mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

SCOPING REPORT

FOR LISTED ACTIVITIES ASSOCIATED WITH MINING RIGHT AND/OR BULK SAMPLING ACTIVITIES INCLUDING TRENCHING IN CASES OF ALLUVIAL DIAMOND PROSPECTING.

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

NAME OF APPLICANT: DELA BEST TRADING ENTERPRISE (PTY) LTD

TEL NO: 0842930200
FAX NO:
POSTAL ADDRESS:
PHYSICAL ADDRESS: 31 HALKETT, KIMBERLEY, 8301

FILE REFERENCE NUMBER SAMRAD: (NC) 30/5/1/2/2/10127 MR

Commented [EN1]:

IMPORANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended), the Minister must grant a prospecting or mining right if among others the mining "will not result in unacceptable pollution, ecological degradation or damage to the environment".

Unless an Environmental Authorisation can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Programme Report in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

In terms of Section 16(3)(b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of Section 17(1)(c) the Competent Authority must check whether the application has taken into account any minimum requirements applicable or instructions or guidance provided by the Competent Authority to the submission of applications.

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a right or permit are submitted in the exact format of, and provide all the information required in terms of, this template. Furthermore please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorisation being refused.

It is furthermore an instruction that the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. (Unprocessed supporting information may be attached as appendices.) The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in the order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the applicant.

OBJECTIVE OF THE SCOPING PROCESS

1) The objective of the scoping process is to, through a consultative process:-
   a) identify the relevant policies and legislation relevant to the activity;
   b) motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
   c) identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process;
   d) identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment;
   e) identify the key issues to be addressed in the assessment phase;
   f) agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and
   g) identify suitable measures to avoid, manage, or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

SCOPING REPORT

2) Contact Person and correspondence address:

a) **Details of:**
i) The EAP who prepared the report:

ii) Expertise of the EAP:
(1) The qualifications of the EAP:
(With evidence attached as Appendix 1)

(2) Summary of the EAP's past experience:
(Attach the EAP's curriculum vitae as Appendix 2)

Relevant past experiences in carrying out the Environmental Impact Assessment Procedures include Environmental Impact Assessments, Environmental Management Plans / Programmes / Reports, Performance Assessments, Rehabilitation Progress Assessments, Environmental Liability Assessments, Environmental Compliance Monitoring, Scoping Reports, etc.

b) **Description of the property:**

Farm Name:	Erf 10 Ritchie
Application area (Ha)	33.3004 Ha
Magisterial district:	Kimberley
Distance and direction from nearest town	Dela Best Trading Enterprise (Pty) Ltd is situated approximately 40km South-west of the town of Kimberley, in the Northern Cape Province.
21 digit Surveyor General Code for each farm portion	C04100000000066800001 C04100000000066800006

c) **Locality Map:**
(show nearest town, scale not smaller than 1:250 000 attached as Appendix 3)

Figure 1 – Locality Map

d) **Description of the scope of the proposed overall activity:**

i) Listed and specified activities:

(Provide a plan drawn to a scale acceptable to the competent authority but not less than 1:10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on site and attach as Appendix 4)

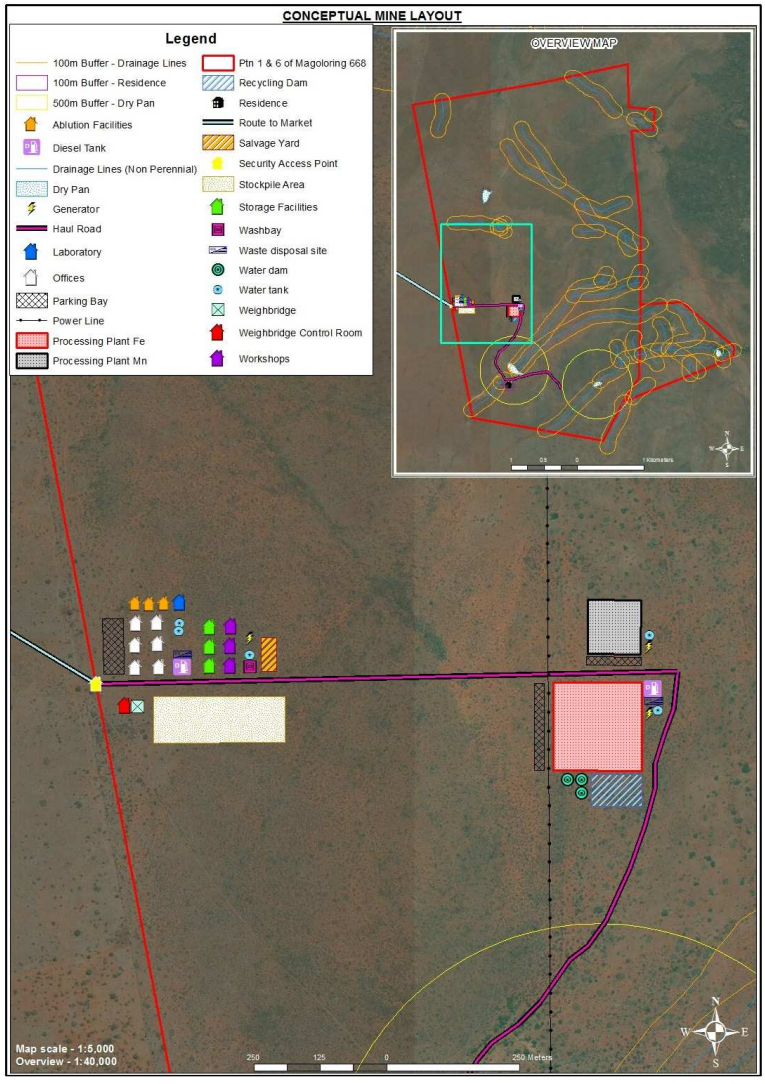

Figure 2 – Conceptual site layout plan

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 983, GNR 984 OR GNR 985)	WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act.) (Mark with an X.)
1	Blasting: Approximately 120kg of explosives is placed in one blast hole. The tons of explosives consumed per month depend completely on the number of blasts DMC conducts.	The size of the blasts will be directly affected by the geology of the deposit.	X	GNR983: Activity 19 GNR983: Activity 30 GNR984: Activity 15 GNR984: Activity 17	N/A
2	Chemical toilets: Mobile chemical toilets shall be utilized. It is anticipated that the operation will use 10 chemical toilets.	2m x 3m =6m² each	X	GNR984: Activity 17	N/A
3	Clean & Dirty water system: It is anticipated that the operation will establish stormwater control berms and trenches to separate clean and dirty water on the mine site.	The size and length of the berms and trenches will be directly affected by the topography of the area and the locality of the infrastructure.	X	GNR983: Activity 12 GNR983: Activity 19 GNR984: Activity 17	N/A
4	Diesel tanks: It is anticipated that the operation will utilize 2 x 24 000 litre (24m³) 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 floor must be established where the re-fuelling will take place.	10m x 20m = 200m² each	X	GNR984: Activity 17 GNR985: Activity 10	N/A

5	Excavations: 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.	Provision is made for a maximum footprint (at full production) of 10 hectares of open excavations at any one time.	X	GNR983: Activity 19 GNR984: Activity 15 GNR984: Activity 17 GNR984: Activity 21	N/A
6	Explosive Magazine: It is anticipated that the operation will have a fenced explosive magazine area, in which area two TS3 magazines will be placed on concrete blocks.	20m x 40m = 800m²	X	GNR983: Activity 27 GNR984: Activity 17	N/A
7	Generator: It is anticipated that the operation will establish a brick building (for each set of generators), in which the generators will be kept.	10m x 5m = 50m² each	X	GNR984: Activity 17	N/A
8	Office – Mobile container	3m x 6m = 18m² each	X	GNR984: Activity 17	N/A
9	Parking Bay: It is anticipated that vegetation will be cleared in this area and superfine material will be used as groundcover.	100m x 100m = 1Ha	X	GNR983: Activity 30 GNR984: Activity 15 GNR984: Activity 17	N/A
10	Processing plant: Iron Ore It is anticipated that the plant will consist of the following: - VGF + Primary JAW Crusher - Primary Double Deck Screen - VGF + Secondary Cone Crusher - Secondary Double Deck Screen - Scrubber / DMS	100m x 200m = 2Ha	X	GNR984: Activity 15 GNR984: Activity 17 GNR984: Activity 21	N/A
11	Processing plant: Manganese Ore It is anticipated that the plant will consist of the following:	100m x 100m = 1Ha	X	GNR984: Activity 15 GNR984: Activity 17 GNR984: Activity 21	N/A

