

KIMCRUSH (Pty) Ltd

**BACKGROUND INFORMATION DOCUMENT FOR A
PUBLIC PARTICIPATION PROCESS**

**SUBMITTED FOR AN APPLICATION
FOR A MINING RIGHT
IN TERMS OF SECTION 39 AND OF REGULATIONS 50 AND 51 OF THE
MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002,
(ACT NO. 28 OF 2002) (the Act)**

(NC) 30/5/1/1/3/2/1/10118 MR

**A PORTION OF PORTION 1 AND A PORTION OF PORTION 351 OF FARM VOORUITZICHT NO
81 WITHIN THE ADMINISTRATIVE DISTRICT OF KIMBERLEY, NORTHERN CAPE PROVINCE**

Compiled by Ms. R.H. Oosthuizen for Kimcrush (Pty) Ltd

Wadala Mining and Consulting (Pty) Ltd

BACKGROUND INFORMATION DOCUMENT

1. INTRODUCTION

We must inform you that Kimcrush (Pty) Ltd (“The applicant”) has been directed in terms of section 22 of the Act, to implement the processes prescribed by the National Environmental Management Act, as amended and submit a Scoping Report within 44 days from the date of application of the Environmental Authorization and submit the relevant Environmental Impact and Environmental Management Programme reports as required in terms of the National Environmental Act, (as amended) within 106 days from the date of acceptance of the scoping report, as prescribed.

The Scoping Report and Environmental Impact and Environmental Management Programme reports must be submitted to the Regional Manager, Department of Mineral Resources (“DMR”) situated at 65 Phakamile Majiba Street, Kimberley, 8301 with contact number 053-8071700.

2. PURPOSE OF THE BACKGROUND INFORMATION DOCUMENT

The purpose of this document is:

- To notify potential stakeholders of the mining right application and submission of the related Environmental documents to the Department of Mineral Resources Reference (NC) 30/5/1/1/3/2/1/10118 MR
- Provide background information regarding the proposed mining right application and relevant Environmental Management Programme for Kimcrush (Pty) Ltd.
- Invite potential stakeholders to register themselves as interested and affected parties and to raise issues of importance, share their input, comments and or concerns to inform the updated and revised Environmental Management Programme.
- To provide information on the environmental work that had been done to meet requirements of Environmental Legislation.
- To inform the Affected and Interested Parties of the requirements in terms of all Governing Legislation.

Kimcrush (Pty) Ltd seeks to gather comments, suggestions, issues and concerns from all stakeholders.

3. A BRIEF OVERVIEW

Kimcrush (Pty) Ltd (“The applicant”) has applied for a Mining Right on the above mentioned farm situated in the Magisterial District of Kimberley, Northern Cape Province to mine for Aggregate (RM); Sand General (QY); Sand Manufactured from Hardrock (QH); Stone Aggregate;Gravel (St); Clay General (Cy); Shale/Brickclay (CS).

The Kimcrush quarry is located approximately 5 km West of Kimberley on the R64 road to Griekwastad in the Northern Cape Province. The mining activities will involve the blasting and removal of dolerite with heavy earthmoving equipment, crushed to marketable sizes which will be sold on the open market.

3.1 Proposed activity description

Currently the process route comprises stripping of overburden of red soil and weathered dolerite to access the competent dolerite. The weathered dolerite is hauled to a screen to screen the gravel to size Oversize weathered dolerite is crushed and screened. Screened gravel is stockpiled and sold to customers who either collect from site or it is delivered to the customer worksite.

After stripping the competent dolerite is drilled and blasted by blasting contractors. After blasting the dolerite is loaded and hauled to the processing plant where the dolerite is crushed to various sizes of aggregate. The aggregate generated are ballast, crusher sand, crusher dust, 19mm, 13mm, 9.5mm and 6.7mm stone.

The equipment used is excavators, articulated dump trucks, tipper trucks, jaw crusher, cone crusher VSI crusher, conveyer belt systems and generators.

Mining activities will primarily make use of existing roads created by previous activities, but additional roads will most likely be created.

