MULILO NEWCASTLE WIND POWER (PTY) LTD

PROPOSED MINING ON A PORTION OF FARM BYRON NO 9448, NEWCASTLE LOCAL MUNICIPAL AREA, KWAZULU-NATAL PROVINCE

CLOSURE PLAN

DEPARTMENTAL REFERENCE NUMBER:

KZN 30/5/1/3/2/11072 MP

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EXECUTIVE SUMMARY

Greenmined Environmental (Pty) Ltd is the consultants responsible for the mining permit application, and considering this, an Annual- and Final Rehabilitation, Decommissioning and Mine Closure Plan (*in aliis verbis* Closure Plan) was accordingly drafted for the proposed mine.

The purpose of this document is to provide site management with an Annual Rehabilitation Plan as well as the Final Rehabilitation, Decommissioning and Closure Plan, compiled in terms of the NEMA Amendment Act, 2014 (Act No. 25 of 2014) read with the Regulations pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations, November 2015 (GN 1228, Financial Provision Regulations 2015 (as amended). The amendment of the closure plan entails a review of the following aspects:

1. Annual rehabilitation as reflected in the annual rehabilitation plan;
2. Final rehabilitation, decommissioning and closure of the mining operations at the end of the life of operations as reflected in the final rehabilitation, decommissioning and mine closure plan;
3. Remediation of latent or residual environmental impacts, which may become known in the future, as, reflected in the environmental risk assessment report.

Annual Rehabilitation Plan

Upon approval of the mining permit application and receipt of the EA, the permit holder will annually report on the planned rehabilitation actions.

Rehabilitation, Decommissioning and Mine Closure Plan

The decommissioning phase will entail the reinstatement of the processing area by removing the stockpiled material, and site infrastructure/equipment and landscaping the disturbed footprints. Due to the impracticality of importing large volumes of fill to restore the quarry area to its original topography, the rehabilitation option is to develop the quarry into a minor landscape feature. This will entail creating a series of irregular benches along the quarry faces, the top edges of each face being blasted away to form scree slopes on the benches below, thereby reducing the overall face angle. The benches will be top-dressed with topsoil and vegetated with an appropriate grass mix if vegetation does not naturally establish in the area within six months of the replacement of the topsoil.

Environmental Risk Assessment Report

At this stage, no latent risks that will potentially arise during closure phase of the mining area were identified. By reason of the fact that no latent risks regarding the management of the mining area were identified no additional monitoring, auditing or reporting requirements are required at this stage.

LIST OF DEFINITIONS

Abandonment: The act of abandoning and relinquishment of a mining claim or intention to mine, a voluntary surrender of the claim or mine to the next party.

Appropriately qualified: A person who has training in the skills appropriate to the type of work to be done, and experience of the type of mine and of the size, complexity and safety classification of the deposit or the environmental conditions (or both) pertaining to the specific project.

Closure Plan: Annual Rehabilitation and Final Rehabilitation, Decommission and Closure Plan.

Biodiversity: Biodiversity is an abbreviation of “biological diversity”. It means the variety of living things – the different plants, animals and microorganisms, the genes they contain and the ecosystems of which they are a part.

Closure: The act of reinstating a redundant mine which is acceptable for final mine closure.

Context of an environmental impact: The overall environmental setting in which an environmental impact occurs. It includes all "natural" components and characteristics (or both) and all "human and social" components and characteristics (or both). It has both spatial and time dimensions.

Design: The documented result of a systematic process during which all relevant factors and criteria are considered. The design includes the design report, the working drawings and the operations manual.

Environmental impact: Any change in the state of a component of the environment, whether adverse or beneficial, that wholly or partially results from activities, projects, or developments.

Environmental integrity: The reliability of performance of the environmental impact management measures associated with the facility, with respect to the environmental performance objectives.

Environmental management programme: A programme contemplated in the Mineral and Petroleum Resources Development Act, 2002 submitted to and approved by the Director: Mineral Development and detailing the plan to be adopted and implemented by a mine for managing the environmental effects of the operations of the mine.

Environmental objectives: Those objectives that represent the desired state of environmental components that have been adopted for the mine.

Intensity of an environmental impact: The severity of the consequences of an environmental impact, as judged by suitably qualified persons.

Manager of a mine (general manager): Any competent person appointed in terms of the Mine Health and Safety Act, 1996 (Act 29 of 1996), to be responsible for the control, management and direction of a mine.

Rehabilitated land: Is defined as land that has previously been mined through or areas, which have been disturbed by the mining process. These areas have been levelled, covered with topsoil, fertilized, seeded, and can support a sustained long-term vegetation cover.

Redundant: No longer required for mining operation.

Reliability: The probability that a specified event will not occur in a specified time (usually expressed as a ratio, when measured in quantitative terms).

Risk: The probability that a specified event, such as failure, will occur in a specified time.

Scheduled closure: Planned closure of the mine

Significant environmental impact: An impact in respect of which consultation (with the relevant authorities and other interested and affected parties) on the context and intensity of its effects provides reasonable grounds for mitigating measures to be included in the environmental management programme. Significance is determined by the integration of the context and intensity of the effects of the impact, and the likelihood that the impact will occur.

Topsoil: means the layer of soil covering the earth which –
(a) provides a suitable environment for the germination of seed;
(b) allows for penetration of water; and
(c) Is a source of microorganisms, plant nutrients and in some cases seed.

Unscheduled closure: The closure cost associated with immediate closure and provision.

LIST OF ABBREVIATIONS

BAR	Basic Assessment Report
DMRE	Department of Mineral Resources and Energy
DWS	Department of Water and Sanitation
EIA	Environmental Impact Assessment
EPA	Environmental Performance Assessment
EMPR	Environmental Management Program
I&AP's	Interested and Affected Parties
MPRDA	Mineral and Petroleum Resources Act, 2002 (Act No 28 of 2002)
NWA	National Water Act, 1998 (Act No. 36 of 1998)
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NEM:WA	National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)
WCMR	Waste Classification and Management Regulations
WWF	World Wildlife Fund

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

The Applicant, Mulilo Newcastle Wind Power (Pty) Ltd, applied for environmental authorisation and a mining permit to mine aggregate, gravel and stone from 4.9 ha of the farm Byron No 9448 in the Amajuba Magisterial District of the KwaZulu-Natal Province.

Greenmined Environmental (Pty) Ltd ("Greenmined") is the consultants responsible for the mining permit application, and considering this, an Annual- and Final Rehabilitation, Decommissioning and Mine Closure Plan (*in aliis verbis* Closure Plan) was accordingly drafted for the proposed mine. This report (the Closure Plan) stipulates the rehabilitation methods to be followed in the restoration of the earmarked mining footprint. The report was compiled in line with Government Notice 940 of the National Environmental Management Act, 1998 [NEMA] (Act No. 107 of 1998) together with Regulation 62 of the Minerals and Petroleum Resources Development Act, 2002 [MPRDA] (Act No. 28 of 2002). The information used in this report was sourced during the EIA process.

The purpose of this document is to provide site management with an Annual Rehabilitation Plan as well as the Final Rehabilitation, Decommissioning and Closure Plan, compiled in terms of the NEMA Amendment Act, 2014 (Act No. 25 of 2014) read with the Regulations pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations, November 2015 (GN 1228), Financial Provision Regulations 2015 (as amended).

1.1 BACKGROUND INFORMATION

Mulilo Newcastle Wind Power (Pty) Ltd (MNWP) holds two environmental authorisations for a wind energy complex near Newcastle in KwaZulu-Natal namely the:

1. **Mulilo Newcastle Wind Power WEF with DFFE Reference Number: 14/12/16/3/3/2/2457.**

   MNWP proposes to develop, construct and operate the 200 MW MNWP Wind Energy Facility (WEF) as part of the Mulilo Newcastle WEF Complex located near Newcastle in KwaZulu-Natal. The MNWP WEF will comprise of up to 35 wind turbines and will have an anticipated lifespan of 20 – 25 years. The WEF will be located on six (6) land parcels with a total extent of 2,940 ha.

2. **Mulilo Newcastle Wind Power 2 WEF with DFFE Reference Number: 14/12/16/3/3/2/2458.**

Mulilo Newcastle Wind Power 2 WEF proposes to develop, construct and operate the 160 MW Mulilo Newcastle Wind Power 2 (MNWP 2 WEF) as part of the Mulilo Newcastle Wind Energy Facility (WEF) Complex located near Newcastle in KwaZulu-Natal. The MNWP 2 WEF will comprise up to 16 wind turbines and will have an anticipated lifespan of 20 – 25 years. The WEF will be located on eight (8) land parcels with a total extent of 1,626 ha.

