

Kimswa Mining (Pty) Ltd
Background Information Document

PUBLIC PARTICIPATION PROCESS

PUBLIC PARTICIPATION PROCESS FOR AN APPLICATION FOR A MINING PERMIT FOR DIAMONDS (ALLUVIAL), DIAMONDS (GENERAL) AND SAND IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002), THE NATIONAL ENVIROMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998); THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS 2014; THE NATIONAL ENVIRONMENTAL MANAGEMENT: WASTE ACT, 2008 (ACT NO. 59 OF 2008) AND THE NATIONAL WATER ACT1998, (ACT 36 OF 1998).

NC30/5/1/3/2/10691MP

A surveyed portion (4.9605ha) of unsurveyed state land in the Vaal River next to farm 352 located in the Barkly West District, Northern Cape Province

Compiled by Ms. R.H. Oosthuizen

Wadala Mining and Consulting (Pty) Ltd

BACKGROUND INFORMATION DOCUMENT

1. INTRODUCTION

We hereby inform you that Kimswa Mining (Pty) Ltd (“The applicant”) has applied for a Mining Permit on “A surveyed portion (4.9605ha) of unsurveyed state land in the Vaal River next to farm 352” situated in the Magisterial District of Barkly West, Northern Cape Province.

The application was submitted to the Regional Manager, Department of Mineral Resources (“DMR”) situated at 65 Phakamile Mabija Street, Kimberley, 8301 with contact number 053-807 1700. The mentioned application was accepted on 26 July 2018 and the prescribed Environmental Impact Assessment and Environmental Management Programme must be submitted on or before 23 December 2018.

2. PURPOSE OF THE BACKGROUND INFORMATION DOCUMENT

The purpose of this document is:

- To notify potential stakeholders of the application for a Mining Permit for Diamonds (Alluvial); Diamonds (General) and Sand which was submitted to the Department of Mineral Resources (DMR) with Reference NC30/5/1/3/2/10691MP.
- Provide background information regarding the proposed Mining Permit application for Kimswa Mining.
- Invite potential stakeholders to register themselves as interested and affected parties and to raise issues of importance, share their input, comments and or concerns which will be incorporated into the Environmental Management Programme.
- To inform the Affected and Interested Parties of the requirements in terms of all Governing Legislation applicable to this process.

Kimswa Mining seeks to gather comments, suggestions, issues and concerns from all stakeholders.

3. A BRIEF OVERVIEW

Kimswa Mining (“The applicant”) has applied for a Mining Permit on the above mentioned survey piece of the Vaal River area situated in the Magisterial District of Barkly West, Northern Cape Province to mine for Diamonds (Alluvial), Diamonds (General) and Sand (General).

The property is located 20km North West of Barkly West on the R31 route to Postmasburg.

3.1 Proposed activity description

The focus will be to mechanically remove the diamondiferous gravels by means of an excavator and front-end loader, loading it onto 40 t trucks and transporting the material (mineral resource) to a Recovery Plant Facility.

The area will be excavated (opencast method) with an excavator up to bedrock, stockpiled next to an open area and loaded onto the trucks by a front end loader. The trucks will transport the gravel via a newly constructed road, which will be constructed to the required safety standard. No provincial roads will be used.

At the processing plant the run of mine tailings will be fed onto a grizzly for the screening out oversize material. The gravel will be processed through a screening and crushing section for delivery to a recovery plant and associated equipment. In terms of the processing it should take place outside the 1:100 year floodline and a processing area will be negotiated with the Department or surface owner. This area will be used for all processing and stockpiling operations with an agreement entered into with the relevant Department or Farm owner).

3.2 Rehabilitation

On completion of the mining operation, the various surfaces, including the access road, the office area, storage areas and the plant site, will finally be rehabilitated as follows: All tailings or other material on the surface will be removed to the original topsoil level where possible. This material will then be backfilled into the open excavations. Any compacted area will then be ripped to a depth of 300mm, where possible, the topsoil or growth medium returned and landscaped.