3.2 Rehabilitation

The area has been prospected with bulk sampling in the past. The Kimcrush Dolerite quarry is located approximately 5 kilometres (Km) west of Kimberley in the Northern Cape Province of South Africa. The site is accessible from Johannesburg 478km to the north and Bloemfontein, 165 km to the east via modern tarred access roads and services, with gravel roads providing internal access to all portions of the project area. The Kimberley Airport is located about 10km to the south of Kimberley.

Mining operations that will take place will be rehabilitated as far as practically possible in order for the land to revert back to grazing potential.

The open mining pit will never be backfilled to its original state as most of the material will be crushed and sold as aggregate. The open pits will be benched and made safe as per prescribed regulations and all risk for pollution will be mitigated.

The study area is situated next to the Kimberley Municipal Dumping site and is not currently utilised for any specific purpose as it does not lend itself to be used for grazing by livestock due to the waste carried in and around the dump. Access to the farm is gained from an existing gravel road.

The area applied for represents 176.3574 ha of the farm Vooruitzicht and the main mining focus area will be on the area next to the municipal dumps on the farm.

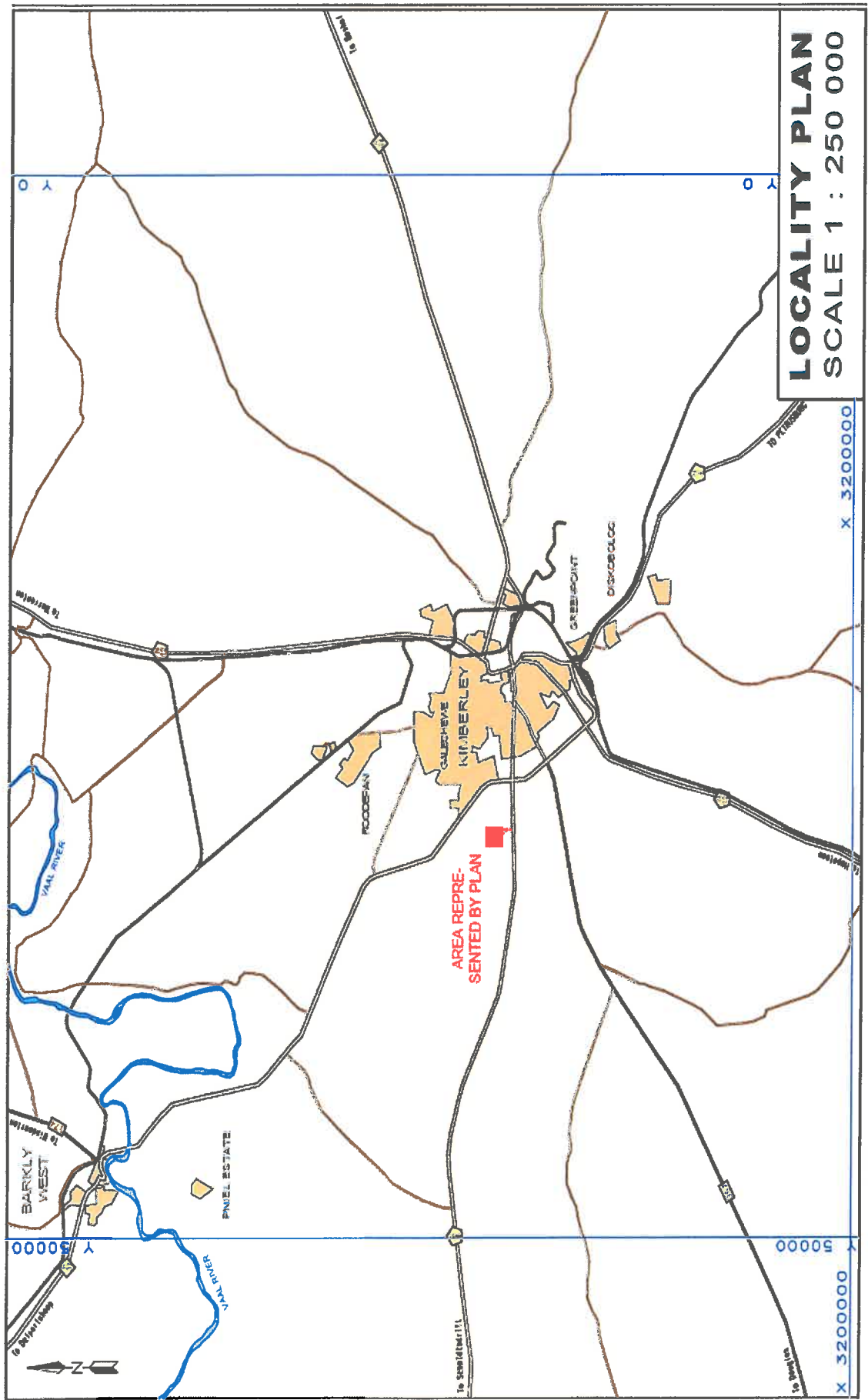


Figure 1: The locality of the proposed mining right area indicated in red.

3.3 Foreseen Environmental Impacts

3.3.1 Air quality deterioration

Source of the impact

Sources of atmospheric emission associated with the mining operation are likely to include fugitive dust from materials handling operations, wind erosion of stockpiles, and vehicle entrainment of dust roads.

Description of the impact

During the construction and operation of the mine dust can be generated through the use of access roads and haul roads. Also blasting will have a negative effect on Air Quality. Air pollution through vehicle entrainment is expected to be negligible due to the small scale of the project and dust suppression measures that will be implemented by the mine. Air pollution from exhaust fumes.

3.3.2 Soil pollution

Source of the impact

Spillage of hazardous material; runoff.

Description of the impact

During the construction and operation of the mine, there is a possibility that equipment might leak oil, thus causing surface spillages. The hydrocarbon soil contamination will render the soil unusable unless they are decontaminated. The storage of fuels on site might have an impact on soil if the tanks that are available on site are not properly monitored and maintained to avoid leakages. Then there is the potential that contaminated soil can be carried through runoff to contaminate water resources and soil stockpiled for rehabilitation. Soil pollution is therefore possible, but through mitigation it can be minimised. The impact will have minimal severity and slight effect on extent.