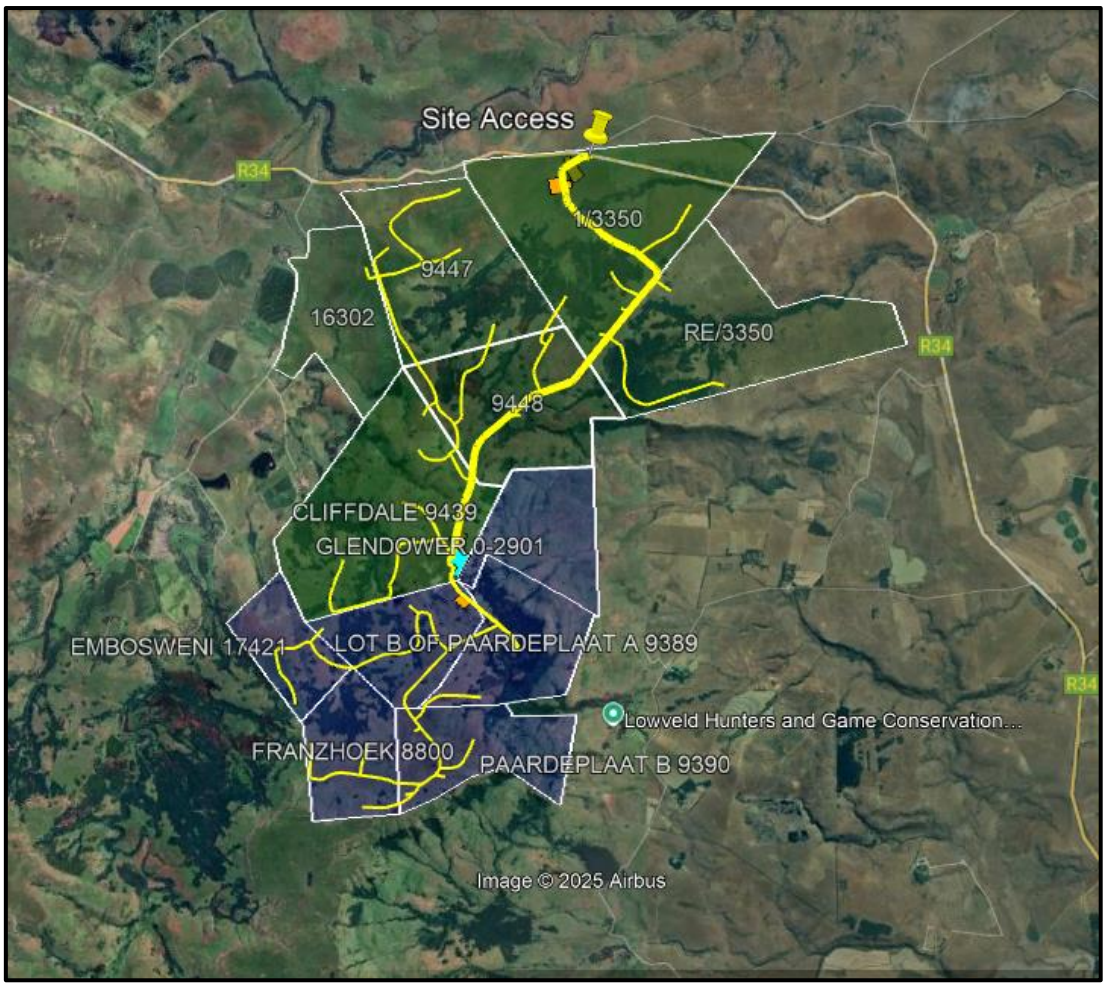

Figure 1: Satellite view showing the location of the MNWP WEF projects where the green polygons indicate MNWP WEF and the purple polygons show the location of MNWP 2 WEF. The yellow lines indicate the road infrastructure (image obtained from Google Earth).

1.2 PROJECT PROPOSAL

Considering the above, the Applicant applied for environmental authorisation and mining permit in support of the MNWP WEF projects earmarked to commence in August 2025. The material to be generated at the proposed quarry will be used, by the Applicant, as fill

and construction material for the MNWP WEF projects and the quarry will therefore be of temporary nature, to be rehabilitated once the construction phase of the MNWP WEF is complete.

The Applicant intends to develop the earmarked site through the open-cast mining method. The hard rock of the quarry will be loosened by blasting, upon which it will be mechanically recovered with drilling-, excavating- and earthmoving equipment. The rock will then be delivered to the crushing and screening plant where it will be reduced to various sized gravels. The screened material will be delivered to various size category stockpiles. When necessary, the concrete aggregate will be washed at an on-site washing plant prior to use.

Transportation of the final product will be from the stockpile area to the MNWP WEF construction sites by means of trucks. Mining will take place from 07:00 to 18:00 Monday – Fridays, and no blasting will be done after hours or over weekends.

The proposed MP project will therefor entail the:

- ❖ site establishment and infrastructure development;
- ❖ stripping and stockpiling of topsoil from the proposed mining footprint area;
- ❖ blasting and excavation of the mining area;
- ❖ crushing and screening of the loosened material at the processing plant;
- ❖ washing of material (when needed), and
- ❖ stockpiling the product until used at the MNWP WEF projects.

The proposed quarry will appoint ±15 employees, and due to the temporary nature and small scale of the operation no permanent infrastructure will be established at the mining area. The Applicant plans to establish the following mobile/temporary infrastructure within the mining footprint:

- ❖ Chemical ablution facilities to be serviced by a registered contractor;
- ❖ Crushing and screening plant (mobile);
- ❖ Diesel tank (capacity less than 50 000 l);
- ❖ Washing plant and water sump (temporary); and
- ❖ Workshop and storage containers.

1.3 OBJECTIVE OF THE CLOSURE PLAN

The purpose of the Closure Plan is to describe the rehabilitation processes that need to take place to ensure that the mine reaches its full environmental potential upon closure.

The primary objective, at the end of the mine's life, is to obtain a closure certificate in as short a period as possible whilst still complying with the requirements of the Minerals and Petroleum Resources Development Act (Act No. 28 of 2002) [MPRDA]. To realise this, the following main objectives must be achieved:

- Remove all temporary infrastructure and waste from the site as per the requirements of the EMPR and of the Provincial Department Mineral Resources and Energy.
- Shape and contour all disturbed areas in compliance with the EMPR.
- Ensure that permanent changes in topography (due to mining) are sustainable and do not cause erosion or the damming of surface water.
- Make all excavations safe.
- Use the topsoil effectively to promote the re-establishment of vegetation.
- Ensure that all rehabilitated areas are stable and self-sustaining in terms of vegetation cover.
- Eradicate all weeds/invader plant species by intensive management of the mine site.

2. DETAILS OF THE AUTHOR

Mulilo Newcastle Wind Power (Pty) Ltd appointed Greenmined Environmental (Pty) Ltd to compile the Closure Plan of the mine. Ms Christine Fouché is the responsible consultant for the project and holds a Diploma in Nature Conservation and a B.Sc. in Botany and Zoology with twenty years' experience in doing environmental impact assessments and compliance monitoring in South Africa (see CV and proof of experience attached as Appendix M to the BAR & EMPR).

Name of the Practitioner: Ms Christine Fouché (Senior Environmental Specialist)
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Declaration of Independence:

I, Christine Fouche, in my capacity as environmental assessment practitioner declare that–

- I act as independent environmental officer in this matter;
- I will perform the work relating to this matter in an objective manner, even if the results and findings are not favourable to the holder of the authorisation;
- I have expertise in conducting environmental related projects, including knowledge of the Act and regulations that have relevance to the activity;
- I will adhere to and comply with all responsibilities as indicated in the National Environmental Management Act and Environmental Impact Assessment Regulations.

- I do not have and will not have any vested interest in the activity other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014 (as amended).

Christine Fouché Date: 21 February 2025

3. LEGAL BACKGROUND AND BEST PRACTICES

This section provides an overview of the legislative requirements applicable to the project, including the acts, guidelines and policies considered in the compilation of the Closure Plan.

3.1 THE CONSTITUTION OF SOUTH AFRICA, 1996 (ACT NO. 108 OF 1996)

The legislative motivation for this project is underpinned by The Constitution of South Africa, 1996 (Act No. 108 of 1996), which states that:

The State must, in compliance with Section 7(2) of the Constitution, respect, protect, promote and fulfil the rights enshrined in the Bill of Rights, which is the cornerstone of democracy in South Africa. Section 24 of the Constitution:

24. Environment

-Everyone has the right-

(a) To an environment that is not harmful to their health or well-being; and

(b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-

(i) Prevent pollution and ecological degradation;

(ii) Promote conservation; and

(iii) Secure ecologically sustainable development and use of natural resources while promoting a justifiable economic and social development.

Section 24 of the Constitution of South Africa requires that all activities that may significantly affect the environment and require authorisation by law must be assessed prior to approval. In addition, it provides for the Minister of Environmental Affairs or the relevant provincial Ministers to identify:

- New activities that require approval;
- Areas within which activities require approval; and
- Existing activities that should be assessed and reported on.

Section 28(1) of the Constitution of South Africa states that:

"Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring".

If such pollution or degradation cannot be prevented, then appropriate measures must be taken to minimise or rectify such pollution or degradation. These measures may include:

- Assessing the impact on the environment.
- Informing and educating employees about the environmental risks of their work and ways of minimising these risks;
- Ceasing, modifying, or controlling actions which cause pollution/degradation;
- Containing pollutants or preventing movement of pollutants;
- Eliminating the source of pollution or degradation; and
- Remedying the effects of the pollution or degradation.

3.2 THE MINERALS AND PETROLEUM RESOURCES ACT, 2002 (ACT NO. 28 OF 2002) [MPRDA]

The table below summarises the relevant sections in terms of the MPRDA, 2002.

Table 1: Summary of the relevant rehabilitation sections of the MPRDA, 2002

AREA OF CONCERN	SECTION	LEGAL REQUIREMENTS
Environmental Management	Section 37	*Requires that the principles set out in section 2 of NEMA must apply to all prospecting and mining operations, and that the generally accepted principles of sustainable development must be applied by integrating social, economic, and environmental factors during the planning and implementation phases of mining projects.*
	Section 38	*Requires the applicant to manage all environmental impacts in accordance with his or her environmental management plan (EMP) or the approved EMPR.*
	Section 39	*Deals with the requirements of an EMP/EMPR, whichever is applicable.*
Financial Provision	Section 41	*Financial provision needs to be provided and annually assess the environmental liability.*
Closure Certificate	Section 43	*Holder of a mining permit is responsible for all environmental liabilities as may be identified in the EMP, application needs to be made to the regional manager for the closure certificate.*

AREA OF CONCERN	SECTION	LEGAL REQUIREMENTS
Removal of Infrastructure	Section 44	*When the mining operation comes to an end the mine may not remove buildings, structures or objects which may not be demolished or removed in terms of any other law.*

3.2.1 Regulation 527 of the MPRDA, 2002

Government Notice No. R.527, as published in the Government Gazette, 23 April 2004 (GG No. 26275, Volume 466) of MPRDA stipulate that the following closure objectives must form part of the EMPR:

- Identify the key objectives for closure of the operation to guide the project design;
- Development and management of environmental impacts;
- Provide future land use objectives for the site; and
- Provide proposed closure costs.