	- VGF + Primary JAW Crusher - Primary Double Deck Screen - VGF + Secondary Cone Crusher - Secondary Double Deck Screen				
12	Rapid reloading area (explosives): The demarcated area will be large enough to accommodate three (3) twenty (20) meter tankers (horse and semi-trailer), as well as accommodating the movement of one (1) Mobile Manufacturing Unit within the demarcated area.	50m x 20m = 0.1Ha	X	GNR984: Activity 17	N/A
13	Recycling dam: The Scrubber / DMS plant will utilize recycled water.	1 Ha	X	GNR704 GNR983: Activity 12 GNR983: Activity 27 GNR984: Activity 17 GNR984: Activity 21	
14	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 operation will create 2km of roads, with a width of 10m each and more than one lane of traffic in both directions. The locality of these roads will be determined by the geology of the area (excavation areas) and the locality of the infrastructure.	2 000m x 10m wide = 2Ha	X	GNR983: Activity 19 GNR983: Activity 24 GNR983: Activity 56 GNR984: Activity 17 GNR984: Activity 27	N/A
15	Salvage yard (fenced)	20m x 50m = 0.1 Ha	X	GNR984: Activity 17	N/A
16	Security access control point – Mobile container	3m x 6m mobile container = 18m² each	X	GNR984: Activity 17	N/A
17	Stockpile area	Provision is made for a maximum footprint	X	GNR984: Activity 15 GNR984: Activity 17	N/A

		(at full production) of 2 hectares for the stockpile area at any one time.			
18	Storage facility: It is anticipated that the operation will make use of mobile containers for their storage facilities.	3m x 6m = 18m² each	X	GNR984: Activity 17	N/A
19	Stormwater dam It is anticipated that the operation will construct a stormwater dam. The locality of this dam will be directly affected by the topography of the area and the locality of the infrastructure.	20m x 50m = 0.1 Ha	X	GNR984: Activity 17	N/A
20	Subgrade stockpile area	Provision is made for a maximum footprint (at full production) of 1 hectare for this stockpile area at any one time.	X	GNR984: Activity 15 GNR984: Activity 17	N/A
21	Topsoil storage area (temporary)	Provision is made for a maximum footprint (at full production) of 0.5 hectare for this area at any one time.	X	GNR984: Activity 15 GNR984: Activity 17	N/A
22	Wash bay	20m x 30m = 600m²	X	GNR984: Activity 17	N/A
23	Waste disposal site (domestic and industrial waste): It is anticipated that the operation will establish a dedicated, fenced waste disposal site with a concrete floor and bund wall. The following types of waste will be disposed of in this area: • Small amounts of low level hazardous	15 x 30m = 450m² each	X	GNR984: Activity 17	N/A

	waste in suitable receptacles. • Domestic waste. • Industrial waste.				
24	Waste rock dumps	Provision is made for a maximum footprint (at full production) of 3 hectares for waste rock dumps at any one time.	X	GNR633: Activity 11 GNR984: Activity 15 GNR984: Activity 17	N/A
25	Water dam: It is anticipated that the operation will establish two x 200 000 litre zinc dams with a radius of 5.5m and a height of 2.4m.	Dam = rrr^2 $rr5.5^2$ = 95m² each	X	GNR984: Activity 17	N/A
26	Water distribution pipeline	Provision is made for 1 000m	X	GNR983: Activity 9	N/A
27	Water tank: It is anticipated that the operation will establish 2 x 10 000 litre water tanks with purifiers for potable water.	3m x 3m = 9m² each	X	GNR984: Activity 17	N/A
28	Weighbridge	3m x 20m = 60m²	X	GNR984: Activity 17	N/A
29	Weighbridge control room – Mobile container	3m x 6m = 18m²	X	GNR984: Activity 17	N/A
30	Workshop: It is anticipated that the operation will make use of mobile containers for their workshop facilities. This area will also include a compressor area and tyre bay.	3m x 6m = 18m² each	X	GNR984: Activity 17	N/A

Full description of listed activities applied for:	
GNR633 Activity 11	National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008); Category B: The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).
GNR704	Regulations published on 4 June 1999 in terms of the National Water Act, 1998 (Act No. 36 of 1998).

GNR983 Activity 9	The development of infrastructure exceeding 1 000 meters in length for the bulk transportation of water or storm water:- i) with an internal diameter of 0.36 meters or more; or ii) with a peak throughput of 120 litres per second or more.
GNR983 Activity 12	The development of:- i) canals exceeding 100 square meters in size; ii) channels exceeding 100 square meters in size; iii) bridges exceeding 100 square meters in size; iv) dams, where the dam, including infrastructure and water surface area, exceeds 100 square meters in size; v) weirs, where the weir, including infrastructure and water surface area, exceeds 100 square meters in size; vi) bulk storm water outlet structures exceeding 100 square meters in size; vii) buildings exceeding 100 square meters in size; or viii)infrastructure or structures with a physical footprint of 100 square meters or more; where such development occurs:- a) within a watercourse; b) in front of a development setback; or c) if no development setback exists, within 32 meters of a watercourse, measured from the edge of the watercourse.
GNR983 Activity 19	The infilling or depositing of any material of more than 5 cubic meters into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic meters from:- i) a watercourse ii) the seashore; or iii) the littoral active zone, an estuary or a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is the greater.
GNR983 Activity 24 (ii)	The development of:- (ii) a road with a reserve wider than 13.5 meters, or where no reserve exists where the road is wider than 8 meters.
GNR983 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.
GNR983 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).
GNR983 Activity 56	The widening of a road by more than 6 meters, or the lengthening of a road by more than 1 kilometre:- i) where the existing reserve is wider than 13.5 meters; or

(ii)	ii) where no reserve exists, where the existing road is wider than 8 meters;
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 Activity 17	Any activity including the operation of that activity which requires a mining right as contemplated in Section 22 of the MPRDA, 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 MPRDA.
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 of this Notice applies.
GNR984 Activity 27	The development of:- i) A national road as defined in Section 4 of the SANRAL and NRA Acts. ii) A road administered by a provincial authority iii) A road with a reserve wider than 30 meters iv) A road catering for more than one lane of traffic in both directions. But excluding the development and related operation of a road for which an environmental authorisation was obtained for the route determination in terms of Activity 5 in GN387 of 2006 or activity 18 in GN545 of 2010, in which case activity 24 in LN1 of 2014 applies.
GNR985 Activity 10	The development of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic meters.

ii) Description of the activities to be undertaken:
(Describe methodology or technology to be employed, and for a linear activity, a description of the route of the activity.)

a. Mining Method:

Mining is done by the conventional opencast mining method. It is designed based on the nature of the diamond gravel and Kimberlite pipe on the mine, which proposes that each resource area be treated as a separate pit (selective mining).

Where present vegetated soil overlying the planned mining area is stripped prior to mining and stockpiled on a dedicated (temporary) dump to be used for rehabilitation purposes at a later stage.

A haul road network provides access to the opencast mining areas, to the dry (modular) crushing & screening plants and to the wet (modular) scrubber / DMS plants.

The mining process is initiated by drilling, then blasting and is then followed by loading and hauling of both ore and waste to their respective destinations on the mine site. The mine will be operational 24 hours per day / 7 days a week to achieve the targeted production.

b. Processing Method:

a) Material from mining trenches delivered by ADT is stockpiled at the pan plant site in the vicinity of the pan feed bin.
(b) The material is fed to the pan feed bin with a FEL at a rate of approximately 45 tons per hour depending on the type of material (lower feed rates for material with high sand or clay content
(c) The material is the screened to minus 32 mm with a barrel screen and fed into the pan with a pan feed conveyor.
(d) Oversize material (+ 32 mm) is directed to a tailings dump via a tailings conveyor.
(e) The pan material is separated with a medium of puddle applying the sink/float principle.at an operating density of Rd 1.35 – Rd 1.40
(f) The floating particles (gravel/puddle/fines) is directed to a chute onto a dewatering screen and screened at 1.00 mm. The plus 1.00 mm material or pan tailings are directed to a tailings dump with a tailings conveyor.
(g) The minus 1.00 mm material (slimes) are collected in the screen under pan and pumped to an open and depleted mine trench for (i) replenishing underground water and (ii) restoring the underground water level. This operation is done during the same cycle of plant ROM feed.
(h) As an alternative to (d),(g) and (f) above the pan will be situated on the side of an open and depleted mining trench and oversize, pan tailings and slimes will be deposited directly into the open and worked mining trench. The same objective as the options mentioned applies.
(i) The concentrated material is tapped into a concentrate bin and transported to a Final Recovery Plant for final diamond concentration and recovery.

c. Planned production:

Total estimated resource 11 222 200 tons.

The applicant will make use of two 16 foot wet rotary pans for the recovery of diamonds, which implies that a total of 130 tonnes of gravel is anticipated to be processed per hour (i.e an average of 65 tonnes per pan per hour).This adds up to a total of 823 680 tonnes to be processed per year at the applicant's intended working rate of 528 hours per month or 6 336 hours per year.