3.3.3 Loss of soil fertility

Source of the impact

During the removal of topsoil; stockpiling.

Description of the impact

Improper stockpiling and soil compaction can result in soil sterilisation. Leaching can also occur, resulting in the loss of nutrients.

3.3.4 Soil erosion

Source of the impact

Construction of infrastructure; topsoil removal; potential runoff.

Description of the impact

The construction of infrastructure and various facilities in the mining area can result in loss of soil due to erosion. Vegetation will be stripped in preparation for placement of infrastructure and excavations, and therefore the areas will be bare and susceptible to erosion.

The topsoil that is stripped and piled on surrounding areas can be eroded by wind and rain. The soil will be carried away during runoff. The cleared areas will be rehabilitated, but full restoration of soils might only occur over a number of years, subsequent to the re-establishment of vegetation. Therefore the impact will have a moderate severity, throughout the duration of the mine.

3.3.5 Broad-scale ecological processes

Source of the impact

The construction of roads, plant site, as well as other necessary infrastructure; and the clearing of vegetation for mining.

Description of the impact

Transformation of intact habitat on a cumulative basis would contribute to the fragmentation of the landscape and would potentially disrupt the connectivity of the landscape for fauna and flora and impair their ability to respond to environmental fluctuations. The impact will have minimal severity and slight effect on extent.

3.3.6 Changes to surface topography

Source of the impact

Development of infrastructure; and residue deposits, excavations and blasting.

Description of the impact

The infrastructure and excavation as well as waste rock deposits will alter the topography by adding features to the landscape. Topsoil removal, excavations and blasting will unearth the natural topography. The impact will be definite.

3.3.7 Visual impacts

Source of the impact

The construction of Mine infrastructure, excavations, mine residue deposits, waste rock stockpiles and dust.

Description of the impact

Visual impact of the mine infrastructure, excavations, mine residue deposits, and waste rock stockpile; visibility of dust.

3.3.8 Traffic

Source of the impact

The amount of vehicles will increase with the mine in the area.