Table 2: Requirements of Government Notice 527

AREA OF CONCERN	REGULATION	LEGAL REQUIREMENTS
The need to prevent and alleviate pollution arising from mining activities.	Regulation 42(1)	*Section 42(1) of the MPRDA stipulates that the closure process must start at the commencement of a mining operation and continue throughout the entire life of the mine. Furthermore, future closure and land use objectives must be included in the EMP Section 42(1) d stipulates that any environmental damage or residual impacts that are identified during the Environmental Risk Assessment (ERA) phase must be acceptable to all Interested and Affected Parties (I&AP's) in line with Section 24(a) of the National Constitution.*
Mine Closure	Regulation 43	*A closure plan contemplated in Section 43(3)(d) of the Act, forms part of the EMPR or EMP and must include – a summary of the results of progressive rehabilitation undertaken.*
Part III of R 527 deals with environmental regulations for mineral development, petroleum exploration and production.	Regulation 56	*In accordance with applicable legislative requirements for mine closure, the holder of a prospecting right, mining right, retention permit or mining permit must ensure that –The land is rehabilitated, as far as is practicable, to its natural state, or to a predetermined and agreed standard or land use which conforms with the concepts of suitable development.*

3.3 THE NATIONAL WATER ACT, 1998 (ACT NO. 36 OF 1998) [NWA]

The National Water Act, 1998 (Act No. 36 of 1998) (NWA) aims to provide management of the national water resources to achieve sustainable use of water for the benefit of all water users. This requires that the quality of water resources is protected as well as integrated management of water resources with the delegation of powers to institutions at the regional

or catchment level. The purpose of the NWA is to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways, which take into account:

- Meeting the basic human needs of present and future generations;
- Promoting equitable access to water;
- Redressing the results of past racial discrimination;
- Promoting the efficient, sustainable, and beneficial use of water in the public interest;
- Facilitating social and economic development;
- Providing for growing demand for water use;
- Protecting aquatic and associated ecosystems and their biological diversity;
- Reducing and preventing pollution and degradation of water resources;
- Meeting international obligations; and
- Managing floods and droughts.

The following sections of the NWA, 1998 are relevant.

Table 3: NWA, 1998 applicable sections

AREA OF CONCERN	SECTION	LEGAL REQUIREMENTS
Prevention and remedying effects of pollution.	Section 19	*Any situation exists or which may cause or is likely to cause pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing, or recurring.*
Control of emergency incidents.	Section 20	*Incidences of pollution needs to be reported the Department and the relevant catchment agency*
General principles: Water uses	Section 21	*An application in this regard is pending with the DWS.*

3.4 THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO 107 OF 1998) [NEMA]

The National Environmental Management Act (NEMA) strives to regulate national environmental management policy and is focussed primarily on co-operative governance, public participation and sustainable development. NEMA makes provisions for co-operative environmental governance by establishing principles for decision making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state and to provide for matters connected therewith.

The following sections are relevant.

Table 4: NEMA, 1998 applicable sections

AREA OF CONCERN	SECTION	LEGAL REQUIREMENTS
Principles that may significantly affect the environment.	Section 28	*General duty of care on every person who causes, has caused, or may cause significant pollution or degradation of the environment to take reasonable measures to prevent such pollution or degradation from occurring, continuing, or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment.*
Control of emergency incidents.	Section 30	*Incidences of pollution needs to be reported the Department.*
Environmental Management Plan.	Section 34	*A draft EMP must include –* *information on any proposed management or mitigation measures that will be taken to address the environmental impacts that have been identified in a report contemplated by these Regulations, including environmental impacts or objectives in respect of –* *(iv) rehabilitation of the environment;* *as far as reasonably practicable, measures to rehabilitate the environment affected by the undertaking of any listed activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally acceptable principle of sustainable development, including where appropriate, concurrent, or progressive rehabilitation measures.*

3.4.1 Regulation 1228 of NEMA, 1998

NEMA, GNR 1228 GG 41236, known as the NEMA Financial Provision Regulations, 2015 (amended), was promulgated in November 2015, and in terms of these regulations holders of a mining permit are allowed a transitional period of 39 months (19 February 2019) from the date of promulgation to comply. The compliance date was extended to 19 September 2023.

As mentioned earlier the permit holder must annually update the annual rehabilitation, final rehabilitation and remediation of latent environmental impacts and ensure it is compliant with the Financial Provision Regulations of 2015. The reports need to be conducted in the format that was supplied in the regulations as per Appendix 5 and Appendix 6.

3.5 THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO 57 OF 2008) [NEM:WA]

The rehabilitation measures must be aligned with the objections of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM: WA) which includes:

(a) To protect health, well-being and the environment by providing reasonable measures for—
   (i) Minimising the consumption of natural resources;
   (ii) Avoiding and minimising the generation of waste;
   (iii) Reducing, re-using, recycling and recovering waste;
   (iv) Treating and safely disposing of waste as a last resort;
   (v) Preventing pollution and ecological degradation;
   (vi) Securing ecologically sustainable development while promoting justifiable economic and social development;
   (vii) Promoting and ensuring the effective delivery of waste services;
   (viii) Remediating land where contamination presents, or may present, a significant risk of harm to health or the environment; and
   (ix) Achieving integrated waste management reporting and planning;
(b) To ensure that people are aware of the impact of waste on their health, well-being and the environment;
(c) To provide for compliance with the measures; and
(d) Generally, to give effect to Section 24 of the Constitution in order to secure an environment that is not harmful to health and well-being

3.5.1 Waste Classification and Management Regulations, 2013 (GNR 634)

Waste Classification and Management Regulations (WCMR) promulgated under the National Environmental Management: Waste Act, 2008 (NEM:WA) (effective 2013) provides mechanisms to:

- Facilitate the implementation of the waste hierarchy to move away from landfill;
- Reuse, recovery, and treatment;
- Separate waste classification from the management of waste;
- Divert waste from landfill and into utilisation where possible; and
- Provide measures to monitor the progress

The Waste Classification and Management Regulations ultimately enables the improved and more efficient classification and management of waste; provide for safe and appropriate handling, storage, recovery, reuse, recycling, treatment and disposal of waste and will also enable accurate and relevant reporting on waste generation and management. All waste generators, excluding domestic generators, must ensure that the waste they generate is classified within 180 days of its generation.

All wastes that were classified in terms of the "Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste in terms of the Department of Water Affairs'' (2nd Edition, 1998; Department of Water Affairs and Forestry) or alternative classifications that were approved prior to the WCMR taking effect, must be re-classified and assessed within three years from the commencement of these Regulations.

Reference is made to the NEM:WA, part 8 of Chapter 4 regarding contaminated land:

All owners of land that is significantly contaminated become obliged to report that contamination is occurring. Part 8 of Chapter 4 is concerned with the remediation of contaminated land. This new legal regime for identifying contaminated land, determining its status and the risk that it poses, and regulating the remediation process is introduced. This law imposes significant legal obligation on the owners of land and on those who cause contamination, with potentially serious financial consequences. Part 8 applies where the pollution only manifest sometime after the contamination occurred and also where the action of a person (for example, the excavation of land pursuant to a development) results in a change to pre-existing contamination. Along with the notice brining Part 8 into effect, norms and standards for the remediation of contaminated land and soil quality (list certain contaminants and specify soil screening values for human health and environmental protection). This act also has several important implications for the sale of and, sellers who know that their lands is contaminated can no longer keep silent and this is classified as an offence.

3.6 FURTHER ACTS RELEVANT TO MINE REHABILITATION

- The Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).

- The South African Mineral Resource Committee (SAMREC) Code. Of particular importance in this regard is the determination of whether the mine has made an adequate provision for environmental rehabilitation in terms of Section 41 of the MPRDA.

3.7 BEST PRACTICE AND INTERNATIONAL GUIDELINES

Mine closure is an international challenge. South Africa has produced various well-known and reputable guidelines on matters directly linked and or associated with mine closure. Such was the need for guidelines to manage mine closure provisions in a consistent manner provided for by the DMRE (2005).

These guidelines are the only official mine closure guideline as contemplated in Regulation 54(1) in the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002). Of particular importance is that this guideline document governs the closure cost assessment process in South Africa and is applied by the DMRE through its respective regional managers in each province.

The Chamber of Mines (CoM) (2007) issued a guideline for the rehabilitation of mined land. This document is a result of scientific knowledge experts. It is an on the ground reference document which provides written guidelines on the best rehabilitation techniques. Of value is how the document distinguishes between the financing, the planning, and the licensing components of a typical mining program.

The World Wildlife Fund (WWF) in 2012 published a discussion document named the “Financial provision for the rehabilitation and closure in South African Mining: Discussion Document on Challenges and recommended improvements”. The document focuses on the adequacy of financial provisions and pulls a very strong link between insufficient financial allocations and that of derelict and abandoned mines in South Africa. The document further emphasizes the importance of establishing a dependency between the EMPR/EMP and financial provision which is updated and adequate

Recently a released guideline from the Government of Western Australia (GWA 2011) provides insight to the importance of mine closure. The guidelines (GWA 2011) state that planning for mine closure is a critical component of environmental management in the mining industry. Notably is that this industry leading practice also requires that planning for mine closure should start before mining commence and should continue throughout the life of the mine until final closure and relinquishment. This approach enables better

environmental outcomes. It is also good business practice, as it should avoid the need for costly remedial earthworks late in the project lifecycle.

