buildings;
- Top soiling and vegetation for the areas are included under general surface rehabilitation; and

- No credits are allowed for scrap steel and equipment that can be re-used or sold.

It is assumed that the power line will consist of 13 poles, each with a diameter of 240mm and a buried depth of 2m. The general surface rehabilitation is included in this component and therefore the areas will not be included in the final general surface rehabilitation costs

7.2.2 COMPONENT 2(A), 2(B) AND 5: STEEL AND REINFORCED CONCRETE STRUCTURES AND HOUSING, FACILITIES AND SERVICES

In accordance with the DMR Guideline, the common method of valuation to determine the Master Rate for demolishing of steel and reinforced concrete buildings and structures and for housing facilities and services is that:

- All structures should be demolished to 1m below ground level;
- The rubble is to be buried adjacent to the sites, provided this adheres to the National Waste Management Strategy;
- Silos should be imploded and buried;
- The areas should be shaped, top soiled with 300mm of topsoil and vegetated or as stated in the relevant EMP document;
- Monitoring and maintenance are costed in the relevant areas; and
- The concrete hardstand is the area between buildings such as workshops, offices, etc.

It is assumed the housing facilities will be constructed with brick materials, the brake test ramp as well as the dams will be constructed with reinforced concrete, and the compressor facility, engineering workshops and stores will be a reinforced steel structure.

7.2.3 COMPONENT 3: REHABILITATION OF THE ACCESS ROADS

The DMR Guideline does not provide a description of the rehabilitation activities associated with access roads however, it is expected that it will include:

- Removal of all artificial road surface material (e.g. tarmac, gravel layers), and disposal at a suitably licenced facility.
- Deep ripping of the road surface.
- Placement of existing culverts and storm water control infrastructure will be upgraded (using mainly gabions) to ensure its long-term effectiveness and its ability to handle a 1:50 year flood event.
- Surface topography that emulates the surrounding areas and aligned to the general landscape character. Steep slopes more than 6 percent should also be avoided, if possible.
- Landscaping that would facilitate surface runoff and result in free draining areas. If possible, the drainage lines should be reinstated.
- An area without unnecessary remnants of structures infrastructure to give the rehabilitated area a “neat” appearance. Special attention must be given to shape and/or removal of heaps of excess material being the legacy of prolonged mining and related activity.
- An area suitable for revegetation.

7.2.4 COMPONENT 10: GENERAL SURFACE REHABILITATION

In accordance with the DMR Guideline, final surface rehabilitation of areas disturbed by mining and related activities should be aligned to the selected final land use. Irrespective of the final land use, general surface rehabilitation normally should ensure the following:

- Surface topography that emulates the surrounding areas and aligned to the general landscape character. Steep slopes in excess of 6% should also be avoided if possible.
- Landscaping that would facilitate surface runoff and result in free draining areas. If possible, the drainage lines should be reinstated.
- An area without unnecessary remnants of structures and surface infrastructure to give the rehabilitated area a "neat" appearance. Special attention must be given to shape and/or removal of heaps of excess material being the legacy of prolonged mining and related activity.
- An area suitable for revegetation.

The unit cost for general rehabilitation allows for shaping and landscaping of disturbed areas. The Master Rate allows for the shaping of material to a depth/thickness of about 500mm. An extra over-allowance in the unit cost of 50% has been made to cover the removal and/or destruction of surface infrastructure remnants and/or other undesirable objects such as trees, foundations, concrete slabs, etc.

It is assumed the general surface rehabilitation costs are included in select closure components' Master Rates, such as 1, 2(A), 2(B), 5, 8(A), 8(B) and 10. Therefore all remaining facilities and disturbed areas not identified as one of these closure components, are included as Closure Component 10.

7.2.5 COMPONENT 12: FENCING

The DMR Guideline does not provide a description of the rehabilitation activities associated with fences however, it is expected that it will include:

- Dismantle fences and associated infrastructure;
- Remove material and dispose of at a licenced waste or recycling facility; and
- Revegetation of denuded areas to be undertaken.

It is assumed that currently no fencing exists on-site, and the costing is based on the construction of all fences indicated on the KML file provided by the client.

7.2.6 COMPONENT 14: MAINTENANCE AND AFTERCARE

Maintenance and aftercare are planned for 2 to 3 years after mine production ceases, and covers:

- Annually fertilising of rehabilitated areas,
- Monitoring of surface and subsurface water quality surface,
- Control of wattle and all other alien plants, and
- General maintenance, including rehabilitation of cracks and subsidence.

