

SUMMARY OF THE PROPOSED MINING OPERATION REGARDING AN APPLICATION FOR A MINING PERMIT ON A PORTION OF THE FARM WILDEBEEST KUIL 69, DISTRICT OF KIMBERLEY, PROVINCE OF NORTHERN CAPE. REFERENCE: NC 30/5/1/3/2/10959 MP

1. List of activities, scale and extent of activities applied for

All mining related activities for the recovering of diamonds by means of trenching:

NAME OF ACTIVITY	ARIAL EXTENT OF THE ACTIVITY HA OR M²	APPLICABLE LISTING NOTICE
Total Application	± 5 ha	
Mining	< 4 ha	NEMA 2017, GNR 327, Listed 1, Activity 27: The clearance of an area of 1 hectare or more, but less than 20 ha of indigenous vegetation ...
Excavations	< 3 ha	NEMA GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ... NEMA GNR 983, Listed 1, Activity 27: The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation ...
Topsoil and Overburden	< 0.2 ha	NEMA GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ... NEMA 2017, GNR 983, Listed 1, Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of Section 43 of the MPRDA ...
Ore dumps	< 0.30 ha	NEMA GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ...

		<p>NEMWA 2015, GNR 633, Category A, Activity 15: The continuous establishment and reclamation of temporary stockpiles resulting from activities which require a ... Mine Permit ...</p> <p>NEMA 2017, GNR 983, Listed 1, Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of Section 43 of the MPRDA ...</p>
Waste dumps	< 0.17 ha	<p>NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ...</p> <p>NEMWA 2014, GNR 449, Category B, Activity 13: Inert waste ... (c) discarded soil, stones ...</p> <p>NEMA 2017, GNR 983, Listed 1, Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of Section 43 of the MPRDA ...</p>
Stockpiles	< 0.3 ha	<p>NEMA GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ...</p> <p>NEMWA 2015, GNR 633, Category A, Activity 15: The continuous establishment and reclamation of temporary stockpiles resulting from activities which require a ... Mine Permit ...</p> <p>NEMA 2017, GNR 983, Listed 1, Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of Section 43 of the MPRDA ...</p>

Mine Related infrastructure	0.8499 ha	
Office site	0.0025 ha	<p>NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ...</p> <p>NEMA 2017, GNR 983, Listed 1, Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of Section 43 of the MPRDA ...</p>
Processing plant	0.5 ha	<p>NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ...</p> <p>NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (b) the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing ...</p> <p>NEMWA 2014, GNR 449, Category B, Activity 11: Building and demolition waste ... (e) other discarded building and demolition waste</p> <p>NEMA 2017, GNR 983, Listed 1, Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of Section 43 of the MPRDA ...</p>
Ablution facility	0.0008 ha	<p>NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ...</p>

Vehicle parking	0.0358 ha	
Parking lot Wash bay Parts storeroom Scrap yard	0.02 ha 0.006 ha 0.0048 ha 0.005 ha	<p>NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ...</p> <p>NEMWA 2014, GNR 449, Category A, Activity 12: Oil wastes and wastes of liquid fuels ... (a) waste hydraulic oils ... (b) waste engine, gear and lubricating oils ... (d) oil/water separator contents</p> <p>NEMWA 2014, GNR 449, Category B, Activity 13: Inert waste ... (a) discarded concrete ...</p> <p>NEMA 2017, GNR 983, Listed 1, Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of Section 43 of the MPRDA ...</p>
Temporary workshop facility	0.005 ha	<p>NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ...</p> <p>NEMWA 2014, GNR 449, Category A, Activity 20: Oil wastes and wastes of liquid fuels ... (a) waste hydraulic oils ... (b) waste engine, gear and lubricating oils ... (d) oil/water separator contents ...</p> <p>NEMWA 2014, GNR 449, Category B, Activity 13: Inert waste ... (a) discarded concrete ...</p> <p>NEMA 2017, GNR 983, Listed 1 Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of Section 43 of the MPRDA ...</p>

Chemical and hydrocarbon fluid storage	0.0025 ha	<p>NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ...</p> <p>NEMWA 2014, GNR 449, Category B, Activity 13: Inert waste ... (a) discarded concrete ...</p> <p>NEMWA 2014, GNR 449, Category A, Activity 12: Oil wastes and wastes of liquid fuels ... (a) waste engine, gear and lubricating oils ... (d) oil/water separator contents</p> <p>NEMWA 2017, GNR 983, Listed 1, Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of section 43 of the MPRDA ...</p>
Diesel storage	0.0025 ha	<p>NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ...</p> <p>NEMWA 2014, GNR 449, Category A, Activity 12: Oil wastes and wastes of liquid fuels ... (d) oil/water separator contents</p> <p>NEMWA 2014, GNR 449, Category B, Activity 13: Inert waste ... (a) discarded concrete ...</p> <p>NEMA 2017. GNR 983, Listed 1, Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of Section 43 of the MPRDA ...</p>