4. ENVIRONMENTAL AND PROJECT CONTEXT

4.1 PROJECT LOCATION

The mining permit application was lodged over 4.9 ha of the farm Byron No 9448 in the Amajuba Municipal District. The table below lists the GPS coordinates of the proposed mining footprint.

Table 5: GPS coordinates of the proposed mining footprint.

NUMBER	DEGREES, MINUTES, SECONDS		DECIMAL DEGREES	
	LAT (S)	LONG (E)	LAT (S)	LONG (E)
A	27º39'32.28"	29º48'54.46"	-27.658966º	29.815127º
B	27º39'37.61"	29º48'58.49"	-27.660446º	29.816247º
C	27º39'44.90"	29º48'50.70"	-27.662473º	29.814083º
D	27º39'37.88"	29º48'49.05"	-27.660521º	29.813626º

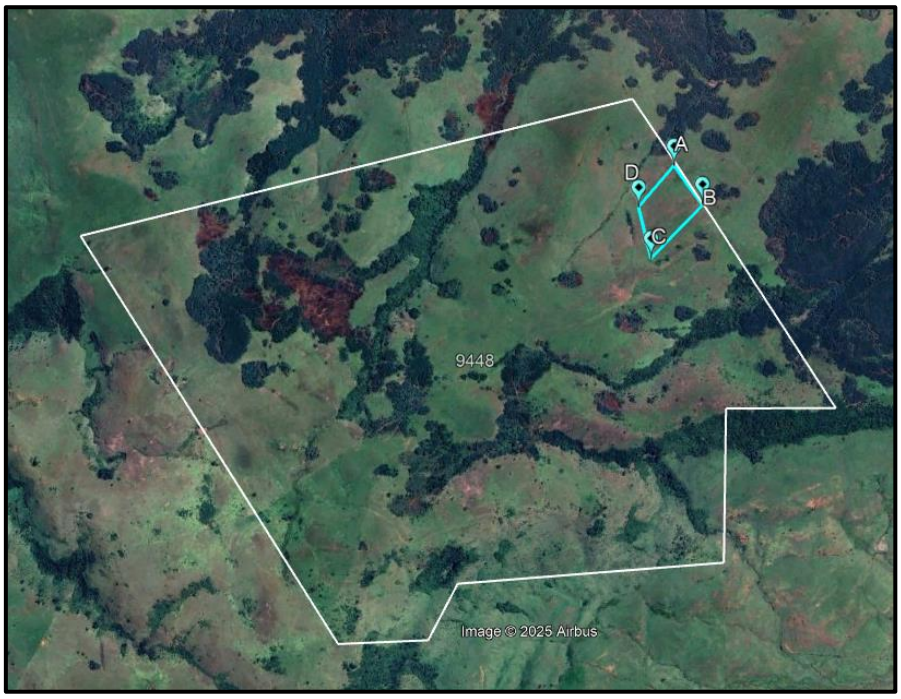

Figure 2: Satellite view showing the location of the MP application area (blue polygon) in relation to the surrounding area where the white lines indicate the farm boundaries (image obtained from Google Earth).

4.2 PROPOSED MINING OPERATION

4.2.1 Site Establishment Phase

Site establishment entails the demarcation of the mining boundaries, the buffer area and the relocation of the identified protected plants, clearance of vegetation, and stripping and stockpiling of topsoil and overburden (if necessary) to access the mineral.

4.2.1.1 Demarcation of Mining Boundaries

Pursuant to receipt of the Environmental Authorisation (EA) and Mining Permit (MP), and prior to mining, the boundary of the mining area will be demarcated with visible beacons. Project specific areas to be demarcated within the boundary of the mining footprint may include, but not be limited to, the offices/workshop, stockpile and processing areas, and the excavation. Additional thereto, the 47 m buffer (Figure 25 of the Basic Assessment Report) around the identified watercourses will be demarcated and managed as a no-go area.

4.2.1.2 Access Road

The proposed mining area will be reached via the existing farm road turning from Collings Pass that passes the site. No mining equipment or vehicles will access the N11 directly from the mining area without prior approval from SANRAL. The Applicant proposes to upgrade the road to allow comfortable movement of mining related equipment and vehicles and to comply with the requirements of the Mine Health and Safety Act, 1996 (Act No 29 of 1996). Haul roads into the excavation will be extended as mining progresses.

4.2.1.3 Vegetation Clearing

The MNWP WEF projects necessitate the development/upgrade of the road network of the earmarked farms to support the proposed development. The environmental authorisation (EA) of the MNWP WEF EIA already allows for the construction/upgrading of the necessary roads. The development/upgrading of the proposed road network will be sufficient to allow access to the proposed mining area (BP1), and the mining development therefore does not require additional road related activities.

4.2.1.4 Clearing of Vegetation

The vegetation type of the earmarked footprint consists of the Low Escarpment Moist Grassland (LC). The vegetation composition indicates a largely natural area which is still relatively unmodified. The grass layer consists of a diversity of species, with the majority being climax species. Several of the geophytic species on site are listed as protected and have a significant conservation value. Surface rock is present as boulders, and this also creates suitable habitat for scattered trees and shrubs.

Consequently the removal of vegetation will be necessary to access the resources. Where the development will affect the provincially protected plant species (geophytes) the Applicant will, prior to bush clearance, apply for relocation permits from Ezemvelo/KZN-Wildlife. Bush clearance will only commence upon receipt of the applicable plant permit and relocation of the said species. The surrounding proposed NMWF WEF has already initiated a protected species transplanting process and the mining permit application area will be incorporated into this process. The environmental control officer (ECO) will assess the compliance of the permit holder with the conditions of said permits.

4.2.1.5 Topsoil Stripping

It is proposed that topsoil removal will be restricted to the exact footprint of areas required during the operational phase of the activity. The topsoil will be stockpiled at a designated signposted area to be replaced during the rehabilitation of the area. It will be part of the obligations of site management to prevent the mixing of topsoil heaps with overburden/other soil heaps. The complete A-horizon (the top 100 – 200 mm of soil which is generally darker coloured due to high organic matter content) will be removed. If it is unclear where the topsoil layer ends the top 300 mm of soil will be stripped. The topsoil berm will measure a maximum of 1.5 m in height.

4.2.1.6 Introduction of Mining Machinery and Site Equipment

As mentioned earlier, the Applicant plans to establish mobile/temporary infrastructure within the mining footprint. It is proposed that the processing area (including ablutions, mobile crusher, washing plant, workshop and

storage containers) will occupy ±1 ha of the proposed 4.9 ha area. As no fixed/permanent infrastructure will be established, the production rate will dictate the layout of the proposed footprint area. The use of diesel and petrol on site will be below the threshold of the NEMA, 1998 EIA Regulations, 2014 (as amended).

Presently, the mining infrastructure/equipment is expected to consist of at least:

- ADT trucks;
- Chemical ablution facilities;
- Crushing and screening plant (mobile);
- Drilling equipment;
- Earthmoving- and excavating equipment;
- Generators;
- Washing plant and sump;
- Water truck;
- Workshop and storage containers.

4.3 OPERATIONAL PHASE

The Applicant applied for a environmental authorisation and mining permit in support of the MNWP WEF projects earmarked to commence in August 2025. The material to be generated at the proposed quarry will be used, by the Applicant, as fill and construction material for the MNWP WEF projects and the quarry will therefore be of temporary nature, to be rehabilitated once the construction phase of the MNWP WEF is complete.

The Applicant intends to develop the earmarked site through the open-cast mining method. The hard rock of the quarry will be loosened by blasting, upon which it will be mechanically recovered with drilling-, excavating- and earthmoving equipment. The rock will then be delivered to the crushing and screening plant where it will be reduced to various sized gravels. The screened material will be delivered to various size category stockpiles. When necessary, the concrete aggregate will be washed at an on-site washing plant prior to use. Transportation of the final product will be from the stockpile area to the MNWP WEF construction sites by means of trucks.

4.4 TOPOGRAPHY

The proposed mining area (BP1) is situated on the lower lying foot slopes of the mountain and is dominated by a longitudinal low ridge from south-west to north-east and has a moderate slope from south-east to north-west. Mining the proposed quarry into the western face of the hill should create an excavation with more or less three faces that will be benched as the mining depth increases.

The MNWP WEF contractors may use the excavation, at the end of the pits life, as a spoil site for inert rubble and soil, but this may not be enough to refill the quarry pit. The rehabilitation proposal is therefore (upon closure) to render the quarry safe and leave it as a minor landscape feature.

4.5 AIR AND NOISE QUALITY

The study area has little natural features that could act as noise barriers considering practical distances at which sound propagates. Most dwellings featuring in the vicinity of the project focus area are scattered in a heterogeneous fashion, typical of a rural area. Most of the area can be considered wilderness, with animal husbandry (stock grazing) and subsistence farming predominant in the area. None of these activities will influence the ambient sound levels in the project focus area.

The R34 pass the project site to the north. Traffic volumes are relatively low, though noises from passing traffic would be audible up to 2 km from the road. Road traffic noises may influence ambient sound levels within 500 m from the roads.

The noise to be generated at the proposed quarry will contribute to the daily noise levels of the receiving environment through blasting, as well as the excavation, crushing/screening and transporting of material. As mentioned earlier, mining will take place from Monday – Fridays between 07:00 to 18:00 and no blasting will be done after hours or on weekends. The nuisance value of noise generated by heavy earthmoving equipment, to residence in the vicinity is deemed to be of low significance. The noise caused by blasting will be instantaneous and of short duration.