All infrastructures, equipment, plant, and other items used during the operational period will be removed from the site.

On completion of operations, all buildings, structures or objects on the office site will be dealt with in accordance with regulation 44 of the Minerals and Petroleum Resources Development Act, 2002, which states:

Regulation 44:

1. *When a prospecting right, mining right, retention permit or mining permit lapses, is cancelled or is abandoned or when any prospecting or mining operation comes to an end, the holder of such right or permit may not demolish or remove any building, structure or object-*
 - (a) *which may not be demolished or removed in terms of any other law;*
 - (b) *which has been identified in writing by the Minister for purposes of this section; or*
 - (c) *which is to be retained in terms of an agreement between the holder and the owner or occupier of the land, which agreement has been approved by the Minister in writing.*
2. *The provision of subsection (1) does not apply to bona fide mining equipment, which may be removed.*

○ Rehabilitation of the secured storage areas

On completion of the mining operation, the above areas will be cleared of any remaining contaminated soil which will be placed in acceptable containers and removed with the industrial waste to a recognized disposing facility or by a waste removal company.

All buildings, structures or objects in the secured storage areas shall be dealt with in accordance with regulation 44 of the Minerals and Petroleum Resources Development Act, 2002.

The surface will be ripped or ploughed to a depth of at least 300 mm, where possible, and the topsoil, previously stored adjacent the site, distributed evenly to its original depth over the whole area. The area will then be fertilized if necessary (based on a soil analysis).

The site will be seeded with a vegetation seed mix adapted to reflect the local indigenous flora if necessary.

Any other disturbed areas will be rehabilitated as described under the relevant activities.

○ Mine residue deposits

▪ Disposal facilities

Waste material of all description inclusive of receptacles, scrap, rubble and tyres will 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.

▪ Ongoing seepage, control of rain water.

Monitoring of ground or surface water will take place during the mining phase if so requested by the DWS - Kimberley.

▪ Long term stability and safety

It will be the objective of mine management to ensure the long term stability of all rehabilitated areas including the backfilled excavations. This will be done by the monitoring of all areas until a closure certificate has been issued.

▪ Final rehabilitation in respect of erosion and dust control

Self-sustaining vegetation will result in the control of erosion and dust and no further rehabilitation is planned.

○ Rehabilitation of dangerous excavations

Due to the removal of surface material, excavations could be created that can be classified as dangerous. All available material will be used during backfilling to avoid the existence of dangerous excavations and backfill all excavations.

○ Final rehabilitation of opencast mine-haul ramps and roads and final voids

After rehabilitation has been completed, all roads will be ripped or ploughed, fertilized and seeded, providing the landowner does not want them to remain that

way and with written approval from the Director Mineral Development of the Department of Mineral Resources.

○ Submission of information

Reports on rehabilitation and monitoring will be submitted annually to the Department of Mineral Resources - Kimberley, as described in the NEMA regulations published 20 November 2015, Appendix 3.

○ Maintenance (Aftercare)

Maintenance after closure will mainly concern the regular inspection and monitoring and/or completion of the re-vegetation programme.

The aim of this Environmental Management Plan is for rehabilitation to be stable and self-sufficient, so that the least possible aftercare is required.

The aim with the closure of the mine will be to create an acceptable post-mine environment and land-use. Therefore all agreed commitments will be implemented by Mine Management

○ After-effects following closure

▪ Acid mine drainage

No potential for bad quality leachate or acid mine drainage development exist after mine closure.

▪ Long term impact on ground water.

No after effect on the groundwater yield or quality is expected.

▪ Long-term stability of rehabilitated land

One of the main aims of any rehabilitated ground will be to obtain a self-sustaining and stable end result. As the excavations will be mined onto bedrock these areas will have long term stability.