Dela BestTrading Enterprise (Pty) Ltd using the technology and machinery detailed above and working at the rate outlined above, the anticipated life of the Mine is 13.60 years (11 222 200 tonnes/823 680 tonnes per year), which, for the purpose of this study, will be rounded off to 12 years.

It is expected that 2 305 800 tons will be extracted over 4 years as outlined in 6.1.4. This roughly equates to the estimated economic resource.

d. Employment

The Applicant is awaiting the Mining Right application to be granted and executed before employees will be appointed. The entire workforce will consist of approximately 200 employees (including contractors) when fully operational. No employees will be allowed to reside at the site.

e. Water Use License

Dela BestTrading Enterprise (Pty) Ltd shall apply for an Integrated Water Use License for all relevant water uses at the site.

e) **Policy and Legislative Context:**

Applicable Legislation and Guidelines used to compile the report (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process.)	Reference where applied
Atmospheric Pollution Prevention Act (Act 45 of 1964) and Regulations	- Sections 27 – 35: Dust control - Sections 36 – 40: Air pollution by fumes emitted by vehicles.
Conservation of Agricultural Resources Act (Act 43 of 1983) and Regulations	- Section 6: Implementation of control measures for alien and invasive plant species.
Constitution of South Africa (Act 108 of 1996)	- Chapter 2: Bill of Rights - Section 24: Environmental rights - Section 25: Rights in Property
Environment Conservation Act (Act 73 of 1989) and Regulations	- Section 19 and 19A: Prevention of littering by employees and sub-contractors during construction and maintenance phases of the proposed project. - Sections 21, 22, 25, 26 and 28: EIA Regulations, including listed activities. - Section 28A: Exemptions.
Fencing Act (Act 31 of 1963)	- Section 17: States that any person erecting a boundary fence may clean any bush along the line of the fence up to 1.5m on each side thereof and remove any tree standing in the immediate line of the fence. However, this provision must be read in conjunction with the environmental legal provisions relevant to protection of flora.
Hazardous Substances Act (Act 15 of 1973) and Regulations	- Definition, classification, use, operation, modification, disposal or dumping of hazardous substances.
Intergovernmental Relations Act (Act 13 of 2005)	- This Act establishes a framework for the National, Provincial and Local Governments to promote and facilitate intergovernmental relations.
Mine, Health and Safety Act (Act 29 of 1996) and Regulations	- The Act
Mineral and Petroleum Resources Development Act (Act 28 of 2002) and Regulations	- The Act
Mineral and Petroleum Resources Development Act (Act	- The Act

49 of 2008)	
National Environmental Management Act (Act 107 of 1998) as amended and Environmental Impact Assessment Regulations, 2014	- Section 2: Strategic environmental management goals and objectives. - Section 24: Foundation for Environmental Management frameworks. - Section 28: The developer has a general duty to care for the environment and to institute such measures to demonstrate such care.
National Environmental Management: Air Quality Act (Act 39 of 2004)	- Section 32: Control of dust - Section 34: Control of noise - Section 35: Control of offensive odours
National Environmental Management: Biodiversity Act (Act 10 of 2004)	- Sections 65 – 69: These sections deal with restricted activities involving alien species; restricted activities involving certain alien species totally prohibited; and duty of care relating to alien species. - Sections 71 and 73: These sections deal with restricted activities involving listed invasive species and duty of care relating to listed invasive species.
National Environmental Management: Protected Areas Act (Act 57 of 2003)	- The Act
National Environmental Management: Waste Management Act (Act 59 of 2008)	- Chapter 4: Waste management activities
National Forest Act (Act 84 of 1998) and Regulations	- Section 7: No person may cut, disturb, damage or destroy any indigenous, living tree in a natural forest, except in terms of a licence issued under Section 7(4) or Section 23; or an exemption from the provisions of this subsection published by the Minister in the Gazette. - Sections 12 – 16: Deals with protected trees, with the Minister having the power to declare a particular tree, a group of trees, a particular woodland, or trees belonging to a certain species, to be a protected tree, group of trees, woodland or species. - Section 15: No person may cut, disturb, damage, destroy or remove any protected tree; or collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a licence granted by the Minister.
National Heritage Resources Act (Act 25 of 1999) and Regulations	- Section 34: No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority. - Section 35: No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or

	otherwise disturb any archaeological or palaeontological site. - Section 36: No person may, without a permit issued by SAHRA or a provincial heritage resources authority destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a forma cemetery administered by a local authority. - Section 38: This section provides for HIA which are not already covered under the ECA. Where they are covered under the ECA the provincial heritage resources authorities must be notified of a proposed project and must be consulted during HIA process.
National Water Act (Act 36 of 1998) and Government Notice No. 704 of 1991	- Section 4: Use of water and licensing. - Section 19: Prevention and remedying the effects of pollution. - Section 20: Control of emergency incidents.
Nature Conservation Ordinance (Ord 19 of 1974)	- Chapters 2, 3, 4 and 6: Nature reserves, miscellaneous conservation measures, protection of wild animals other than fish, protection of Flora.
Northern Cape Nature Conservation Act (Act 9 of 2009)	- Addresses protected species in the Northern Cape and the permit application process related thereto.
Occupational Health and Safety Act (Act 85 of 1993) and Regulations	- Section 8: General duties of employers to their employees. - Section 9: General duties of employers and self-employed persons to persons other than their employees.
Road Traffic Act (Act 93 of 1997) and Regulations	- The Act
Water Services Amendment Act (Act 30 of 2007)	- It serves to provide the right to basic water and sanitation to the citizens of South Africa.
Basic Conditions of Employment Act (Act 3 of 1997)	- To control employment aspects
Basic Conditions of Employment Amendment Act (Act 11 of 2002)	- Amendments to BCEA
Community Development (Act 3 of 1966)	- To promote community development
Development Facilitation (Act 67 of 1995)	- To provide for planning and development
Development Facilitation (GN24, PG329, 24/07/1998)	- Regulations re Northern Cape LDO's
Development Facilitation (GNR1, GG20775, 07/01/2000)	- Regulations re application rules S26, S46, S59
Development Facilitation (GN732, GG14765, 30/04/2004)	- Determines amount, see S7(b)(ii)
Land Survey Act (Act 8 of 1997)	- To control land surveying, beacons etc.
Land Survey Act (GNR1130, GG18229, 29/08/1997)	- Agriculture, land survey S10

National Veld and Forest Fire Act (Act 101 of 1998)	- To regulate law on veld and forest fires
National Veld and Forest Fire Act (GN1775, GG22527, 01/08/2001))	- Draft Regulations S21
Municipal Ordinance, 20/1974	- To control pollution, sewers etc.
Municipal Ordinance, PN955, 29/08/1975	- Nature conservation Regulations
Cape Land Use Planning Ordinance, 15/85	- To control land use planning
Cape Land Use Planning Ordinance, PN1050, 05/12/1988	- Land use planning Regulations
Planning and Development Act (Act 7 of 1998)	- To control planning and development

f) **Need and desirability of the proposed activities:**
(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location.)

The proposed mining activity will benefit society and the surrounding communities both directly and indirectly. Direct economic benefits will derived from wages, taxes and profits. Indirect economic benefits will be derived from the procurement of goods and services and spending power of employees.

Desirability:

No	Description	Yes/No
1	Does the proposed land use / development fit the surrounding area?	Yes
2	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?	Yes
3	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	Yes
4	Will the proposed land use / development impact on the sense of place?	Yes
5	Will the proposed land use / development set a precedent?	No
6	Will any person's rights be affected by the proposed land use / development?	Yes
7	Will the proposed land use / development compromise the "urban edge"?	No

o Benefits:

No	Description	Yes/No
1	Will the land use / development have any benefits for society in general?	Yes
2	Will the land use / development have any benefits for the local communities where it will be located?	Yes

g) **Period for which the environmental authorisation is required:**

12 Years

h) **Description of the process followed to reach the proposed preferred site:**
(NB!! – This section is not about the impact assessment itself; it is about the determination of the specific site layout having taken into consideration (1) the comparison of the originally proposed site plan, the comparison of that plan with the plan of environmental features and current land uses, the issued raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout as a result.)

(i) Details of all alternatives considered:
With reference to the site plan provided as Appendix 4 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

(a) The property on which or location where it is proposed to undertake the activity:

The registered description of the land to which the mining right application relates:

Farm Name	Title Deed	In Extent
ERF 10 of Richie		33.300 Ha

Alternatives considered:-
As the prospecting activities took place over these properties, it wouldn't be viable to consider an alternative site for the Mining Right application.

(b) The type of activity to be undertaken:

Opencast mining activities for Diamond alluvial and Kimberlite.

Alternatives considered:-
The only alternative land use is livestock; however the applicant's main economic activity is mining and for this reason does not favour any other alternative land use.