4.6 GEOLOGY

The geology of the study area is dominated by the Karoo Dolerite Suite, which is dominated by a network of dolerite sills, sheets, and dykes, which are mainly intrusive into the Karoo Supergroup. The remaining geology is underlain by mudstones and sandstones deposited by a variety of fluvial systems.

Soils in the study area are dominated by Leptosols which are shallow soils that overlie continuous rock. These soils may also contain a high degree of gravel, rock and stones derived from the parent material. Such soils dominate the higher lying areas in the study area. Nitosols are deeper, well-drained, red, clayey soils that are generally found in hilly landscapes and occur in the lower lying areas of the study area. Such soils are partially present at BP1.

The sloping topography of BP1 lends itself to the extraction of significant volumes of borrowed materials whilst maintaining daylighting of the excavation area for precipitation runoff. Mining in this manner will also contribute and simplify the rehabilitation of the excavation upon closure.

Widespread visible daylighting of in-tact, hard dolerite material at surface level indicate that the stripping of overburden material will be minimal, thus reducing the overall volume of materials to be moved and lowering the overall impact of the borrowing activities on the environment.

4.7 HYDROLOGY

The Vegetation and Wetland Assessment (VWA) notes that BP1 is devoid of any wetland systems and is dominated by dolerite outcrops. A prominent but small mountain stream is situated in the lower lying valley, ±90 m north-west of the site, while an even smaller drainage line is situated ±40 m to the south-west of the site, also flowing into, and forming a tributary, of the larger stream system (Figure 23 & 24 of the BAR). Both these watercourses are fairly fast flowing, draining from west to east and have a well-defined channel. The stream is clearly a strictly seasonal system, currently containing no connected main channel flow and will contain no flow during winter, while flowing strongly for short periods after rainfall events. As a result, wetland conditions are present, but not extensive.

BP1 is situated within the Northern Drakensberg Strategic SWSA as well as the NPAES: Moist Escarpment Grassland Focus Area. In both instances, the proposed borrow pit development is unlikely to have any significant impact, both in terms of the regional water source and any future expansion of protected areas, largely as a result of its small footprint and therefore limited impact.

A buffer of 47 m should be maintained from the edge of the riparian zone along the watercourses. This buffer area should be treated as a no-go area. Adequate storm water management measures should be implemented and should include diverting storm- and

floodwater around operational and excavation areas and preventing sediment and silt from entering any of the delineated watercourses.

4.8 TERRESTRIAL BIODIVERSITY, CONSERVATION AREAS AND GROUNDCOVER

BP1 consists of natural grassland which is in a fairly good condition. The species diversity is moderate although the area does contain a significant number of protected plant species which contribute towards its conservation value. Significant mitigation have to be implemented to ensure the impact on these elements of significant conservation value is decreased.

The proposed mining area is not listed as a Critical Biodiversity Area, Ecological Support Area or important habitat for threatened species and is not considered essential for meeting conservation targets.

The necessary plant removal permits must be obtained from Ezemvelo prior to commencement. The surrounding proposed MNWP WEF has already initiated a protected species transplanting process and the mining permit application area can be incorporated into this process.

Though the site itself does not currently contain any significant weed or invasive plant infestations, mining will increase disturbance in the area, and this will pose a risk of weeds and invasive species establishing and spreading into surrounding natural areas. This risk must be managed throughout the life of the mine.

4.9 CULTURAL AND HERITAGE ENVIRONMENT

The survey results of the MNWP WEF projects (Anderson 2022) were compared to the location of the proposed borrow pits (BP1 – BP5), and the specialist found that only BP5 is located near heritage sites. The specialist concluded that BP1 – BP4 are clear of heritage sites and either of these could be chosen.

Dr Alan Smith undertook the desktop palaeontological impact assessment (PIA) and fieldwork study for this project as some of the land was considered to be of high palaeontological significance. Dr Smith noted that the type of material that will be mined at the proposed quarry will be dolerite, and as dolerite is a non-fossiliferous material no PIA mitigation will be required.

4.10 EXISTING INFRASTRUCTURE

No infrastructure exists in the proposed 4.9 ha footprint of BP1, nor are there infrastructure in proximity to the proposed footprint apart from the boundary fence.

4.11 LAND CAPABILITY AND SURROUNDING LAND USE

All the land on which the MNWP WEF Complex and mine is proposed is grazing land. Woodlands or afromontane forests occur in the ravines. No cultivated land were recognised on any of the farms. Scars left from gully erosion occur in some areas. Most of the land consists of shallow and rocky soils that are not arable. Some attempts were made to establish pastures in the valleys where the soils are deeper and consists of colluvium or hill wash.

BP1 is outside all protected agricultural areas, and comprises of land type Fa that is characterised by shallow soils (Mispah & Glenrosa forms), with little or no lime in the landscape. The soil capability of BP1 is Moderate (value 5), while the land capability is Very Low – Low (value 3) meaning it is only suitable for grazing and wilderness. Considering this, BP1 has a very high grazing capacity of 3 ha/LSU (large stock unit). The study area is used for grazing and does not enter into field crop boundaries or other cultivated areas. In light of the above, the agricultural specialist supports the Medium sensitivity of the DFFE screening report, however the specialist still recommends that the development may continue as the operation of the proposed quarry will not have a significant impact on the potential agricultural activities in the area nor pose a threat to food security.

5. ANNUAL REHABILITATION PLAN

Appendix 3 to the Financial Provision Regulations, 2015 states that the objectives of the annual rehabilitation plan are to:

a) Review concurrent rehabilitation and remediation activities already implemented;
b) Establish rehabilitation and remediation goals and outcomes for the forthcoming 12 months, which contribute to the gradual achievement of the post-mining land use, closure vision and objectives identified the holder's final rehabilitation, decommissioning and mine closure plan;
c) Establish a plan, schedule, and budget for rehabilitation for the forthcoming 12 months;
d) Identify and address shortcomings experienced in the preceding 12 months of rehabilitation; and
e) Evaluate and update the cost of rehabilitation for the 12-month period and for closure, for purposes of supplementing the financial provision guarantee or other financial provision instrument

5.1 IMPLEMENTATION AND REVIEW OF TIMEFRAMES

The annual rehabilitation plan will be applicable for a 12-month period commencing from the date of approval thereof by the Department of Mineral Resources and Energy. The document will be reviewed during the 11th month of the operative period to ensure the timeous submission of the subsequent annual review.

5.2 MONITORING RESULTS

5.2.1 Control of Invasive Alien Vegetation

The permit holder will continuously monitor the mining footprint for the invasion of alien vegetation in accordance with the Invader Plant Species Management Plan of the site (Appendix K of the BAR & EMPR). Care will be taken to prevent the establishment of species such as Black Wattle (*Acacia mearnsii*), Lantana (*Lantana camara*) or Bugweed (*Solanum mauritianum*). This practice will continue throughout the site establishment-, operational-, and decommissioning phases of the project.

5.2.2 Noise Monitoring

A qualified occupational hygienist will quarterly monitor and report on the personal noise exposure of the employees working at the mine. Monitoring will be in accordance with SANS 10083:2004 (Edition 5) sampling method as well as NEM:AQA 2004, SANS 10103:2008.

Silencers will be fitted to all project related vehicles, and vehicles will be in a road worthy condition as stipulated in terms of the National Road Traffic Act, 1996. Noise mufflers will be fitted to generators, and the type, duration and timing of each blast will be planned with due cognizance of other land users and structures in the vicinity.

5.2.3 Dust Monitoring

The above mentioned occupational hygienist will also report on the gravimetric dust levels of the site. Site management must ensure that the dust generating activities at the site comply with the National Dust Control Regulations, GN No R827 promulgated in terms of NEM:AQA, 2004 and ASTM D1739 (SANS 1137:2012). Dust levels will be controlled through the management processes stipulated in the BAR & EMPR.

5.2.4 Waste Monitoring

Site management will be responsible to monitor the generation of all types of waste at the mining area, including general-, hazardous- and liquid waste. Solid (general) waste, generated during the operational phase, will be contained in sealable refuse bins that will be placed at the processing area until the waste is transported to a registered general waste landfill site. A registered contractor will service the chemical toilets that will serve as ablution facilities to the employees.

Hazardous waste (such as spills) will be cleaned up immediately (within two hours of the occurrence) and the contaminated soil will be contained in designated hazardous waste containers that will be kept in a bunded area with impermeable surface until it is removed from site by a registered hazardous waste handling contractor to an approved facility.

5.3 SHORTCOMINGS IDENTIFIED

This report is the first Annual Rehabilitation Plan in terms of the Financial Provision Regulations, 2015 that was compiled for the proposed mine. No shortcomings have therefore been identified.

5.4 REHABILITATION ACTIVITIES FOR THE FORTHCOMING 12 MONTHS

Not yet applicable as mining has not yet commenced. Upon approval of the mining permit application and receipt of the EA, the permit holder will annually report on the planned rehabilitation actions.

5.5 REVIEW OF THE PREVIOUS YEAR'S REHABILITATION ACTIONS

This report is the first Annual Rehabilitation Plan in terms of the Financial Provision Regulations, 2015 that was compiled for the proposed mine. In this circumstance no annual rehabilitation activities have been identified and can be reviewed.

5.6 COSTING

To be determined once the annual rehabilitation objectives were established.