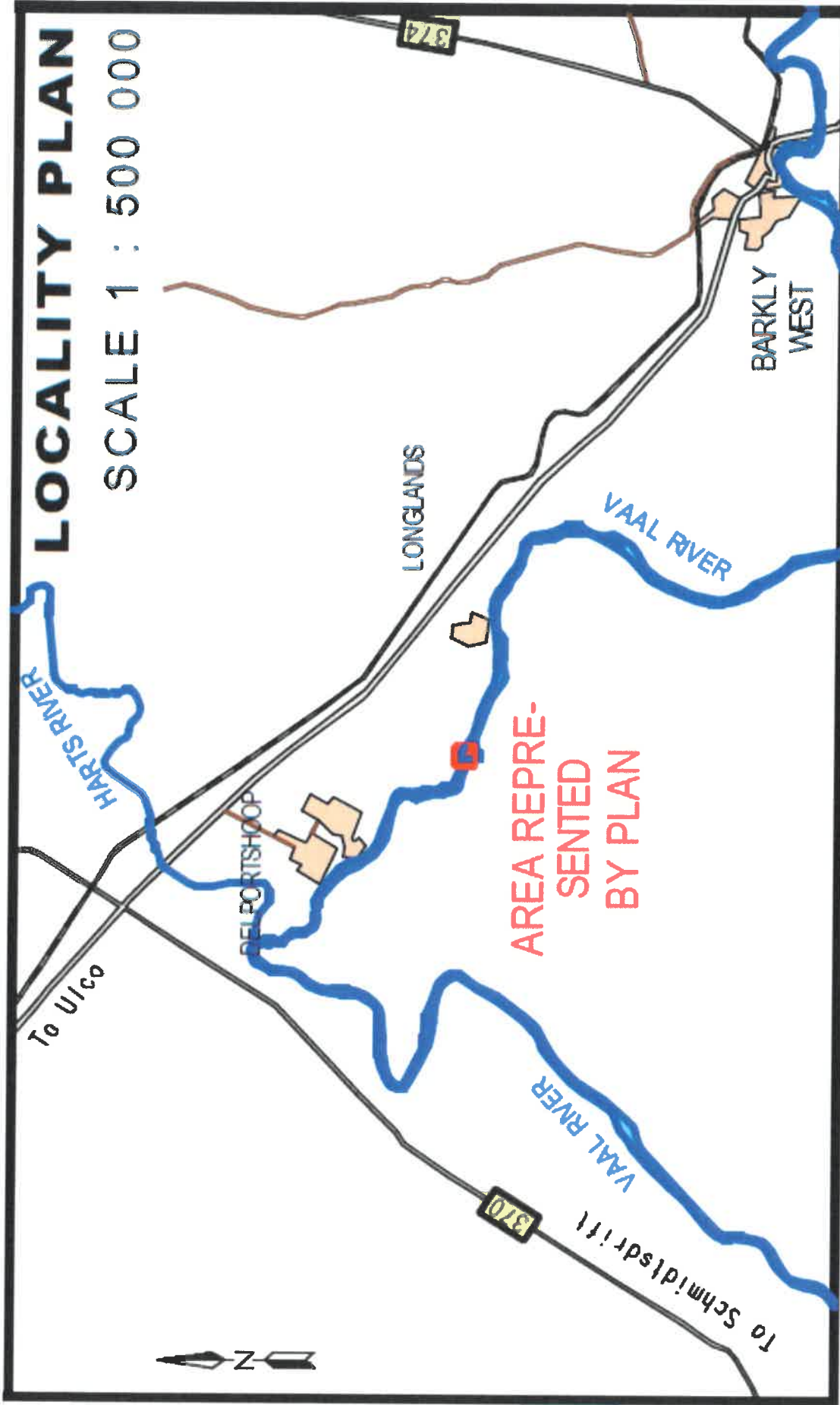


Figure 1. The locality of the proposed Mining Permit area is indicated with a red block. The exact outline of the application area (4.9605ha) is indicated in the surveyed plan below.