(c) The design or layout of the activity:

DBE plans to establish the following, amongst other, infrastructure on their mine site during the initial construction phase:

- Ablution facilities (chemical toilets to be upgraded to brick buildings with septic tanks)
- Diesel tanks
- Explosive magazine
- Generators
- Laboratory (mobile container to be upgraded to brick building)
- Offices (mobile containers to be upgraded to brick buildings)
- Parking bay
- Processing Plant (Diamond alluvial)
- Processing Plant (Kimberlite)
- Recycling dam
- Salvage Yard
- Security access point

- Stockpile area
- Storage facilities (mobile containers)
- Wash bay
- Waste disposal sites (concrete floor with bund walls)
- Water dams (clean water)
- Water tanks (drinking water)
- Workshops (mobile containers to be upgraded to brick buildings)

The final locality of the above infrastructure was decided upon after taking into account of the following:-

- Locality of residential area of surface owner (currently not occupied);
- Locality of the diamond bearing ground;
- Topography of the area;
- Environmental features such as non-perennial drainage lines; and
- Discussions with the lawful occupier of the land.

Alternatives considered:-
The only alternative considered was the locality of the infrastructure.

The final design and layout of the infrastructure can only be decided upon by the management team after granting and execution of the Mining Right and during the construction phase.

(d) The technology to be used in the activity:

Diamondiferous material of -50mm will be fed through the 150t/hr surge bin by a front-end loader (see above flow diagram). The surge bin will serve as surge capacity for the entire plant to ensure that there is continuous feed into the plant. The -50mm material will be fed to the scrubber via a scrubber feed conveyor at a throughput of 150t/hr. The +25mm material will be screened out to the oversize and in turn will used as a charge into the scrubber for efficient scrubbing. Scrubber will wash-off the fines and clay. This is essential for feed preparation to ensure that the DMS feed is free of fines, which might affect the efficiency of the DMS circuit by influencing the dense medium stability characteristics.

The DMS preparation screen will further screen out the -2mm, which is the undersize (slimes) that will be discarded to the slimes disposal. DMS surge bin serves as the source of constant feed to the DMS plant, which is essential in the efficient operation of the cyclones. This will ensure that ore:medium ratio is easily maintained. The -25mm+2mm material will pumped to the DMS cyclone and the sinks (heavies) will report to the sinks screen whilst the floats will report to the floats screen. The floats will then be discarded to the tailings dump. The sinks will report to the sizing screen, where the material will be divided into two size fraction, that is the coarse (-25mm+8mm) and the fines (-8mm+2mm). The two size fraction will report into two different concentrate bins with the storage capacity of 6 tons each. The material will be fed to the flowsort wet x-ray machine through a volumetric feeder to ensure constant feed into the x-ray machine. X-ray machine concentrate will report to the glove box in which the final hand sorting

of diamonds will take place.

X-ray machine tailings will report to the Barmac crusher, to liberate the locked diamonds. The -2mm material will be screened out at the re-crush screen and the rest of the material will report to the sizing screen for further processing.

Alternatives considered:-

The only alternative considered was the processing of ore only using a dry processing method. Taking into consideration the drilling results, it was decided to incorporate the wet processing to ensure grade.

(e) The operational aspects of the activity:

Mining is done by the conventional opencast mining method. It is designed based on the nature of the diamond bearing ground on the mine, which proposes that each resource area be treated as a separate pit (selective mining).

Where present vegetated soil overlying the planned mining area is stripped prior to mining and stockpiled on a dedicated (temporary) dump to be used for rehabilitation purposes at a later stage.

A haul road network provides access to the opencast mining areas, to the crushing & screening plants and to the scrubber / DMS plants.

The mining process is initiated by drilling, then blasting and is then followed by loading and hauling of both ore and waste to their respective destinations on the mine site. The mine will be operational 24 hours per day / 7 days a week to achieve the targeted production.

Alternatives considered:-

The conventional opencast drill-blast-load-haul-mining method has been proven to be the most cost effective mining method in the Northern Cape Province and for this reason no viable alternatives were identified.

(f) The option of not implementing the activity:

Mining forms an integral part of the social and economical growth of South Africa and more specifically the Northern Cape Province.

The following positive impacts will be lost if the proposed mining project is not developed:

- South Africa is one of the largest producer of diamonds in the world. The diamonds mined in South Africa are mostly exported. Foreign revenue earned by these sales has a huge positive economical impact both locally and regionally. TAX obligations to SARS have an additional positive impact on the Government's income. Foreign revenue and tax will be lost should the proposed mining project not be developed.
- Equipment and infrastructure development will amount to approximately R75 million, which contribution to the local / regional economy will be lost if the proposed mining operation is not

developed.

- Employment: The entire workforce will consist of approximately 200 employees when fully operational. These job opportunities will be lost if the proposed mining project is not developed.
- Payroll income - The gross remuneration of employees in terms of salaries and wages will be lost if the proposed mining project is not developed.
- Operating expenditure and maintenance (OPEX) - The total amount spent locally by businesses on goods and services, excluding salaries and wages as well as rents or interest will be lost if the proposed mining project is not developed.
- Revenue - The total value of sales arising from business activity at the mine will be lost if the proposed mining project is not developed.

(ii) Details of the Public Participation Process Followed:

(Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.)

Identified interested and/or affected parties were notified of the Mining Right application as follows:

- Notification letters will be sent to all identified interested and / or affected parties on the 15th of September 2017.. Attached to each of these letters was a Background Information Document, containing information relating to the proposed project.
- A newspaper advert will be placed in the 'DFA' local newspaper on the 15th of September 2017.
- A notice board was placed at the entrance to the site.

Consultation process:

- The surface owners are Mining Right applicants.

A public meeting will be held after all specialist reports have been received and after the first draft Environmental Impact Assessment has been compiled

.

(iii) Summary of issues raised by I&AP's
(Complete the table summarising comments and issues raised, and reaction to those responses.)

Interested and Affected Parties List the names of persons consulted in this column, and mark with an X where those who must be consulted were in fact consulted.		Date comments received	Issues raised	EAPs response to the issue of the I&AP
AFFECTED PARTIES				
Landowner/s	X			
	X	N/A		N/A
Lawful occupier/s of the land				
	X		-	-
Landowners or lawful occupiers on adjacent properties	X			
			-	

Municipal Councillor	X			
	X	N/A	To date no comment has been received from the Tsantsabane Municipality.	N/A
Municipality	X			
Sol Platjie local Municipality	X	N/A	To date no comment has been received from the Sol Platjie local Municipality.	N/A
Organs of State (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA, etc.)				
Eskom	X	N/A	To date no comment has been received from Eskom.	N/A
	X			
Communities				
Not applicable: There are no communities in the immediate vicinity of the mining right application area.				
Department of Land Affairs				
Department of Rural Development and Land Reform	X	N/A	To date no comment has been received from Transnet.	N/A
Traditional Leaders				
Not applicable: There are no communities, with Traditional Leaders, in the immediate vicinity of the mining right application area.				
Department of Environmental Affairs				
The Department of Environmental Affairs is a competent authority in this Mining Right application process. A letter dated 14 November 2016 was received, acknowledging receipt of the application for Environmental Authorisation for a Mining Right and associated infrastructure.				
Other Competent Authorities				
Department of Agriculture	X	N/A	To date no comment has been received from this Department.	N/A
Department of Public Works	X	N/A	To date no comment has been received from this Department.	N/A
Department of Water Affairs	X	N/A	To date no comment has been received from this Department.	N/A
OTHER AFFECTED PARTIES				
N/A – No other affected parties were identified.				

INTERESTED PARTIES				

(iv) The Environmental attributes associated with the sites:

(1) Baseline Environment:

(a) Type of environment affected by the proposed activity:
(its current geographical, physical, biological, socio-economic and cultural character.)

- **Air quality:**
  Current sources of air pollution in the area stems mainly from:

  - Dust from the secondary (public) and gravel (farm) roads transecting the properties.
  - Dust induced by wind and wind gusts.

  While many factors affect the precipitation rate, the main factors are related to wind velocity, air humidity, particulate size and dynamic shape, and prevailing ground cover.

  A specialist company will be appointed to conduct a baseline study of the air quality. The findings of this report will be included in the EIA/EMPR document.

  The general air quality on the properties is expected to be good.

- **Archaeological, cultural & heritage environment:**
  A specialist company will be appointed to conduct an archaeological assessment. The findings of this report will be included in the EIA/EMPR document.

- **Climate:**
  The area is located in a semi-arid region, receiving on average about 250mm of rain per annum. The rainfall is largely due to showers and thunderstorms falling in the summer months October to march. The peak of the rainy season is normally March or February. The summers are very hot with cool winters.