6. REHABILITATION, DECOMMISSIONING AND MINE CLOSURE PLAN

The objective of the final rehabilitation, decommissioning and mine closure plan (According to MPRDA) is to identify a post-mining land use that is feasible through;

a) Providing the vision, objectives, targets, and criteria for final rehabilitation, decommissioning and closure of the project (as described above);
b) Outlining the design principles for closure;
c) Explaining the risk assessment approach and outcomes and link closure activities to risk rehabilitation;
d) Detailing the closure actions that clearly indicate the measures that will be taken to mitigate and/or manage identified risks and describes the nature of residual risks that will need to be monitored and managed post closure;
e) Committing to a schedule, budget, roles, and responsibilities for final rehabilitation, decommissioning and closure of each relevant activity or item of infrastructure;
f) Identifying knowledge gaps and how these will be addressed and filled;
g) Detailing the full closure costs for the life of project at increasing levels of accuracy as the project develops and approaches closure in line with the final land use; and
h) Outlining monitoring, auditing, and reporting requirements.
(Financial provision regulations, 2015 appendix 4)

The following objectives are leading closure indicators, which need to be applied across all the domains, and read in conjunction with the principles, which embody the strategic objectives. The closure plan must address all the areas associated with closing the operations, of which rehabilitation and re-vegetation forms part of as component. The first step in developing the overall mine closure strategy is to identify potential post mining land use options and establish key objectives for closure to be incorporated in the project design.

The preferred post mining land use for the proposed mine is to restore the natural vegetation (where possible) and allow the use of the surrounding area as part of the MNWP WEF and grazing in the undeveloped areas. In this context, the primary objectives for the closure of the mining operations are:

- Remove all temporary infrastructure and waste from the mine as per the requirements of this EMPR and of the Provincial Department of Minerals and Resources and Energy.
- Shape and contour disturbed areas in compliance with the EMPR.
- Ensure that permanent changes in topography (due to mining) are sustainable and do not cause erosion or the damming of surface water.
- Make all excavations safe.
- Use the topsoil effectively to promote the re-establishment of vegetation.

- ❖ Ensure that all rehabilitated areas are stable and self-sustaining in terms of vegetation cover.
- ❖ Eradicate all weeds/invader plant species by intensive management of the mine site.

6.1 CLOSURE STRATEGY GUIDED BY THE ENVIRONMENTAL RISK ASSESSMENT

The overall objective of the closure plan is to minimize adverse environmental impacts associated with the mining activity whilst maximising the future utilisation of the property. The idea, therefore, is to leave the mined areas in a condition that reduces all negative impacts associated with the activity. Significant aspects to be borne in mind in this regard is visibility of the mining scar, re-vegetation of the mining footprint, stability, and environmental risk in an old mine environment. The rehabilitated and immediate surroundings must also be free of weeds and alien vegetation.

The proposed quarrying and rehabilitation procedures was formulated to optimise the extraction of the raw material while creating stable quarry sides that will not present an unreasonable safety risk once the mine was closured. Mining operations will be conducted in stages, corresponding to the creation of precision blasted quarry sides and benches towards the base of the working. The decommissioning phase and closure of the quarry will also involve removal of all debris and rehabilitation of areas not rehabilitated during the operational phases of the project. This will comprise the scarification of compacted areas, reshaping of areas, topsoiling and regeneration of all prepared surfaces. All temporary infrastructure/equipment will be dissembled and all other infrastructural development such as haulage roads and stockpile areas will be rehabilitated.

6.2 DESIGN PRINCIPLES

6.2.1 Excavation

Upon closure of the mine, the Applicant will contract the expertise of a rock engineer to guide the final design of the quarries. The rock engineer will be directed by the following:

- ❖ The quarry pit must be developed into a minor landscape feature, by creating a series of irregular benches along the quarry faces. The top edges of each face being blasted away to form scree slopes on the benches below, thereby reducing the overall face angle.
- ❖ Presently, it is proposed that the benches must be ±12 m high x 3 m wide. However, site management must be directed by the rock engineer regarding the final layout of the benches.

- The MNWP WEF contractors may use the excavation, at the end of the pits life, as a spoil site for inert rubble and soil.
- The benches must be top-dressed with topsoil and vegetated with an appropriate grass mix if vegetation does not naturally establish in the area within six months of the replacement of the topsoil.

6.2.2 Processing Area

The processing area (including mobile crusher, ablutions, and weighbridge with control room) will be reinstated and the footprint landscaped as listed below.

- Coarse natural material used for the construction of ramps must be removed and dumped into the excavations.
- Stockpiles must be removed during the decommissioning phase, the area ripped, and the topsoil returned to its original depth to provide a growth medium.
- On completion of operations, all structures or objects shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002):
  - Where sites have been rendered devoid of vegetation/grass or where soils have been compacted owing to traffic, the surface shall be scarified or ripped.
  - Areas containing French drains shall be compacted and covered with a final layer of topsoil to a height of 10 cm above the surrounding ground surface.
  - The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.
- Photographs of the processing area, before and during the mining operation and after rehabilitation, shall be taken at selected fixed points and kept on record for the information of the DMRE Regional Manager.
- On completion of mining operations, the surface of these areas, if compacted due to hauling and dumping operations, shall be scarified to a depth of at least 200 mm and graded to an even surface condition. Where applicable/possible topsoil needs to be returned to its original depth over the area.
- The area shall then be fertilized if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local, adapted indigenous seed mix.

6.3 POST-MINING LAND USE

As mentioned earlier, the preferred post mining land use for the proposed mine is a combination of agriculture (grazing) and energy generation as part of the MNWP WEF. Upon replacement of the topsoil, the area around the excavation will once again be available for grazing purposes, and the planting of the grass layer (to protect the topsoil) will tie in with the proposed land use.

6.4 CLOSURE ACTIONS

The closure goals and objectives are to ensure that post-use rehabilitation achieves a stable and functioning landform consistent with the surrounding landscape, other environmental values and agreed land use.

The Applicant will comply with the minimum closure objectives as prescribed by the DMRE and detailed below:

6.4.1 Rehabilitation of the Excavated Area

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

6.4.2 Rehabilitation of Processing Area

- Coarse natural material used for the construction of ramps must be removed and dumped into the excavations.
- Stockpiles must be removed during the decommissioning phase, the area ripped, and the topsoil returned to its original depth to provide a growth medium.
- On completion of operations, all structures or objects shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002):
  - Where sites have been rendered devoid of vegetation/grass or where soils have been compacted owing to traffic, the surface shall be scarified or ripped.
  - The site shall be seeded with a vegetation seed mix adapted to reflect the local indigenous flora.
- Photographs of the processing area, before and during the mining operation and after rehabilitation, shall be taken at selected fixed points and kept on record for the information of the DMRE Regional Manager.
- On completion of mining operations, the surface of these areas, if compacted due to hauling and dumping operations, shall be scarified to a depth of at least 200 mm and graded to an even surface condition. Where applicable/possible topsoil needs to be returned to its original depth over the area.
- The area shall then be fertilized if necessary to allow vegetation to establish rapidly. The site shall be seeded with a local, adapted indigenous seed mix.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the DMRE Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining operation be corrected and the area be seeded with a seed mix to his or her specification.

6.4.3 Final rehabilitation:

- Rehabilitation of the surface area shall entail landscaping, levelling, top dressing, land preparation, seeding (if required), maintenance, and clearing of invasive plant species.
- All equipment, plant, and other items used during the mining period must be removed from the site (section 44 of the MPRDA).

- ❖ Waste material of any description, including receptacles, scrap, rubble and tyres, must be removed entirely from the mining area and disposed of at a recognized landfill facility. It will not be permitted to be buried or burned on the site.
- ❖ The management of invasive plant species must be done in a sporadic manner during the life of the mining activities. Species regarded as Category 1a and 1b invasive species in terms of NEM:BA (National Environmental Management: Biodiversity Act 10 of 2004 and regulations applicable thereto) need to be eradicated from the site.
- ❖ Final rehabilitation must be completed within a period specified by the Regional Manager (DMRE).

6.4.4 Revegetation of Rehabilitated Areas

All reinstated areas must be revegetated to establish a stable grass layer that will tie-in with the end-use of the site. The use of a commercial seed mix is recommended, and for dryland areas, the seed mix should be less than half the standard sowing rate and include annuals (e.g. wheat or rye) and perennials e.g. Couch Grass (*Cynodon dactylon*). The seed mix can be augmented by Love Grass (*Eragrostis curvula*) and Finger Grass (*Digitaria eriantha*).

6.4.5 Maintenance and Monitoring

Rehabilitated areas need to be monitored and managed after the initial rehabilitation. The proposed mine's primary tool for maintenance of the rehabilitated area will be monitoring of the reinstated areas until the closure certificate is issued. If areas are identified that are considered unsatisfactory then maintenance may include, but not be limited to:

- ❖ Replanting failed or unsatisfactory areas;
- ❖ Repairing any erosion problems; and
- ❖ Pest and weed control.

6.4.6 Success Criteria and Monitoring

To assess when the rehabilitation and re-vegetation process is complete, the mine will develop a set of completion criteria. These criteria will be reviewed by senior management before being submitted to the regulatory authorities (DMRE) for approval and sign off.

The approved set of completion criteria will be used as a basis for assessing the closure of the mining operations, with the mine required to comply with the specified criteria before the land management can be relinquished. The completion criteria will be reviewed every two years with the closure plan and updated to include findings of the mine rehabilitation research and development program as well as additional requirements of the regulatory authorities.

When selecting completion criteria, consideration must be given to the climatic conditions in the area. Using simple percentage species and percentage cover may not be appropriate, as this is dependent on when the samples are taken. If the baseline was established during a wet year and the assessment undertaken during drought, the criteria will not be met. The rehabilitated and re-vegetated areas will be monitored to determine the progress of the programme. Monitoring is likely to be a combination of methods and may include photographic monitoring, transects and standard plot areas.

6.4.7 Impact Specific Procedures

The table below provides a summary of the impact specific procedures associated with the closure of the mine.