It is noted that the area requiring aftercare and maintenance is approximately 12.1 ha.

7.3 CLOSURE LIABILITY COST

The quantum for financial provisions has been estimated using the "rule-based" approach, defined in the DMR Guideline. Refer to Table 5 for a summarised breakdown of the closure liability estimate. The closure liability estimate is **R 19 657 888.64 (Inc VAT)**.

Table 5: Closure liability estimate.

CC No	Sub-Task	Subtotal (R)
1	Dismantling of processing plant and related structures (including overland conveyors and power lines).	R 297 748.14
2(A)	Demolition of steel buildings and structures.	R 5 182 084.85
2(B)	Demolition of reinforced concrete buildings and structures.	R 721 271.87
3	Rehabilitation of access roads.	R 1 050 086.04
4(A)	Demolition and rehabilitation of electrified railway lines.	N/A
4(B)	Demolition and rehabilitation of non-electrified railway lines.	N/A
5	Demolition of housing and facilities.	R 5 449 315.47
6	Opencast rehabilitation including final voids and ramps.	N/A
7	Sealing of shafts, adits and inclines.	N/A
8(A)	Rehabilitation of overburden and spoils.	N/A
8(B)	Rehabilitation of processing waste deposits and evaporation ponds (basic, salt-producing waste).	N/A
8(C)	Rehabilitation of processing waste deposits and evaporation ponds (acidic, metal-rich waste).	N/A
9	Rehabilitation of subsided areas.	N/A

CC No	Sub-Task		Subtotal (R)
10	General surface rehabilitation, including grassing of all denuded areas.		R 410 665.96
11	River diversions.		N/A
12	Fencing.		R 622 527.53
13	Water management (Separating clean and dirty water, managing polluted water and managing the impact on groundwater, including treatment, when required).		N/A
14	Maintenance and Aftercare (2-3 years)		R 245 880.92
15(A)	Specialist Study: Ecologist		R 31 750.00
Subtotal (items 1-15)			R 14 011 324.76
Subtotal 1 (subtotal x weighting factor 2)			R 14 011 324.76
Time, Fee & Contingencies			
1	Preliminary and general	Subtotal 2 (Subtotal 1 plus sum of management and contingency)	R 15 692 683.74
2	Contingencies	Subtotal 3 (10% of subtotal 1 added)	R 17 093 816.21
		VAT @ 15% of subtotal 3	R 2 564 072.43
		Grand total (incl. VAT)	**R 19 657 888.64**

7.4 ASSUMPTIONS AND LIMITATIONS

The following key assumptions and limitations apply to the report:

- The quantities and measurements were derived from the KML file and the information within, provided by Glencore, as well as approximate measurements from Google Earth.
- The Base DMR Guideline Master Rates were escalated using the average CPI values for each year passed since 2005 when the Base DMR Rates were published.
- The latest CPI rate used for the year 2024, was the CPI for the month September (3.80%), since the Quantum was first calculated in October.
- Given the year 2024 does not constitute a full 12-month cycle, the average CPI for 2024 is not available, at the time of the Quantum Calculation the latest monthly CPI was used for the year 2024 (September). When the next Closure Quantum is to be calculated, the DMR Rates will be escalated including the average CPI for the year 2024.
- The estimate of the quantum of financial provision required for rehabilitation, decommissioning and closure of the mine, was based on the DMR Guidelines “rule-based” approach. This method is not to be regarded as an absolute and accurate forecast for actual closure costs.

8 RECOMMENDATIONS

- Glencore should prepare future annual financial provisioning reports as required by the 2015 NEMA Regulations. This proactive measure will ensure a seamless transition to full compliance upon the official publication of the implementation date.
- The Master Rates were escalated using the Consumer Price Index, as outlined in the DMR Guidelines. It is recommended that Construction Material Price Indices (contractor rates/quotations) be used instead to get a more accurate Quantum.

References

Department of Mineral Resources. (2005). *Guideline Document for the Evaluaton of the Quantum of Closure-related Financial Provision Provided by a Mine.*

Environmental and Energy Services. (2024). *Closure Cost Report for Glencore Kroondal Chrome Mine.*

Appendix 1: DMR Guideline Master rates escalated with CPI.