  The meteoblue climate diagrams are based on 30 years of hourly weather model simulations and available for every place on Earth. They give good indications of typical climate patterns and expected conditions (temperature, precipitation, sunshine and wind). The simulated weather data have a spatial resolution of approximately 30 km and may not reproduce all local weather effects, such as thunderstorms, local winds, or tornadoes.

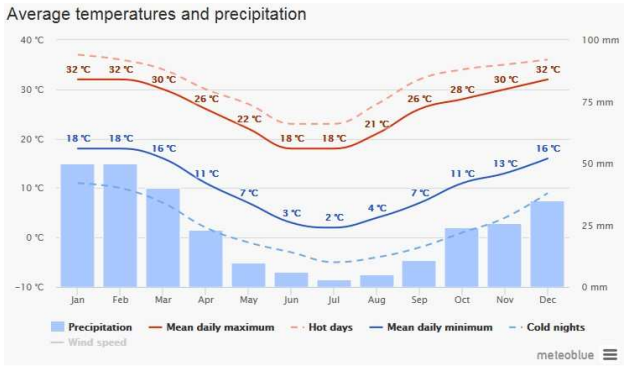

Figure 5 – Average temperatures and precipitation

The "mean daily maximum" (solid red line) shows the maximum temperature of an average day for every month for Retchie. Likewise, "mean daily minimum" (solid blue line) shows the average minimum temperature. Hot days and cold nights (dashed red and blue lines) show the average of the hottest day and coldest night of each month of the last 30 years.

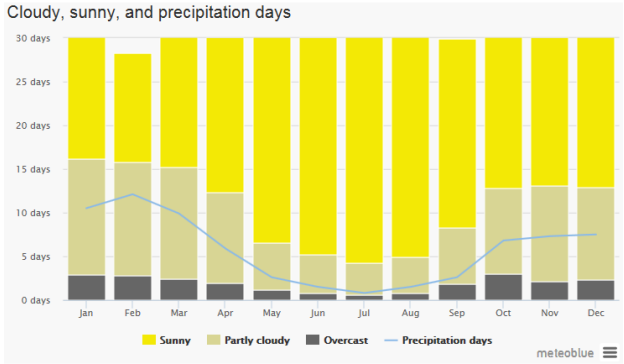

Figure 6 - Cloudy, sunny and precipitation days in the Ritchie area

The graph shows the monthly number of sunny, partly cloudy, overcast and precipitation days. Days with less than 20% cloud cover are considered as sunny, with 20-80% cloud cover as partly cloudy and with more than 80% as overcast.

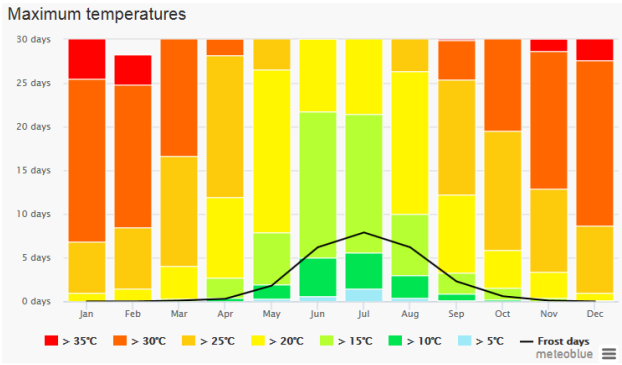

Figure 7 - Maximum temperatures of the Ritchie area

The maximum temperature diagram for Ritchie displays how many days per month reach certain temperatures.

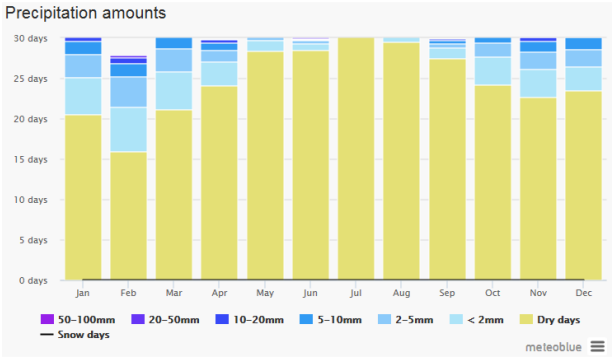

Figure 8 - Precipitation amounts for the Ritchie area

The precipitation diagram for Ritchie shows on how many days per month, certain precipitation amounts are reached.

- **Fauna:**
  Most large antelope species are absent from the area, although nomad game like Kudu and Springbok occasionally traverse the properties. The normal array of small mammals and birds that are associated with the Kimberly Thornveld Vegetation Type.

- **Flora:**
  There are three vegetation types found on the properties:
  - Small Tree: *Rhus lancea*.
  - Tall Shrubs: *Diospyros austro-africana*, *Euclea crispa* subsp. *crispa*, *E. undulata*, *Olea europaea* subsp.

africana, *Rhus pyroides* var. *pyroides*, *R. tridactyla*, *Tarchonanthus camphoratus*, *Tephrosia longipes*.

- Low Shrubs: *Rhus ciliate* (d), *Amphiglossa triflora*, *Anthospermum rigidum* subsp. *pumilum*, *Gomphocarpus fruticosus* subsp. *fruticosus*, *Helichrysum zeyheri*, *Lantana rugosa*, *Wahlenbergia nodosa*.
- Succulent Shrubs: *Ebracteola wilmaniae*, *Hertia pallens*.
- Herbaceous Climber: *Rhynchosia totta*.
- Graminoids: *Andropogon chinesis* (d), *A. schirensis* (d), *Anthephora pubescens* (d), *Aristida congesta* (d), *Digitaria eriantha* subsp. *eriantha* (d), *Themeda triandra* (d), *Triraphis andropogonoides* (d), *Aristida diffusa*, *Brachiaria nigropedata*, *Bulbostylis burchellii*, *Cymbopogon caesius*, *Diheteropogon amplectens*, *Elionurus muticus*, *Eragrostis chloromelas*, *E. nindensis*, *Eustachys paspaloides*, *Heteropogon contortus*, *Melinis repens*, *Schizachyrium sangiuneum*, *Trichoneura grandiglumis*.
- Herbs: *Dicoma anomala*, *D. schinzii*, *Geigeria ornativa*, *Helichrysum cerastioides*, *Heliotropium strigosum*, *Hibiscus marlothianus*, *Kohautia cynanchica*, *Kyphocarpa angustifolia*.
- Geophytic Herbs: *Boophone districha*, *Pellaea calomelanos*.

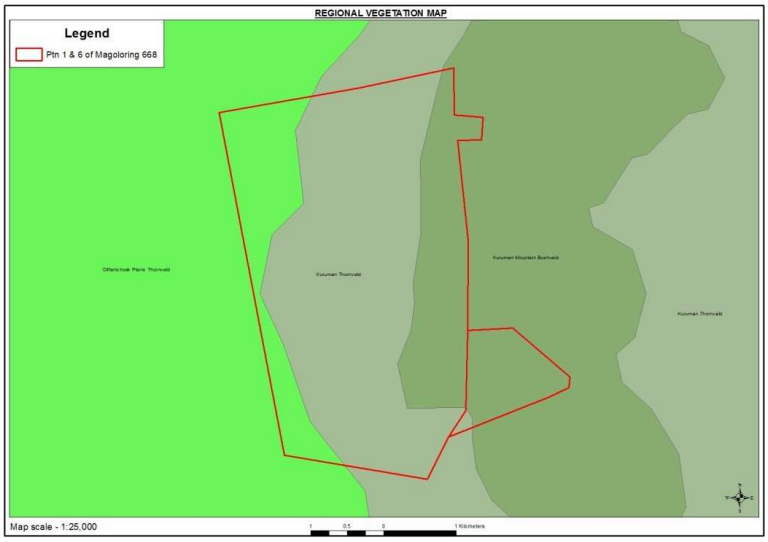

Figure 9 - Regional Vegetation Map

:

- Tall Tree*:* *Acacia erioloba* (d).
- Small Trees: *Acacia mellifera* subsp. *detinens* (d), *Bosica albitrunca* (d).

- Tall Shrubs: *Grewia flava* (d), *Lycium hirsutum* (d), *Tarchonanthus camphorates* (d), *Gymnosporia buximolia*.
- Low Shrubs: *Acacia hebeclada* subsp. *hebeclada* (d), *Monechma divaricatum* (d), *Gnidia polycephala*, *Helichrysum zeyheri*, *Hermannia comosa*, *Pentzia calcarea*, *Plinthus sericeus*.
- Geoxylic Suffrutex: *Elephantorrhiza elephantine*.
- Graminoids: *Aristida meridionalis* (d), *A. stipitata* subsp. *stipitata* (d), *Eragrostis lehmanniana* (d), *E. echinochloidea*, *Melinis repens*.
- Herbs: *Dicoma schinzii*, *Gisekia africana*, *Harpagophytum procumbens* subsp. *procumbens*, *Indigofera daleoides*, *Limeum fenestratum*, *Nolletia ciliaris*, *Seddera capensis*, *Tripteris aghillana*, *Vahlia capensis* subsp. *vulgaris*.