Description of the impact

Potential negative impacts on traffic safety and deterioration of the existing road networks.

3.3.9 Heritage resources

Source of the impact

The mining operations can mine through or destroy sites of cultural and heritage importance

Description of the impact

The deterioration or destruction of sites of cultural and heritage importance

3.3.10 Socio-economic

Source of the impact

The mine can create various job opportunities for local people. The mine can also destroy the land capability and use while mining.

Description of the impact

Loss of land potential; influx of workers to the area increases health risks and loitering (resulting in lack of security and safety); negative impact of employment loss during mine closure.

3.3.11 Interested and affected parties

Source of the impact

The setting up of an open cast Aggregate mine next to the city of Kimberley.

Description of the impact

Loss of trust and a good standing relationship between the IAPs and the mining company.

3.3.12 Land capability

Source of the impact

Aggregate open cast mining.

Description of the impact

Loss of land capability through topsoil removal, disturbances and loss of soil fertility.

3.3.13 Land use

Source of the impact

Aggregate opencast mining.

Description of the impact

Loss of land use due to poor placement of surface infrastructure and ineffective rehabilitation.

3.3.14 Ground water

Source of the impact

Potential chemical spills.

Yellow fleet servicing and tyre replacement workshop – Potential diesel and lubricant spills.

Operating of the Wash bay as well as silt trap and oil separator – Potential contaminated water and chemical spills.

Yellow fleet parking area – Potential diesel and lubricant spills.

Septic tank and soak-away systems – Potential infiltration of contaminants through substrata.

Description of the impact

Possible Pollution of underground water sources. Construction of measures to prevent seepage into the groundwater by biological and engineering means. Implementation of the necessary management programs to ensure the integrity of ground water resources.

3.3.15 Surface water

Source of the impact

Potential chemical spills.

Yellow fleet servicing and tyre replacement workshop – Potential diesel and lubricant spills.

Operating of the Wash bay as well as silt trap and oil separator – Potential contaminated water and chemical spills.

Yellow fleet parking area – Potential diesel and lubricant spills.

Description of the impact

During the construction and operation of the mine, there is a possibility that equipment might leak oil, thus causing surface spillages. The storage of fuels on site might have an impact on surface water if the tanks that are available on site are not properly monitored and maintained to avoid leakages. Then there is the potential that contaminated soil can be carried through runoff to contaminate water resources and soil stockpiled for rehabilitation. Surface water pollution is therefore possible, but through mitigation it can be minimised. The impact will have minimal severity and slight effect on extent.

3.3.16 Disturbance, displacement and killing of fauna

Source of the impact

Vegetation clearing; increase in noise and vibration; human and vehicular movement on site resulting from mining activities.

Description of the impact

The transformation of natural habitats to mining and associated infrastructure will result in the loss of habitat affected individual species, and ecological processes. In turn this will result in the displacement of faunal species dependent upon such habitat. Increased noise and vibration due to mining activities will disturb and possibly displace birds and other wildlife. Fast moving vehicles take a heavy toll in the form of road kills of small mammals, birds, reptiles, amphibians and a large number of invertebrates.

3.3.17 Fauna Loss, damage and fragmentation of natural habitats

Source of the impact

Clearance of vegetation; mining activities.

Description of the impact

The construction of the mine and associated infrastructure will result in the loss of connectivity and fragmentation of natural habitat. Fragmentation of habitat will lead to the loss of migration corridors, in turn resulting in degeneration of the affected population's genetic make-up. This results in a subsequent loss of genetic variability between meta-populations occurring within the study site. Pockets of fragmented natural habitats hinder the growth and development of populations.

3.3.18 Encouragement of bush encroachment

Source of the impact

Clearing of vegetation; disturbances through mining activities.

Description of the impact

While general clearing of the area and mining activities destroy natural vegetation, bush encroaching plants can increase due to their opportunistic nature in disturbed areas. If encroaching plants establish in disturbed areas, it may the lower potential for future land use and decrease biodiversity. With proper mitigation, the impacts can be substantially reduced.