KIMSWA MINING (PTY) LTD MINING PERMIT APPLICATION

THE FIGURE A, BZN, IP4, YTT, WRR, UT1, V3M, KK, AA, BB, CC, DD, FR, T, SCS3, SCS2, SCS1, SCS8, SCS7, SCS6, SCS5, SCS4 AND A, REPRESENTS 4.9605ha. SITUATED ON STATES LAND VAAL RIVER ADMINISTRATIVE DISTRICT OF BARKLY WEST, PROVINCE OF THE NORTHERN CAPE.

WITH REGARD TO A MINING PERMIT OF THE PROVISIONS OF SECTION 27 OF THE MINING AND PETROLEUM RESOURCES DEVELOPMENT ACT 2002 (No.28 OF 2002).

WGS 84 DATUM SURVEY SYSTEM WG 25

S c a l e 1 : 7 0 0 0

APPLICANT _____

DATE _____

MINERAL DEVELOPMENT _____

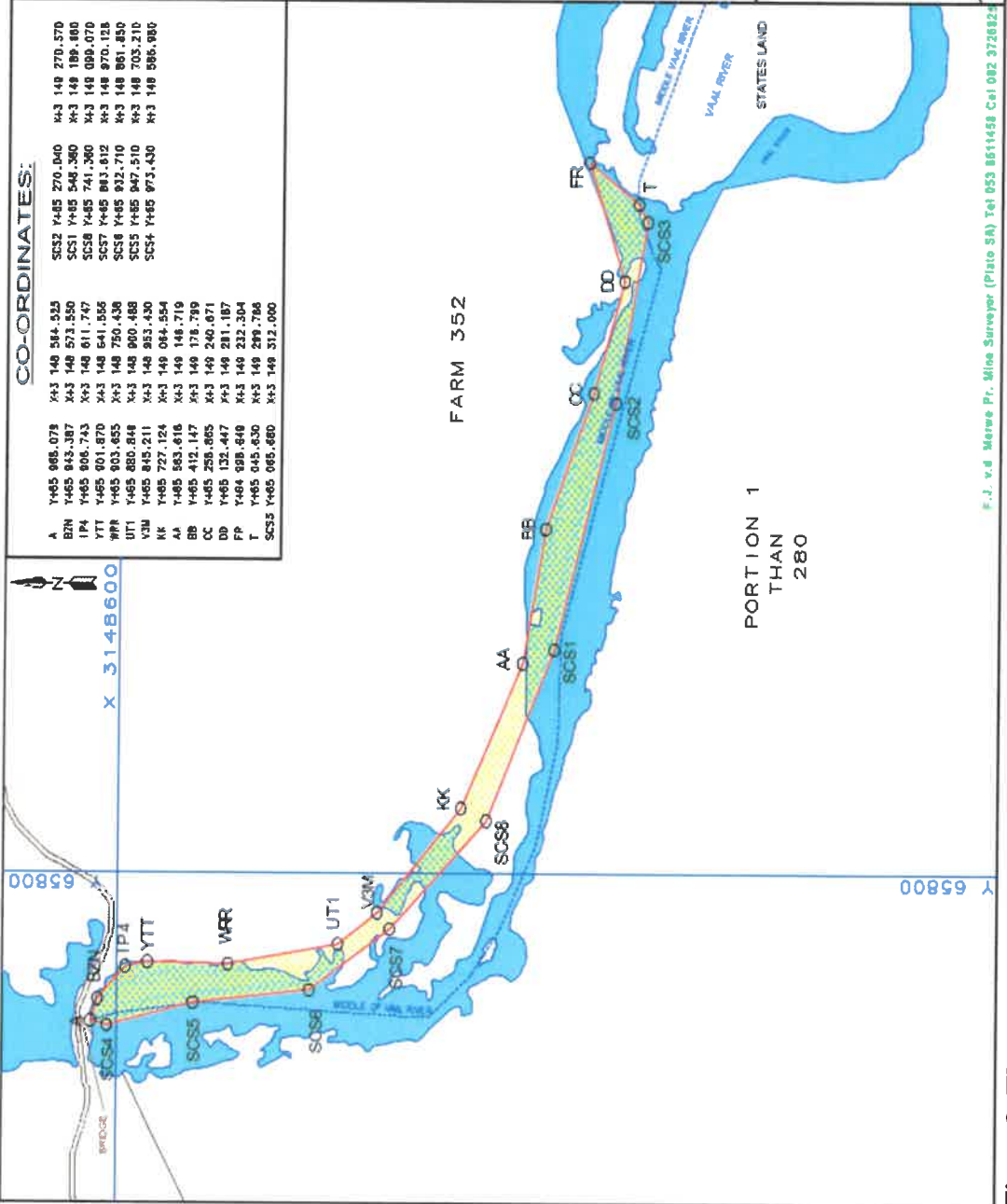
DATE _____

LOCALITY PLAN
SCALE 1 : 500 000



CO-ORDINATES:

A	Y465 868.078	X43 148 584.325	SCS2	Y465 270.040	X43 148 270.570
BZN	Y465 842.387	X43 148 573.550	SCS1	Y465 548.360	X43 148 186.180
IP4	Y465 806.743	X43 148 611.747	SCS8	Y465 741.360	X43 148 098.070
YTT	Y465 901.870	X43 148 641.956	SCS7	Y465 883.612	X43 148 970.128
WRR	Y465 903.655	X43 148 750.438	SCS6	Y465 932.710	X43 148 961.850
UT1	Y465 880.648	X43 148 900.488	SCS5	Y465 947.510	X43 148 705.210
V3M	Y465 845.211	X43 148 953.430	SCS4	Y465 973.430	X43 148 986.986
KK	Y465 727.124	X43 149 064.854			
AA	Y465 563.616	X43 149 146.719			
BB	Y465 412.147	X43 149 178.789			
CC	Y465 258.865	X43 149 240.871			
DD	Y465 132.447	X43 149 281.187			
FR	Y464 928.648	X43 149 232.304			
T	Y465 045.630	X43 149 299.766			
SCS3	Y465 065.680	X43 149 312.000			



F.J. v.d. Merwe Pr. Mine Surveyor (Plato SA) Tel 053 8611458 Cel 082 3726124

Figure2. The surveyed map of the proposed Mining Permit area.

3.3 Foreseen Environmental Impacts

3.3.1 Air quality deterioration

Source of the impact

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

Description of the impact

During the construction and operation of the mining operation dust can be generated through the use of access roads and haul roads. 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 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 stockpiled 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 months, subsequent to the re-establishment of vegetation. Therefore the impact will have a moderate severity, throughout the duration of the mining operation.