A specialist will be appointed to conduct a study of the flora found within the planned mining areas. The findings of this report will be included in the EIA/EMPR document.

- **Geology:**
  The surface geology of the area comprises mainly of Qaurtenery sediments namely alluvial diamondiferous gravel, sand (red and grey aeolian dune sands), shale and andesite in places amygdaloidal and/porphyritic with quartzite and conglomerate lenses near the bottom. The early Quarternary sediments most likely cover the karoo Supergroup particurlarly the Dwayka and the Ecca Group. The Dwayka Group is situated on the glaciated Precambrian bedrock surfaces along the northern basin margin but overlies the Cape Supergroup in the South. This group consists of a selection of lithofacies types. The lithofacies types consist mainly of massive diamictite, stratified diamictite, massive carbonate-rich diamictite, mudrock with stones and mudrock facies. The individual formations can be grouped into three geographical areas for descriptive purposes. Alluvial diamonds have been extracted from several areas within the Vaal and Orange River systems amongst others. The deposits are formed mostly on Ventersdorp Supergroup lava bedrock. The alluvial diamond deposits occur where the Vaal, Orange and Riet rivers flow off the younger karoo cover onto the hard basement.

- **Groundwater:**

  There are various boreholes on the immediate surrounding properties. Groundwater abstracted from these boreholes is used for:
  - Domestic;
  - Livestock and game watering; and
  - Mining activities

  With the area having an average water table of almost 40m below surface it can be expected that the main groundwater aquifer be found in the discrete solution cavities and fracture zones of the

Campbellrand dolomites of the area. The main water strikes would normally be from ±35m to 150m below surface in the area.

All of the secondary aquifers are characterized by high permeability and low storage capacity. Any intrusive dykes or fissures will compartmentalize the dolomite creating unique hydro geological conditions in each compartment.

A Hydrocensus and Groundwater Assessment will be conducted by a specialist company. The findings of this report will be included in the EIA/EMPR document.

- **Noise:**
  The main current noise sources in the area include:
  - Mining activities (blasting, hauling, crushing & screening) by mining operations situated in close proximity of the application area.
  - Traffic noise from the surrounding road network.

  A specialist company will be appointed to conduct a baseline noise study. The findings of this report will be included in the EIA/EMPR document.

- **Sensitive landscapes:**
  "Sensitive environments" that have statutory protection are the following:
  - Limited development areas (section 23 of the Environment Conservation Act, 1989 (Act 73 of 1989).
  - Protected natural environments and national heritage sites.
  - National, provincial, municipal and private nature reserves.
  - Conservation areas and sites of conservation significance.
  - National monuments and gardens of remembrance.
  - Archaeological and palaeontological sites.
  - Graves and burial sites
  - Lake areas, offshore islands and the admiralty reserve.
  - Estuaries, lagoons, wetlands and lakes.
  - Streams and river channels, and their banks.
  - Dunes and beaches.
  - Caves and sites of geological significance.
  - Battle and burial sites.
  - Habitat and /or breeding sites of Red Data Book species.
  - Areas or sites of outstanding natural beauty.
  - Areas or sites of special scientific interest.
  - Areas or sites of special social, cultural or historical interest.
  - Declared national heritage sites
  - Mountain catchment areas.
  - Areas with eco-tourism potential

  There are a number of dry pans and non-perennial drainage lines within the application area. There are also old ruins on the site.

  The relevant specialists will be appointed to assess whether there are any other sensitive landscapes within the application area.

Key statistics:

Area[1]	
• **Total**	24.8 km^2 (9.6 sq mi)
Population (2011)[1]	
• **Total**	14,850
• **Density**	600/km^2 (1,600/sq mi)
Racial makeup (2011)[1]	
•Black African	50.9%
• Coloured	45.4%
• Indian/Asian	0.8%
• White	2.1%
• Other	0.7%
First languages (2011)[1]	
• Afrikaans	87.6%
• Tswana	6.3%
• Xhosa	1.8%
• Sotho	1.6%

The regional soil environment in the Ritchie area is typified by shallow Mispah and Coega soils on gentle to flat mid slopes. Both soil forms have medium clay content and a low agricultural potential. The arid climate restricts the growth of vegetation which usually contributes organic matter to soils further reducing the agricultural potential of the soil.

In the higher lying areas the soil type is dominantly the Mispah soil form (Family #1100 Myhill). Some development of a red apedal horizon can be found, but due to the limited depth (<100mm) and small areas of development, cannot be classified under the Hutton form. The Mispah form therefore consists of regolith that represents the C horizon and the A and B horizon is generally absent.

A specialist company will be appointed to conduct a baseline soil assessment. The findings of this report will be included in the EIA/EMPR document.

- **Surface water:**
  The application area falls in two quaternary catchment areas, D41J and D73A - part of the Lower Vaal Management Area. The mining area falls in catchment area 10.

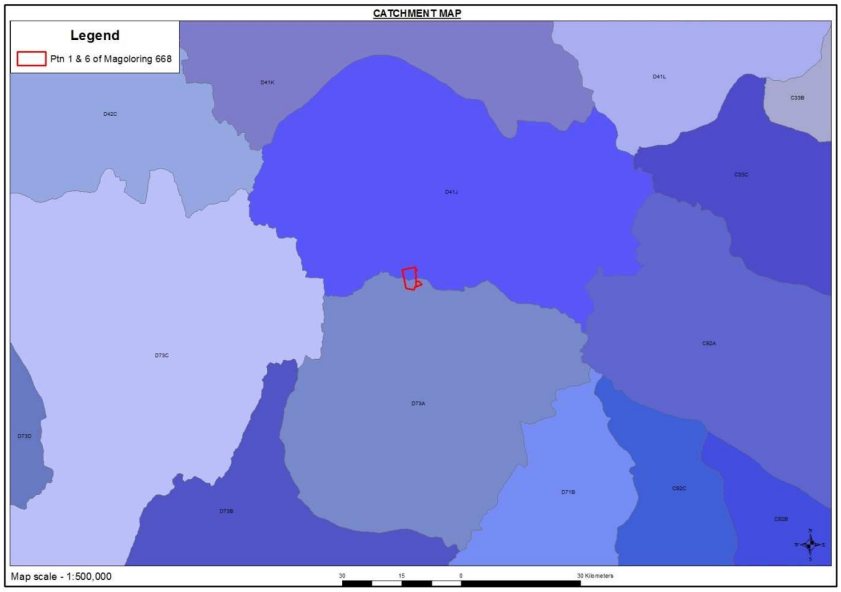

Figure 11 - Catchment Map

There are a number of dry pans and non-perennial drainage lines within the application area.

Figure 12 - Surface water map

A specialist company will be appointed to conduct a baseline surface water assessment. The findings of this report will be included in the EIA/EMPR document.

- **Topography:**
  The application area and where the mining will take place varies in altitude from about 1 473meters above sea level in the higher lying areas to about 1 323 meters above sea level in the lower lying areas. The surface topography is relatively flat in the lower lying areas.

(b) Description of the current land uses.

- Current land use:
  The land is utilizes for livestock farming purposes.

- Evidence of disturbance:
  A drilling programme was conducted during the prospecting phase.

- Existing structures:
  The following structures are found within the application area: residential and relating buildings, power line, fencing, windmills, primary (farm) roads.

(c) Description of specific environmental features and infrastructure on the site.

- Infrastructure:
  The only current infrastructure on the site is:
  - Residence and associated infrastructure;
  - Farm roads;
  - Power line (private);
  - Ruins;
  - Farm fencing; and
  - Windmills.

- Environmental:
  There are a number of dry pans and non-perennial drainage lines within the application area.

(d) Environmental and current land use map:
(Show all environmental and current land use features.)