3.3.19 Proliferation of alien vegetation

Source of the impact

Clearing of vegetation; mining activities.

Description of the impact

While general clearing of the area and mining activities destroy natural vegetation, invasive plants can increase due to their opportunistic nature in disturbed areas. If invasive plants establish in disturbed areas, it may cause an impact beyond the boundaries of the mining site. These alien invasive species are thus a threat to surrounding natural vegetation and can result in the decrease of biodiversity and ecological value of the area. Therefore, if alien invasive species are not controlled and managed, their propagation into new areas could have a high impact on the surrounding natural vegetation in the long term. With proper mitigation, the impacts can be substantially reduced.

3.3.20 Loss of flora with conservation concern

Source of the impact

Removal of listed or protected plant species; during the construction of roads, plant site, as well as other necessary infrastructure; the placement of stockpiles; and the clearing of vegetation for mining.

Description of the impact

It is possible that protected species will be destroyed during the mining operation. Furthermore, it is possible that provincially protected species and other species of conservation concern will be destroyed.

3.3.21 Loss of, and disturbance to indigenous vegetation

Source of the impact

The construction of roads, plant site, as well as other necessary infrastructure; the placement of stockpiles; and the clearing of vegetation for mining, materials storage and topsoil stockpiles; vehicular movement.

Description of the impact

Construction and mining activities on site will reduce the natural habitat for ecological systems to continue their operation. It is not expected that the areas of high ecological function will rehabilitate following disturbance events. Vehicle traffic generates lots of dust which can reduce the growth success and seed dispersal of many small plant species.

3.3.22 Noise and vibration:

Source of the impact

Noise generated by the vehicles and mining equipment and occasional blasting.

Description of the impact

Opencast aggregate mining which increase continuous noise levels; the disruption of current ambient noise levels; and the disruption of sensitive receptors by means of increased noise and vibration. This is particularly relevant to IAPs that reside in close proximity to the mining site and excavation location.

3.3.23 Land use:

Source of the impact

Opencast Aggregate mining

Description of the impact

Loss of economic function of disturbed area during mining activities and potential loss of land capability post mining (limited to the mine pit area and processing plant).

3.4 Listed Activities applied for in terms of the National Environmental Management Act, 1998 Act 107 of 1998 (NEMA)

Table 1: Listed and Specified Activities

NAME OF ACTIVITY (E.g. for prospecting – drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc. ... etc. ... etc. E.g. for mining – excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc. ... etc. ... etc.)	Aerial extent of the Activity Ha or m²	LISTED ACTIVITY (Mark with an X where applicable or affected).	APPLICABLE LISTING NOTICE (GNR 544, GNR 545 or GNR 546)	WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)
<ul style="list-style-type: none"> ➤ Mining Area (Pit): The mining process will be initiated by drilling of blast holes. These holes will then be blasted where after the ore will be loaded from the open excavations and hauled to the processing plant. ➤ Blasting: The mine will blast blocks with a typical dimension of 25meter x 50 meter x 10 meter. ➤ Explosive Magazine: The mine will need two magazines to store the different explosive 	<p>Provision is made for a maximum footprint (at full production) of 200000m² or 20 hectares of open excavations at any one time.</p> <p>The size of the blasts will be determined by the practical blast block design and the production rate required from the mine.</p> <p>50m x 40m = 2000m²</p>	<p>X</p>	<p>GNR984 : Activity 15: "The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for- (i) The undertaking of a linear activity; or (ii) Maintenance purposes undertaken in accordance with a maintenance management plan." GNR984:</p>	