Table 6: Summary of the impact specific procedures

CLOSURE MANAGEMENT OBJECTIVES	SPECIFIC PERFORMANCE CRITERIA	ACTION REQUIRED
SOCIO-ECONOMIC		
❖ The retrenchment process will be followed as per requirements of the applicable legal process; and ❖ All existing social investments will be phased out over an agreed period with beneficiaries.	❖ Progressive rehabilitation must be implemented if possible as mining progress.	❖ Any commitments made to I&AP'S will be attended to the relevant I&AP's satisfaction as agreed upon between the I&AP'S and the mine.
TOPOGRAPHY AND EROSION CONTROL		
❖ The area will have contours constructed to prevent soil erosion.	❖ All slopes which may incur erosion will be profiled in such a way that a preferential down drain can be installed; ❖ Erosion control measures such as contour banks and cut off berms should be constructed, and soil vegetated in rehabilitated areas. On gentle slopes, water will be encouraged to flow off the rehabilitated surface as surface flow, as quickly as possible without causing erosion.	❖ Should it be noted that designs are not being followed, rehabilitation activities will cease, and corrective measures will be taken to ensure design specifications are achieved. Specialists will be consulted if necessary; ❖ Any pooling will be addressed by filling depression and / or grading areas and re-vegetating such sites; ❖ Any erosion will also be addressed utilising contour berms, gabion structures if necessary or a specialist will be consulted if necessary. Any eroded soils will be lifted and returned to the affected area; ❖ Any deficiencies will be corrected by placing material in these areas as per the closure plan; ❖ Any compacted soils will be ripped or disked and re-vegetated with indigenous flora. Vegetation will then be monitored in these areas; ❖ All recommendations made by the specialists will be implemented where deemed appropriate; ❖ An alien invasive management program will be implemented for the control and eradication of alien invasive species on site. This plan will give preference to mechanical control methods. Any chemicals utilised will be used responsibly. Where required DWS will be consulted with regards to the use of certain chemicals

CLOSURE MANAGEMENT OBJECTIVES	SPECIFIC PERFORMANCE CRITERIA	ACTION REQUIRED
ECOLOGY		
❖ The rehabilitated area will be protected from surface disturbance to allow vegetation to establish and stabilise.	❖ Vegetation in rehabilitated areas will have equivalent values as surrounding natural ecosystems; ❖ The rehabilitated ecosystem will have equivalent functions and resilience as the target ecosystem; ❖ Soil properties will be appropriate to support the target ecosystem; ❖ The rehabilitated areas will provide appropriate habitat for fauna.	❖ Should it be noted that designs are not being followed, rehabilitation activities will be amended to ensure corrective measures will be taken to ensure design specifications are achieved. Specialists will be consulted if necessary; ❖ An alien invasive management programme will be implemented for the control and eradication of alien invasive species on site. This plan will give preference to mechanical control methods. Any chemicals utilised must be used responsibly.
LAND USE		
❖ To ensure that rehabilitation is done to such an extent that land use potential is regained for agricultural use and associated zoning.	❖ Only after the levelled areas have been inspected and approved by the Mine Manager/Site Manager will topsoil be placed to a depth of 300 mm. The topsoil layer must be as even as possible, i.e. it must be smooth, and the depth must remain consistent throughout; ❖ Once the topsoil has been replaced, vehicle movement will be restricted to prevent compaction of the topsoil; ❖ Rehabilitated areas will be vegetated within the same growing season (at the end of the rainy season). A suitable seedbed will be prepared to enhance the penetration and absorption of water, thereby giving the seed the best possible chance to germinate. The seeding depth should be very shallow to provide better germination. For most grass species seeding depth is approximately 5-15 mm; ❖ Rehabilitated areas will be re-vegetated with local indigenous flora as far as possible; and ❖ Once the seed mixture has been sown, the land must be rolled to ensure consolidation around the seeds and effective moisture retention.	❖ N/A

6.5 CLOSURE SCHEDULE

At this stage it is proposed that the final rehabilitation of the mining area will take approximately three months to complete. Rehabilitation will, however, not be considered complete until the first cover crop is well established and therefore the rehabilitation phase will extend over at least a six-month period.

Control of invasive plant species is an important aspect after topsoil replacement and seeding has been completed in an area. Site management will implement an invasive plant species management plan during the 12-month aftercare period to address germination of problem plants in the area. Final rehabilitation shall be completed within a period specified by the Regional Manager.

According to the MPRDA Section 43 (4) refers to the issues of a closure certificate and stipulates the following:

"Section 43(4) Issuing of a closure certificate -

(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 prescribed environmental risk report.

Table 7: Closure schedule

CLOSURE SCHEDULE	
DECOMMISSIONING / CLOSURE ACTION	**TIMEFRAME**
EXCAVATION	
❖ Create irregular benches along the quarry faces; ❖ Dump excess rocks and coarse material into the quarry; ❖ Place overburden and topsoil over benches; ❖ Bench plant the faces; ❖ Dispose all waste off-site.	Week 1 - 6
PROCESSING AREA	
❖ Dump coarse natural material used for ramps into the excavations; ❖ Remove all product stockpiles; ❖ Remove all temporary structures/equipment from the footprint; ❖ Rip any compacted area; ❖ Landscape and level the area to prevent any depressions and allow for agricultural activities; ❖ Replace the stockpiled topsoil over the mined-out area;	Week 6 - 12

CLOSURE SCHEDULE	
DECOMMISSIONING / CLOSURE ACTION	**TIMEFRAME**
❖ Seed reinstated area or arrange for planting of relevant cover crop.	
MAINTENANCE AND AFTER CARE	
❖ Erosion Monitoring ❖ Weeds and Invader Plant Control	12 months duration after final closure of the mining area

6.6 IMPLEMENTATION AND RESPONSIBILITY OF CLOSURE PLAN

Implementation of the closure plan is ultimately the responsibility of Mulilo Newcastle Wind Energy Facility (Pty) Ltd. Upon commencement of the closure phase daily compliance monitoring will be the responsibility of the site manager. The site manager will be responsible for ensuring compliance with the guidelines as stipulated in the EMPR as well as the prevention and/or rectification of environmental incidents. The permit holder will appoint an Environmental Control Officer to oversee compliance of the rehabilitation/closure activities.

6.6.1 Site Management Responsibility List

- ❖ Inspect area for erosion, pooling and/or compaction;
- ❖ Floral surveys need to be conducted to monitor cover abundance, plant succession and community structure;
- ❖ Monitor any ecologically sensitive species should it be observed on site.

6.6.2 Management of Information and Data

The Closure Plan must include a description of the management strategies, and all information and data relevant to mine closures. These records are valuable during all phases of mining to provide:

- ❖ A history of closure and implementation at the site;
- ❖ A history of past developments;
- ❖ Information for incorporation into state and national natural resource databases; and
- ❖ The potential for improved future land use planning and/or site development.

6.7 IDENTIFIED GAPS IN THE PLAN

The assumptions made in this plan, which relate to the closure objectives and associated impact on the receiving environment, stem from site-specific information gathered by the project team. No gaps in the Rehabilitation, Decommissioning and Mine Closure Plan could be identified.

6.8 RELINQUISHMENT CRITERIA FOR CLOSURE ACTIVITIES

The specific rehabilitation outcomes against which the effectiveness of completed rehabilitation must be measured are:

1. that the topography has been sufficiently rehabilitated without unsafe excavation edges;
2. that topsoil has been spread on the surface;
3. that there is a potential rooting depth of at least 30 cm, of non-compacted soil material, which is suitable for root growth, across the mining area;
4. that there is no visible erosion across the area, or down-slope of it as a result of mining, and that no part of the area has been left unacceptably vulnerable to erosion;
5. that a successful cover crop has been established across the area.

In addition to the above, the following relinquishment criteria is proposed for the closure activities of the mining area:

Table 8: Relinquishment criteria

RELINQUISHMENT CRITERIA FOR CLOSURE ACTIVITIES			
CATEGORY	**RELINQUISHMENT CRITERIA**	**INDICATORS**	**REPORTING REQUIREMENTS**
Removal of all equipment.	No visible man-made structures should remain.	Closeout inspection by site management upon end of decommissioning phase.	Photographic evidence that infrastructure has been removed.
Soil erosion	Implementation of erosion control measures or the establishment of vegetation in denuded areas.	Engineered structures to control water flow	Proof in final closure report that required structures are in place and functional.
Vegetation	Seeding of a cover crop after topsoiling.	Biodiversity monitoring	Monitoring report
Invader plant management	Continuous management of invader plants until the establishment of the first cover crop.	Biodiversity monitoring	Monitoring report
Land Use	Land capability and productivity like that, which existed prior to mining.	Land capability and productivity	Comparison to equivalent areas.

6.9 CLOSURE COST ESTIMATE

Financial provision (Regulation 54 of the MPRDA, 2002) is the amount needed for the rehabilitation of damage caused by the operation, both at sudden closure during the normal operation of the project and at final, planned closure. This amount reflects what it will cost the Department to rehabilitate the area disturbed in case of liquidation or abscondence. Financial provision for environmental rehabilitation and closure requirements of mining operations forms an integral part of the MPRDA. Section 41 of the MPRDA and Regulations 53 and 54 promulgated in terms of the MPRDA deal with financial provision for mine rehabilitation and closure.

Based on the extent of the current disturbance and by utilising the Department of Mineral Resources and Energy guideline document for calculating financial provision the proposed mine needs to provide a financial provision value of R 511 097.80 (calculated February 2025). Refer to *Part B(1)(f)(i)(e) Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline* of the 2025 BAR & EMPR for an explanation as to how the financial provision amount was calculated.

6.10 MOTIVATION FOR AMENDMENTS MADE TO THE FINAL REHABILITATION, DECOMMISSIONING AND MINE CLOSURE PLAN.

Not applicable as no amendments were made to the Final Rehabilitation, Decommissioning and Mine Closure Plan.