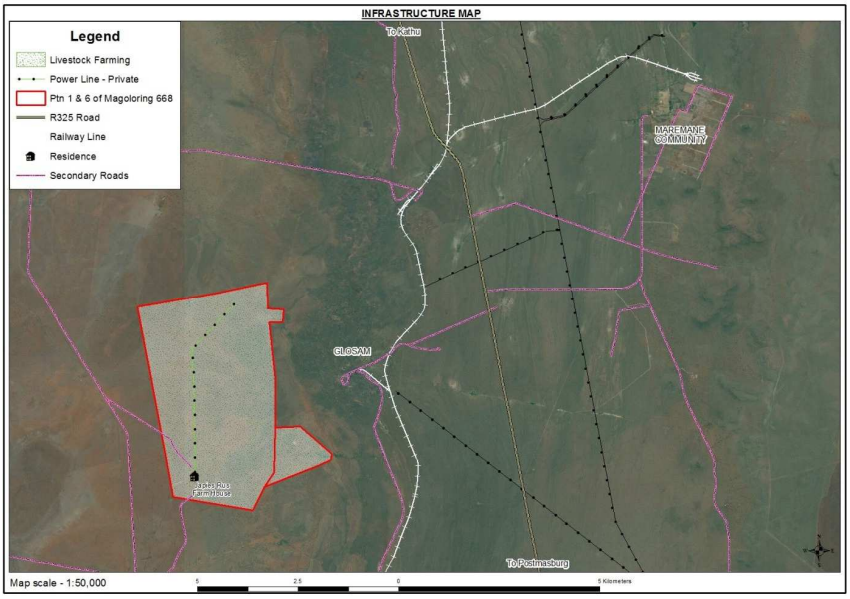

Figure 13 – Current land use and environmental map

(v) Impacts identified:

(Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impacts of such activities, and as informed by the consultations with affected parties together with the significance, probability and duration of the impacts.)

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Air quality	• Nuisance dust on roads will be created by the mining equipment hauling material between the open excavation areas, the plant area, stockpile areas and waste dump areas on the mine site. • Nuisance dust will be created by the mining equipment during excavation activities. • Nuisance dust will be created by the drilling and blasting activities. • Vehicle and equipment emissions in workshop, stores and office areas. • Nuisance dust will be created at the modular processing plant. • Nuisance dust will be created in the residue deposition site, topsoil storage site, stockpile and waste dump areas when the material is dumped. • Nuisance dust will be created when new infrastructure is established. • Nuisance dust from the roads transecting the property and surrounding area. • Dust created by surrounding prospecting and mining activities. • Fumes and noxious gases generated by blasting. • Emmissions from vehicles utilizing the road network in the area immediately surrounding the mine.	Negative	Regional	Long term	Medium	Definite	Medium

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Archaeological, cultural & heritage	• Archaeological artefacts • Burial grounds and graves • Buildings and structures older than sixty years	N/A	N/A	N/A	N/A	N/A	No impact

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Fauna	• Where new haulage roads will be created the natural habitat of the animals will be disturbed and/or destroyed. • Road kills. • Where the firebreak will be created the natural habitat of the animals will be disturbed and/or destroyed. • Where new excavations will be created the natural habitat of the animals will be disturbed and/or destroyed. • The natural habitat of the animals will be disturbed and/or destroyed where buildings and infrastructure will be built / established. • The natural habitat of the animals will be disturbed and/or destroyed where the modular processing plant will be established. • The natural habitat of the animals will be disturbed and/or destroyed where the residue deposition site, topsoil storage site, stockpile and waste dump areas will be established. • The natural habitat of the animals will be disturbed and/or destroyed where new infrastructure will be established. • Hunting & Snaring of animals • Hunting on surrounding farms • Disturbance and / or destruction of the natural habitat of the animals from surrounding prospecting / mining operations.	Negative	Site	Long term	High	Definite	Medium

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Flora	• Where new haulage roads will be created the vegetation will be disturbed and/or destroyed. • Where the firebreak will be created the vegetation will be disturbed and/or destroyed. • Where new excavations will be created the vegetation will be disturbed • The vegetation cover will be disturbed and / or destroyed in the areas where the buildings and infrastructure will be built / established. • The vegetation cover will be disturbed and / or destroyed where the modular processing plant will be established. • The vegetation cover will be disturbed and / or destroyed where the residue deposition site, topsoil storage site, stockpile and waste dump areas will be established. • The vegetation cover will be disturbed and / or destroyed where new infrastructure will be established. • Grazing of livestock and game. • Runaway veld fires. • Disturbance and / or destruction of the natural vegetation cover from surrounding prospecting / mining operations.	Negative	Site	Long term	High	Definite	Medium

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Groundwater	• Possible hydrocarbon spills from mine vehicles. • Abstraction of groundwater for the use in the mining operation. • The utilization of groundwater for the cleaning of vehicles and equipment. • Surrounding surface owners extracts groundwater for domestic and livestock farming uses. • Abstraction of groundwater by surrounding prospecting / mining operations.	Negative	Site	Long term	Low	Definite	Low

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Noise	• Noise from the mining equipment on the haulage roads. • Noise from the mining equipment and vehicles during excavations activities. • Noise from drilling and blasting activities. • A high noise impact is expected inthe immediate vicinity of the processing plant. • Noise created by traffic on surrounding road network. • Noise created by surrounding agricultural equipment / activities. • Noise created by surrounding prospecting / mining activities.	Negative	Site	Long term	Medium	Definite	Medium

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Sensitive landscapes	• Dry pans • Drainage lines	N/A	N/A	N/A	N/A	N/A	No impact

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Socio-Economic	• Capital Expenditure	Positive	Regional	Long term	Medium	Definite	High
	• Payroll income	Positive	Regional	Long term	Medium	Definite	High
	• Operating expenditure and maintenance	Positive	Regional	Long term	Medium	Definite	High
	• Revenue	Positive	Regional	Long term	Medium	Definite	High
	• Employment	Positive	Regional	Long term	Medium	Definite	High
	• Employment of contractors	Positive	Regional	Long term	Medium	Definite	High
	• Provision of skills development	Positive	Regional	Long term	Medium	Definite	High
	• Opportunities for local SMME's	Positive	Site	Long term	Medium	Definite	Medium
	• Community involvement	Positive	Site	Long term	Medium	Definite	Medium
	• Poverty alleviation	Positive	Site	Long term	Medium	Definite	High
	• Community health	Positive	Site	Long term	Medium	Definite	Medium
	• Community proximity	Negative	Site	Long term	Medium	Definite	Medium
	• Social & Labour Plan	Positive	Regional	Long term	Medium	Definite	Medium
	• Security risk	Negative	Regional	Long term	Medium	Probable	Low

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Soil	• Compaction of soil is expected on the roads that are used by the mining operation. • Possible hydrocarbon spills from mine vehicles. • Removal and disturbance of soil structure by excavation activities. • Disturbance of soil structure where buildings and infrastructure will be built / established. • Disturbance of soil structure where the residue deposition sites, topsoil storage sites, stockpile and waste dump sites will be created. • Disturbance of soil structure where new infrastructure will be established. • Disturbance of soil structure by surrounding prospecting / mining operations. • Potential hydrocarboun spills from vehicles and equipment of surrounding prospecting / mining operations.	Negative	Site	Long term	Medium	Definite	Medium

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Surface water	• If roads are not properly maintained, water erosion after thunder storms can occur. • Possible contamination of surface water by hydrocarbon spills during a rain event. • Collection of water in open excavations during and after thunderstorms. • Potential hydrocarboun spills from vehicles and equipment of surrounding prospecting / mining operations.	Negative	Regional	Long term	Medium	Definite	Medium

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Topography	• Changing of natural slopes will take place. The hill areas will be completely mined out, altering the topography permanently. • Temporary stockpiles, topsoil storage sites and waste rock dumps will be created, temprarily altering the topography. • A permanent waste rock dump will be created on site. • Changing of natural slopes by surrounding prospecting / mining operations.	Negative	Site	Long term	High	Definite	High

Impact	Description	Nature	Extent	Duration	Intensity	Probability	Significance
Visual	• The haulage roads are visible to some extent from the immediate surroundings. • Changing of natural aesthetic view of environment could take place from mining activities and relating infrastructure. • Breaking of natural skyline. • Changing of natural aesthetic view of the environment could take place from surrounding prospecting and mining activities.	Negative	Site	Long term	Low	Definite	Low

(vi) Methodology used in determining the significance of environmental impacts:

(Describe how the significance, probability and duration of the aforesaid identified impacts that were identified through the consultation process were determined in order to decide the extent to which the initial site layout needs revision.)

The assessment of the impacts has been conducted according to a synthesis of criteria required by the integrated environmental management procedure.

Nature of impact

This is an appraisal of the type of effect the activity would have on the affected environmental component. Its description should include what is being affected, and how.

Extent

The physical and spatial size of the impact. This is classified as follows:

- **Local**
  The impacted area extends only as far as the activity, e.g. a footprint.
- **Site**
  The impact could affect the whole, or a measurable portion of the property.
- **Regional**
  The impact could affect the area including the neighboring farms, transport routes and the adjoining towns.

Duration

The lifetime of the impact which is measured in the context of the lifetime of the proposed phase (i.e. construction or operation).

- **Short term**
  The impact will either disappear with mitigation or will be mitigated through natural process in a short time period.
- **Medium term**
  The impact will last up to the end of the mining period, where after it will be entirely negated.
- **Long term**
  The impact will continue or last for the entire operational life of the mine, but will be mitigated by direct human action or by natural processes thereafter.

- **Permanent**
  The only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.