CC	Component	Base rate	2019	2020	2021	2022	2023	2024 (Sep CPI)
		-%	**4.10%**	**3.30%**	**4.50%**	**6.90%**	**5.90%**	**3.80%**
1	Dismantling of processing plant and related structures (including overland conveyors and power lines).	R 6.82	R 15.64	R 16.16	R 16.89	R 18.05	R 19.12	**R 19.84**
2A	Demolition of steel buildings and structures.	R 95.00	R 217.90	R 225.09	R 235.22	R 251.45	R 266.29	**R 276.41**
2B	Demolition of reinforced concrete buildings and structures.	R 140.00	R 321.12	R 331.72	R 346.64	R 370.56	R 392.42	**R 407.34**
3	Rehabilitation of access roads.	R 17.00	R 38.99	R 40.28	R 42.09	R 45.00	R 47.65	**R 49.46**
4A	Demolition and rehabilitation of electrified railway lines.	R 165.00	R 378.46	R 390.95	R 408.54	R 436.73	R 462.50	**R 480.08**
4B	Demolition and rehabilitation of non-electrified railway lines.	R 90.00	R 206.43	R 213.25	R 222.84	R 238.22	R 252.27	**R 261.86**
5	Demolition of housing and facilities.	R 190.00	R 435.80	R 450.19	R 470.44	R 502.91	R 532.58	**R 552.81**
6	Opencast rehabilitation including final voids and ramps.	R 96 700.00	R 221 801.67	R 229 121.13	R 239 431.58	R 255 952.36	R 271 053.54	**R 281 353.58**
7	Sealing of shafts, adits and inclines.	R 51.00	R 116.98	R 120.84	R 126.28	R 134.99	R 142.95	**R 148.39**
8A	Rehabilitation of overburden and spoils.	R 66 400.00	R 152 302.28	R 157 328.26	R 164 408.03	R 175 752.19	R 186 121.56	**R 193 194.18**
8B	Rehabilitation of processing waste deposits and evaporation ponds (basic, salt-producing waste).	R 82 700.00	R 189 689.74	R 195 949.50	R 204 767.23	R 218 896.17	R 231 811.05	**R 240 619.87**

CC	Component	Base rate	2019	2020	2021	2022	2023	2024 (Sep CPI)
		-%	**4.10%**	**3.30%**	**4.50%**	**6.90%**	**5.90%**	**3.80%**
8C	Rehabilitation of processing waste deposits and evaporation ponds (acidic, metal-rich waste).	R 240 200.00	R 550 948.93	R 569 130.24	R 594 741.10	R 635 778.24	R 673 289.15	**R 698 874.14**
9	Rehabilitation of subsided areas.	R 55 600.00	R 127 530.23	R 131 738.72	R 137 666.97	R 147 165.99	R 155 848.78	**R 161 771.03**
10	General surface rehabilitation, including grassing of all denuded areas.	R 52 600.00	R 120 649.10	R 124 630.52	R 130 238.89	R 139 225.38	R 147 439.67	**R 153 042.38**
11	River diversions.	R 52 600.00	R 120 649.10	R 124 630.52	R 130 238.89	R 139 225.38	R 147 439.67	**R 153 042.38**
12	Fencing.	R 60.00	R 137.62	R 142.16	R 148.56	R 158.81	R 168.18	**R 174.57**
13	Water management (Separating clean and dirty water, managing polluted water and managing the impact on groundwater, including treatment, when required).	R 20 000.00	R 45 874.18	R 47 388.03	R 49 520.49	R 52 937.41	R 56 060.71	**R 58 191.02**
14	2 to 3 years of maintenance and aftercare.	R 7 000.00	R 16 055.96	R 16 585.81	R 17 332.17	R 18 528.09	R 19 621.25	**R 20 366.86**
15(A)	Specialist studies: Ecology Risk Assessment.		R -	R -	R -	R -	R -	**R 31 750.00**

Appendix 2: Infrastructure Inventory.