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 prospecting.

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. Due to the small size of the operation in the area, this impact should be negligible due to the small scale of the project.

3.3.6 Changes to surface topography

Source of the impact

Development of infrastructure and excavations.

Description of the impact

The infrastructure and residue deposits will alter the topography by adding features to the landscape. Topsoil removal and mining will unearth the natural topography. The impact will be definite if mining is approved and the operation continues.

3.3.7 Visual impacts

Source of the impact

The construction of mining infrastructure, excavations and dust.

Description of the impact

Visual impact of the mining infrastructure, excavations and visibility of dust.

3.3.8 Traffic

Source of the impact

The amount of vehicles will increase with the mining 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 mining operation can create various job opportunities for local people. The mine can also destroy the land capability and land use while mining.

Description of the impact

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

3.3.11 Interested and affected parties

Source of the impact

The setting up of a Mining operation for Diamonds (Alluvial); and Diamonds (General) on "A surveyed portion (5ha) of unsurveyed state land next to farm 352", in the Magisterial District of Barkly West.

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

Diamonds (Alluvial); and Diamonds (General) mining operation.

Description of the impact

Loss of land capability through topsoil removal, disturbances and loss of soil fertility if the mining operation starts.

3.3.13 Land use

Source of the impact

Diamonds (Alluvial); and Diamonds (General) mining operation.

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 if the mining operation continues to mine.

Yellow fleet servicing and tire 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

Breakwaters in the River

Potential chemical spills due to mining operations.