Domestic waste facility	0.0008 ha	NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ... NEMWA 2014, GNR 449, Category B, Activity 12: Domestic waste ... (b) municipal waste
Access and hauling roads	0.3 ha	NEMA 2017, GNR 983, Listed 1, Activity 21: Any activity including the operation of that activity which requires a mining permit ... (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ... NEMA 2017, GNR 983, Listed 1, Activity 22: The decommissioning of any activity ... (i) a closure certificate in terms of Section 43 of the MPRDA ...

	Activity total
	Grouped activity
	Information unknown / Cannot be determined

2. Typical impacts of activities

- Vegetation loss – a total area of < 40 000 m² will be cleared for mining related structures (excavations, topsoil, overburden, ore dumps, waste dump and stock piles) and ± 8 499 m² for plant, and office site establishment. The impact can be regarded as medium to low, with minimum long term effects. If rehabilitation of these areas is done correctly adequate recovery of the environment is possible.
- Noise disturbance – during excavation, hauling and mineral processing activities is noise generated by the machinery. Again the noise will be much localized and should have no impact on the surrounding environment.
- Air quality loss – dust will be generated during the excavating and hauling activities. The dust generated may have an impact on the air quality, but with localized effects and should not have an effect on the surrounding environment. For this the impact can be regarded as low.

- Soil pollution – chemical soil pollution is always a possibility during mechanical mining operations. Working machinery and storage facilities bears a risk for chemical spillage and the impact thereof may be very severe.
- Soil compaction – heavy vehicles driving off-road bears a great risk to the trampling of vegetation and the compaction of the soil. The plant site area will also become compacted during the duration of the mine. If not rehabilitated vegetation re-growth is unforeseen and poses a medium risk to the environment.
- Littering pollution – littering during the mining activities can happen and may have a low to medium impact on the environment depending on the type of littering and the remediation thereof.
- Water pollution – chemical contaminated water from the storage facilities bears a risk to the environment. This impact should always be regarded as high and proper mitigation and/or remediation measures should be in place.

3. Duration of each activity

All of the listed activities will be occurring concurrently and the time frame applied for at the Department of Mineral Resources is 2 years which is the duration of the permit.

4. Details regarding intended operation

A total approximate area of 3 hectares will be excavated to remove all possible Gypsum over a period of 2 years as applied for. The method of mining to be applied is opencast bench mining.

In the process of mining the topsoil and overburden be removed and stored separately for final rehabilitation purposes and the mineral material excavated is stored for processing. During the processing, the ore material is screened to firstly removal all possible waste materials from the commodity and then size screened. The screened commodity obtained will be crushed to the preferred size (-60 to +40 mm) and re-screened. The screened commodity is further transported over a conveyor belt to remove excess moisture from the ore with a Rotary dryer. The final product is stockpiled and sold to the local and international market to obtain market values for further feasibility studies.

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Rotary dryers work by tumbling material in a rotating drum in the presence of hot air. The drum is positioned at a slight horizontal slope to allow gravity to assist in moving the material

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During the rehabilitation process continuous backfilling will occur thill the entire area is backfilled and awaiting final rehabilitation. Once the bulk sampling phase is completed the excavation will be finalized by the sloping of the backfilled excavation and the overburden and topsoil spread in their respective manner. A maintenance plan will be executed to ensure the successful re-growth of indigenous plant species.

Rehabilitation is planned to occur in the following manner:

- All areas mined will be backfilled as part of the mining operation, then covered with the initial topsoil removed as rehabilitation material to encourage plant growth as final part of rehabilitation
- All haul roads will be ripped and rehabilitated.
- The rehabilitated area will be continuously inspected against invader plant species and to monitor the indigenous vegetation regrowth

During the decommissioning of the project the following will be done to ensure a successful closure

- All mining and mining related infrastructure will be removed from the area and the compacted ground ripped and rehabilitated.
- Mine roads will also be ripped and rehabilitated.
- All rehabilitated areas will be monitored and regularly inspected against invader species as well as monitoring the indigenous vegetation regrowth rate.

The end-land use after final rehabilitation would probably be the continuation of farming activities, but is dependable on the decision of the land owner.