Developments	Area size / length	Developments	Area size / length
Access roads	21 230m^2	**Chairlift**	232m^2
Boardroom	195.8m^2	**Lamproom**	630m^2
Brake test ramp	170.7m^2	**Technical office**	400m^2
Cable yard	500m^2	**Survey offices**	200m^2
Changehouse general	3458m^2	**Office admin**	750m^2
Changehouse HOD	98.6m^2	**Engineering offices**	1 000m^2
Compressor	1 000m^2	**Mining offices**	600m^2
Contractors' laydown area	58 000m^2	**Oil separator**	100m^2
Contractors parkhome	112m^2	**Undercover parking**	13 500m^2
Control room	100m^2	**Salvage yard**	1 200m^2
Diesel bay	300m^2	**Sewer plant**	1 500m^2
Engineering workshop and stores	4 000m^2	**Dam**	1 200m^2
Explosive / shaft laydown	1 000m^2	**Fences**	3 566m
IT offices	100m^2	**Powerline (volume)**	5.094 m^3
Pipeline servitude	2 000m^2	**Security offices**	249m^2
Laydown area	1 314m^2	**Walkways**	1 164m^2
Lekgothla hall	800m^2	**Turnstiles**	16m^2

Appendix 3: Closure Quantum.

No	Sub-Task	Unit	A. Quantity	B. Master Rate	C. Multiplication factor	D. Weighting Factor 1	Total (R) E. = A*B*C*D
1	Dismantling of processing plant and related structures (including overland conveyors and power lines).	m^3	15001.17621	R 19.84	1	1	R 297 748.14
2(A)	Demolition of steel buildings and structures.	m^2	18748	R 276.41	1	1	R 5 182 084.85
2(B)	Demolition of reinforced concrete buildings and structures.	m^2	1770.7	R 407.34	1	1	R 721 271.87
3	Rehabilitation of access roads.	m^2	21230	R 49.46	1	1	R 1 050 086.04
4(A)	Demolition and rehabilitation of electrified railway lines.	m	0	R 480.08	1	1	R -
4(B)	Demolition and rehabilitation of non-electrified railway lines.	m	0	R 261.86	1	1	R -
5	Demolition of housing and facilities.	m^2	9857.4	R 552.81	1	1	R 5 449 315.47
6	Opencast rehabilitation including final voids and ramps.	ha	0	R 281 353.58	0.52	1	R -
7	Sealing of shafts, adits and inclines.	m^3	0	R 148.39	1	1	R -
8(A)	Rehabilitation of overburden and spoils.	ha	0	R 193 194.18	1	1	R -

No	Sub-Task	Unit	A. Quantity	B. Master Rate	C. Multiplication factor	D. Weighting Factor 1	Total (R) E. = A*B*C*D
8(B)	Rehabilitation of processing waste deposits and evaporation ponds (basic, salt-producing waste).	ha	0	R 240 619.87	1	1	R -
8(C)	Rehabilitation of processing waste deposits and evaporation ponds (acidic, metal-rich waste).	ha	0	R 698 874.14	0.8	1	R -
9	Rehabilitation of subsided areas.	ha	0	R 161 771.03	1	1	R -
10	General surface rehabilitation, including grassing of all denuded areas.	ha	2.683347938	R 153 042.38	1	1	R 410 665.96
11	River diversions.	ha	0	R 153 042.38	1	1	R -
12	Fencing.	m	3566	R 174.57	1	1	R 622 527.53
13	Water management (Separating clean and dirty water, managing polluted water and managing the impact on groundwater, including treatment, when required).	ha	0	R 58 191.02	0.67	1	R -
14	Maintenance and Aftercare (2-3 years)	ha	12.0726	R 20 366.86	1	1	R 245 880.92
15(A)	Specialist Study: Ecologist	Sum	1	R 31 750.00	1	1	R 31 750.00
Subtotal (items 1-15)							R 14 011 324.76
Subtotal 1 (subtotal * weighting factor 2)						Weighting factor 2 = 1	R 14 011 324.76

No	Sub-Task	Unit	A. Quantity	B. Master Rate	C. Multiplication factor	D. Weighting Factor 1	Total (R) E. = A*B*C*D
Time, Fee & Contingencies							
1	Preliminary and general	Add 6% of Subtotal 1 if Subtotal 1 > R 100,000,000.00; **Add 12% of Subtotal 1 if Subtotal 1 < R 100,000,000.00**					R1 681 358.97
		Subtotal 2 (Subtotal 1 plus sum of management and contingency)					R15 692 683.74
2	Contingencies	10% of Subtotal 1					R1 401 132.48
		Subtotal 3					R17 093 816.21
		VAT @ 15% of subtotal 3					R2 564 072.43
		Grand total (incl. VAT)					**R19 657 888.64**