Yellow fleet servicing and tire 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 of the breakwaters in the River there could be excessive sediment in the river as well as possible destruction of River Fauna and Flora. During the construction and operation of the mining operation, 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 the mining activities.

Description of the impact

The transformation of natural habitats due 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 mining 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

The possibility exists that bush encroaching species can multiply as a result of the disturbance interference in the natural ecosystem. 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 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

The extent of alien invasive species in the area can increase as a result of the mining in the natural ecosystem. 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 prospecting.

Description of the impact

It is possible that protected species will be destroyed during the mining operation.

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 prospecting, 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.

Description of the impact

Mining for Diamonds (Alluvial); and Diamonds (General) 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 mining location.

3.3.23 Land use:

Source of the impact

Mining for Diamonds (Alluvial); and Diamonds (General).

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 mining areas 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 <small>(E.g. for prospecting – drill site, site camp, ablation 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, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc. ... etc. ... etc.)</small>	Aerial extent of the Activity Ha or m ²	LISTED ACTIVITY <small>(Mark with an X where applicable or affected).</small>	APPLICABLE NOTICE <small>(GNR 544, GNR 545 or GNR 546)</small>	LISTING	WASTE MANAGEMENT AUTHORISATION <small>(Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)</small>
<p>Activity 21 of NEMA Listing Notice 1 Any activity including the operation of that activity which requires a mining permit in terms of section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including associated infrastructure, structures and earthworks directly related to the extraction of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).</p>	<p>4.9807ha</p>	<p>X</p>	<p>GNR 983</p>		
<p>Activity 21 of NEMA Listing Notice 2 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.</p>	<p>0.5 ha will be used for the processing plant and associated infrastructure.</p>	<p>X</p>	<p>GNR 984</p>		
<p>Activity 24(ii) of NEMA Listing Notice 1 The development of haul roads 15m wide with no reserve</p>	<p>±5 000m² on the Area.</p>	<p>X</p>	<p>GNR983</p>		

<p>Activity 56(ii) of NEMA Listing Notice 1</p> <p>The continuous lengthening (and rehabilitation) of haul roads 15m wide with no reserve</p>	<p>±5 000m² on the Area.</p>	<p>X</p>	<p>GNR983</p>	
<p>Activity 27 of NEMA Listing Notice 1</p> <p>The clearance of an area of 1 hectare or more, but less than 20 ha of indigenous vegetation</p>	<p>A total of 4.9807 hectares will be physically disturbed the alluvial diamond material will be removed and washed.</p>	<p>X</p>	<p>GNR984</p>	
<p>Activity 9 of Category A under the National Environmental Management: Waste Act 59 of 2008</p>	<p>The disposal of inert waste of 10 000 tons, excluding the disposal of such waste for the purposes of levelling and building which has been authorised by other legislation.</p>		<p>GNR 633</p>	<p>X</p>
<p>Activity 15 of Category A under the National Environmental Management: Waste Act 59 of 2008</p> <p>The continuous establishment and reclamation of temporary stockpiles resulting from activities which require a mining permit.</p>	<p>10 000m²</p>		<p>GNR 633</p>	<p>X</p>

<p>OTHER ACTIVITIES (Associated infrastructure not considered to be listed activities)</p> <p>Temporary Workshop Facilities</p> <p>Storage Facilities</p> <p>Concrete Bund walls and diesel Depots</p> <p>Ablution Facilities</p> <p>Topsoil Stockpiles</p> <p>Overburden Stockpiles</p>	<p>±300m²</p> <p>±3000m²</p> <p>±250m²</p> <p>±25m²</p> <p>±2 000m²</p> <p>±2 000m²</p>		<p>NOT LISTED</p>	
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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. chemical toilets, fences on demarcated areas, equipment and access roads on permission of the surface owners will be rehabilitated to their previous state. Rehabilitation will be done concurrently with the mining and only limited outstanding work will be necessary when mining is ceased.

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.



R.H. Oosthuizen
Environmental Assessment Practitioner
Wadala Mining and Consulting (Pty) Ltd