7. MONITORING, AUDITING AND REPORTING

In compliance with applicable legislation, the mining permit holder will conduct monitoring of the mining activities for the duration of the decommissioning and closure phase. The compliance of the site will be audited, and reporting will be done to the relevant authorities. The table below stipulates the actions to be followed in this regard. Monitoring, auditing, and reporting needs to be conducted until mine closure has been approved by the DMRE and the closing certificate obtained.

Table 9: Monitoring, auditing and reporting requirements

MONITORING, AUDITING AND REPORTING REQUIREMENTS			
AUDIT	**RESPONSIBLE PERSON**	**FREQUENCY OF AUDIT**	**CLOSE OUT APPROACH**
LEGISLATED AUDITING AND REPORTING			
Environmental Auditing	**Internal Review**		
	Site manager to ensure compliance with Environmental Management Programme and Closure Plan.	Daily compliance monitoring.	Any non-conformance must immediately be addressed by site management and weekly reported on.
	External Auditing		
	External Environmental Consultant	Annual auditing and reporting to the DMRE.	Depending on the significance of the findings, site management has a maximum of four weeks to address and close out auditing results.
Financial Provision Review	Financial Provision Review	Annual review of the financial provision, and reporting of the findings to the DMRE.	Should the review of the financial provision indicate a shortfall the holder of the permit would increase the financial provision to meet the audited financial provision within 90 days from the date of the signature.
MONITORING			
Dust Monitoring	Site Management	Daily Dust Monitoring	Site management has a maximum of two weeks to develop and implement a dust management plan should the dust levels increase, and such a plan is required by DMRE or the municipality.
Invader Plant Monitoring	Site Management	Annual Monitoring	Site management has a maximum of two weeks to review and implement the invader plant control plan should Category 1a & b plants in terms of the National Environmental Management: Biodiversity Act, 2004 (Act 15 of 1973) and the Alien and Invasive Species Regulations, 2014 (amended 2016) germinate on-site.
Noise Monitoring	Noise Monitoring Specialist	Quarterly Noise Monitoring	Site management has a maximum of one week to designate additional noise zone where applicable. Hearing protection equipment must always be available to employees.

7.1 SCHEDULE FOR REPORTING REQUIREMENTS

The following table stipulates the reporting requirements and how document updating will be handled:

Table 10: Reporting requirements

REPORTING REQUIREMENTS			
AUDIT	**LEGISLATION**	**REPORTING REQUIREMENTS**	**UPDATE DISCLOSURE**
Environmental Auditing	NEMA; EIA Regulations, 2014 (as amended)	Reporting on the environmental compliance of the mining area will be in accordance with Regulation 34 of the NEMA EIA Regulations, 2014. The environmental audit report will contain the information set out in Appendix 7 of the said Regulation.	The environmental audit report will indicate the ability of the EMPR and Closure Plan to adequately manage the activity. Should the reports not be sufficient, amendment will be proposed.
Financial Provision Review	NEMA Amendment Act, 2014 (Act No 25 of 2014) Financial Provision Regulations, 2015	Reporting on the financial provision for closure of the mining area will be in accordance with Section 24P of the NEMA Amendment Act, 2014 (Act No 25 of 2014) read with the Financial Provision Regulations 2015.	The auditor will report on the adequacy of the financial provision and any adjustments that need to be made to the financial provision.
Health and Safety Auditing	Occupational Health and Safety Act, 1993 Mine Health and Safety Act, 1996	Reporting on the health and safety compliance of the mining area will be in accordance with the Mine Health and Safety Act, 1996.	The safety manager will annually update the Code of Practices applicable to the site.

8. ENVIRONMENTAL RISK ASSESSMENT REPORT

The objective of the environmental risk assessment report is to:

a) ensure timeous risk reduction through appropriate interventions;
b) identify and quantify the potential latent environmental risks related to post closure;
c) detail the approach to managing the risks;
d) quantity the potential liabilities associated with the management of the risks; and
e) outline monitoring, auditing, and reporting requirements.
(Financial Provision Regulations, 2015 Appendix 4)

8.1 ASSESSMENT PROCESS USED TO IDENTIFY AND QUANTIFY LATENT RISKS

8.1.1 Methodology

The methodology for the assessment of the potential latent risks entailed the use of the following:

DEFINITIONS AND CONCEPTS

<u>Environmental significance:</u>

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:

- Environmental significance is a value judgement
- The degree of environmental significance depends on the nature of the risk
- 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 risk magnitude and risk significance. Risk magnitude is the measurable change (i.e. intensity, duration, and likelihood). Risk significance is the value placed on the change by different affected parties (i.e. level of acceptability)

The concept of risk has two dimensions, namely the consequence of an event or set of circumstances, and the likelihood of 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 outcome of an event or situation OR it is the result, on the environment, of an event.

Likelihood:

A qualitative term covering both probability and frequency.

Frequency:

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

Probability:

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

Environment:

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

Methodology to be used:

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

Environmental Significance = Overall Consequence x Overall Likelihood

Determination of Overall Consequence:

Consequence analysis is a mixture of quantitative and qualitative information, and the outcome can be positive or negative. Several factors can be used to determine consequence. For 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 affect the biophysical and socio-economic environment.

The following table will be used to obtain an overall rating for severity, taking into consideration the various criteria.

Table 11: Monitoring Programmes

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

Determination of Duration

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

Table 12: Rating of duration used in the assessment of potential latent risks

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

Determination of Extent/Spatial Scale

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

Table 13: Rating of extent / spatial scale used in the assessment of potential latent risks

Rating	Description
1	Immediate, fully contained area
2	Surrounding area
3	Within Business Unit area of responsibility
4	Within the farm/neighboring farm area
5	Regional, National, International

Determination of Overall Consequence

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

Table 14: Example of calculating overall consequence in the assessment of potential latent risks

Consequence	Rating
Severity	Example 4
Duration	Example 2

Consequence	Rating
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 and in tables 6 and 7.

Determination of Frequency

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

Table 15: Rating of frequency used in the assessment of potential latent risks

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

Determination of Probability

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

Table 16: Rating of probability used in the assessment of potential latent risks

Rating	Description
1	Almost never / almost impossible
2	Very seldom / highly unlikely
3	Infrequent / unlikely / seldom
4	Often / regularly / likely / possible

Rating	Description
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 17: Example of calculating overall likelihood in the assessment of potential latent risks

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

Determination of Overall Environmental Significance:

The multiplication of overall consequence with overall likelihood will provide the significance of the risk, which is a number that will then fall into a range of **insignificant risk, uncertain risk,** or **significant risk**, as shown in the table below.

Table 18: Determination of overall significance in the assessment of potential latent risks

Significance or Risk	Insignificant risk (cc)	Uncertain risk (bb)	Potential significant risk (aa)
Overall Consequence X Overall Likelihood	1 - 4.9	5 - 9.9	10 – 19.9

Qualitative description or magnitude of Environmental Significance

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

Table 19: Description of environmental significance and related action required in the assessment of potential latent risks

Significance	An insignificant risk (cc)	A uncertain risk (bb)	A potential significant risk (aa)
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 substantial in relation to other impacts. Pose a risk to the company. Unacceptable
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	Improve management measures to reduce risk.

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

A potential Risk (aa) — Risks of a substantial order. Mitigation and / or remedial activity would be feasible but difficult, expensive, time-consuming or some combination of these.

An uncertain risk (bb) — Risk would be negligible. Almost no mitigation and or remedial activity would be needed, and any minor steps, which might be needed, would be easy, cheap, and simple.

An insignificant risk (cc) — There would be very small to no risk.

8.1.2 Description of Latent Risks

At this stage, no latent risks that will potentially arise during closure phase of the mining area were identified.

8.1.3 Results and Finding of Risk Assessment

Not applicable as no latent risks were identified.

8.1.4 Changes to the Risk Assessment Results

N/A

8.2 MANAGEMENT ACTIVITIES

No additional management activities are necessary as no latent risks were identified.

8.3 COST ESTIMATE

Not applicable as no latent risks were identified.

8.4 MONITORING, AUDITING AND REPORTING REQUIREMENTS

By reason of the fact that no latent risks regarding the management of the mine were identified, no additional monitoring, auditing or reporting requirements are required at this stage.

9. CONCLUSION

This Closure Plan needs to be followed together with the EMPR and its amendments when it is decided that the end of mining has been reached. This document gives the necessary information when planning the rehabilitation of the mine together with the cost associated with the rehabilitation.

Mulilo Newcastle Wind Power (Pty) Ltd commits itself to providing all the necessary resources to ensure that the rehabilitation of the mine is done in such a way that will be acceptable to all parties involved.

10. SIGNATURE OF AUTHOR

NAME	SIGNATURE	DATE
Christine Fouché		21 February 2025

11. UNDERTAKING BY PERMIT HOLDER

I, ……., the undersigned and duly authorised thereto by ..... ……. that Mulilo Newcastle Wind Power (Pty) Ltd will comply with the provisions of the MPRDA and its Regulations as set out in Government Gazette no. 26275 (23 April 2004), as well as NEMA.

I have studied and understand the contents of this document and duly undertake to adhere to the conditions as set out therein, unless specifically or otherwise agreed to in writing.

Signed at …….. on this ……day of ……2025……

FINAL DOCUMENT TO BE SIGNED

_____

Name:

Designation:

12. REFERENCES

- Chamber of Mines of South Africa, 1981. Guidelines for the rehabilitation of land disturbed by surface product mining in South Africa, Johannesburg
- Department of Water Affairs and Forestry, 2003. Draft: A practical procedure for the identification and delineation of wetlands andarian areas, Pretoria
- Department of Environmental Affairs and Tourism: Integrated Environmental Management Information Series: Impacts Significance
- Department of Water Affairs and Forestry (DWAF) (2007b) Best Practice Guideline A4: Pollution control dams. The Government Printer, Pretoria