<p>products namely</p> <ul style="list-style-type: none"> • 200 case detonator and accessories magazine (3 meter x 6 meter) • 200 case explosives magazine (3 meter x 6 meter) <p>The magazine area will be fenced to comply with the guidelines set out by the Chief inspector of Explosives (CIE). The fence must be further than 10 meter away from the magazine.</p> <p>The CIE determines the safety radius necessary, but the typical approved radiuses have been</p> <ul style="list-style-type: none"> • 90 meter for the inner radius • 180 for the outer radius <p>No structures are allowed in the area contained by the inner radius and only structures approved by the CIE, will be allowed in the area contained in by the outer radius.</p> <p>➤ Parking Bay: It is anticipated that vegetation will be cleared in this area and superfine material will be used as groundcover.</p>	<p>Inner radius area = $3.14 \times (\text{radius squared}) = 25\,434 \text{ m}^2$</p> <p>Outer radius area = $3.14 \times (\text{radius squared}) = 101\,736 \text{ m}^2$ (10.1736ha)</p> <p>100m x 100m = 1Ha</p>		<p>Activity 17: "Any activity including the operation of that activity which requires a mining right [section 22 of MPRDA], including infrastructure, structures and earthworks, directly related to the extraction of a mineral resource ..."</p> <p>GNR 983: Activity 30: "Any process or activity identified in terms of section 53(1) of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)."</p> <p>GNR 983: Activity 27 "The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for— (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan."</p>	
<p>➤ Processing plant: The processing of aggregate will be</p>	<p>30 000m² Steel, concrete, electric wires</p>	<p>X</p>	<p>GNR984: Activity 15 GNR984:</p>	

through crushers			Activity 17 GNR984: Activity 21: "Any activity including the operation of that activity associated with the primary processing of a mineral resource including winning, reduction, extraction, classifying, concentrating, crushing, screening and washing but excluding the smelting, beneficiation, refining, calcining or gasification of the mineral resource in which case activity 6 in this Notice applies."	
Roads (both access and haulage road on the mine site): Although it is recommended that the operation utilize existing roads as far as possible, it is anticipated that the mining operation will create additional roads, with a width of 15 meter.	±10 000m ²	X	NEMA LN1 (GNR983) Activity 24(ii) The development of haul roads 15m wide with no reserve	
Activity 56(ii) The continuous lengthening (and rehabilitation) of haul roads 15m wide with no reserve.	±10 000m ²	X	NEMA LN1 (GNR983)	
Concrete Bund walls and diesel Depots Fuel Storage facility (Diesel tanks): It is anticipated that the operation will utilize 2 x 10 000 litre diesel tanks. These tanks must be placed in bund walls, with a capacity of 1.5 times the volume of the diesel tanks. A concrete	±20 - 80m ³ Footprint of ±250m ²	X	NEMA LN3 (GNR 985) Activity 10 The development of infrastructure for the storage and handling of dangerous goods (fuel) in	

floor must be established where the re-fuelling will take place.			containers with a combined capacity of between 30 and 80m ³ .	
Activity 15 The continuous establishment and reclamation of temporary stockpiles resulting from activities which require a mining right.	±500m ²	X	NEMWA Category A (GNR 633)	X
Activity 15 The establishment of residue deposits resulting from activities which require a mining right.	To be confirmed by specialist	X	NEMWA: Category B GNR 632: Activity 11: "The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right ..."	X
OTHER ACTIVITIES (Associated infrastructure not considered to be listed activities) Salvage yard (Storage and laydown area) Temporary Workshop Facilities Storage Facilities Ablution Facilities Topsoil Stockpiles Overburden Stockpiles Weighbridge Control room Parkhome offices	No construction material, area to be levelled with a grader and fenced with a gate and access control ±300m ² ±3000m ² ±25m ² ±500m ² ±500m ² 127.27m ² 29.22m ² 60m ² pre-fabricated office blocks on concrete		NOT LISTED	

3.5 Decommissioning phase/ Closure Period:

The decommissioning phase will only commence once all the mining is completed. During decommissioning all erected structures, e.g. ablution facilities, fences on demarcated areas, equipment and access roads on permission of the surface owners will be rehabilitated to their previous state. Although rehabilitation will be not be done concurrently with the mining as the pit will not be backfilled but will be made safe and to prevent any pollution, and re-instatement of roads will be done after the completion of the mining operation.

4 CONCLUSION

It is clear that the destruction of the natural habitat in the mining area is inevitable and that there would be both positive and negative impacts related to the mining activities. The significance of these impacts will however be determined by the success of the mitigation measures that will be implemented by mine management in line with the Approved Environmental Management Programme.



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