Intensity

This describes how destructive, or benign, the impact is. Does it destroy the impacted environment, alter its functioning, or slightly alter it. These are rated as:

- **Low**
  This alters the affected environment in such a way that the natural processes or functions are not affected.
- **Medium**
  The affected environment is altered, but function and process continue, albeit in a modified way.

- **High**
  Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

  This will be a relative evaluation within the context of all the activities and the other impacts within the framework of the project.

Probability
This describes the likelihood of the impacts actually occurring. The impact may occur for any length of time during the life cycle of the activity, and not at any given time. The classes are rated as follows:

- **Improbable**
  The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
- **Probable**
  There is a possibility that the impact will occur to the extent that provisions must be made therefore.
- **Highly probable**
  It is most likely that the impacts will occur at some or other stage of the development.

- **Definite**
  The impact will take place regardless of any preventative plans, and mitigation measures or contingency plans will have to be implemented to contain the impact.

Determination of significance
Significance is determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The classes are rated as follows:

- **No significance**
  The impact is not likely to be substantial and does not require any mitigatory action.
- **Low**
  The impact is of little importance, but may require limited mitigation.
- **Medium**
  The impact is of importance and therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
- **High**
  The impact is of great importance. Failure to mitigate, with the objective to reduce the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

(vii) The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternatives will have on the environment and the community that may be affected:
(Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties.)

Locality of site:

- Positive:
  - Topography of the area:
    - The area dedicated for the site is relatively flat, which will ease the establishment of infrastructure.
    - Surface water run-off management will be minimal.
    - Rehabilitation of disturbed areas will be easier to conduct.
  - Locality of the ore bodies:
    The establishment of the site near the ore bodies, minimize the creation of haul roads and the overall area of impact.
  - Environmental:
    The infrastructure will be established outside all buffer zones placed around the dry pans and non-perennial drainage lines.
  - Residential:
    The infrastructure will be established outside all buffer zones placed around the residential buildings.
- Negative:
  - Locality of the ore bodies;
    The hauling distance of material will be increased as mining progresses to ore bodies situated further from the planned infrastructure area.

Locality of alternative sites:

- Positive:
  - Locality of the ore bodies;
    The hauling distance of material could be decreased if infrastructure is established at an alternative site as mining progresses.
- Negative:
  - Topography of the area:
    - Should the area where the site will be not be flat, it could cause design problems during establishment.
    - Surface water run-off management would be problematic.
    - Rehabilitation of disturbed areas will be harder to conduct.
  - Locality of the ore bodies;
    The establishment of more haul roads and a larger overall area of impact.

(viii) The possible mitigation measures that could be applied and the level of risk:

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment / discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered.)

Impact	Mitigation	Risk
Air quality	• Speed limits; • Spraying of surfaces with water; • Avoidance of unnecessary removal of vegetation; • Re-vegetation; • Monitoring; • Backfilling and rehabilitation of disturbed areas; and • Controlled drilling and blasting operations, preferably on wind-free days.	Medium
Fauna	• Speed limits; • Continuous backfilling of open excavations; • Low angle access ramp in excavations; • Continuous rehabilitation of disturbed areas; • Snares & traps removed and destroyed; and • Maintenance of firebreaks.	Medium
Flora	• Continuous backfilling of open excavations; • Continuous rehabilitation of disturbed areas; • Maintenance of firebreaks; • No trees felled for firewood; • Obtain relevant permit before removal of protected tree or plant species; and • Re-seeding where necessary.	Medium
Ground water	• Immediate removal of any hydrocarbon spill; • Maintenance in dedicated area; • Re-fuelling in dedicated area; • Drip pans; • Storage of hydrocarbons in dedicated areas; • Monitoring of groundwater abstraction and quality; and • Clean & Dirty water system.	Low
Noise	• Hearing protection; • Non-metallic washers to join infrastructure; • Working hours; • Controlled drilling & blasting operations; • Silencers on equipment and vehicles; • Acoustic enclosure for generators; and • Distance from residence of surface owner.	Medium
Soil	• Continuous backfilling of open excavations; • Continuous rehabilitation of disturbed areas; • Ripping of compacted areas; • Replacing layer of topsoil over backfilled areas; • Maintenance & refuelling in dedicated areas; • Drip pans;	Medium

	• Storage of hydrocarbons in dedicated areas; and • Immediate removal of any hydrocarbon spill.	
Surface water	• Storm water control; • Immediate removal of any hydrocarbon spill; • Maintenance & re-fuelling in dedicated areas; • Drip pans; • Storage of hydrocarbons in dedicated areas; • Clean & dirty water plan.	Low
Topography	• Continuous backfilling of open excavations; • Replacing layer of topsoil over backfilled areas; • Sloping of rehabilitated and disturbed areas; and • Sloping of topsoil dumps, stockpiles and waste rock dumps.	High
Visual	• Continuous backfilling of open excavations; • Replacing layer of topsoil over backfilled areas; • Sloping of rehabilitated and disturbed areas; • Sloping of topsoil dumps, stockpiles and waste rock dumps; and • Removal of all infrastructure upon mine closure.	Low

(ix) The outcome of the site selection Matrix:- Final site layout plan:
(Provide a final site layout plan as informed by the process of consultation with interested and affected parties.)

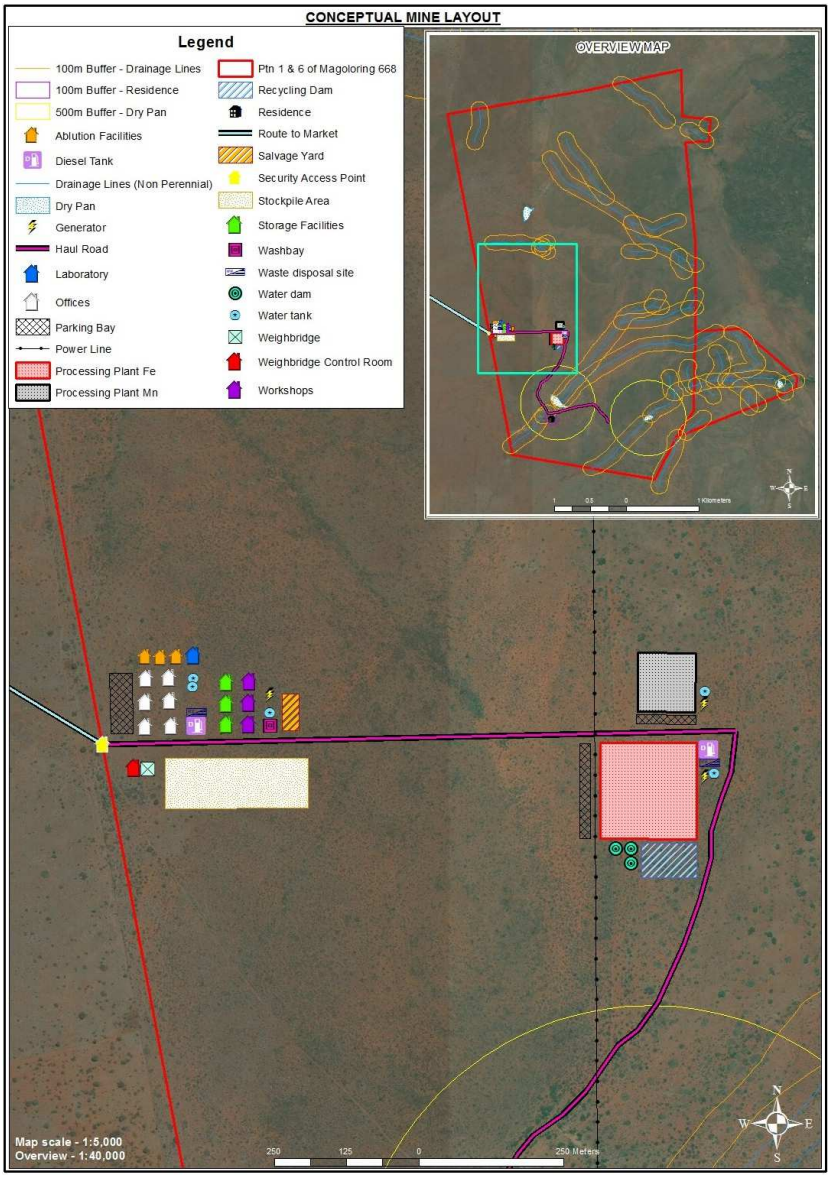

Figure 14 – Conceptual site layout plan

(x) Motivation where no alternative sites were considered:

No viable alternative sites were identified for the following reasons:

- A drilling programme was conducted on the abovementioned properties under the valid Prospecting Right, which results proved the feasibility of the project.
- The drilling results and findings of Geologists indicates that the Diamond bearing ground within the boundaries of the abovementioned property that can be viably mined.
- The final locality of the above infrastructure was decided upon after taking into account of the following:-
  - Locality of the diamond bearing ground;
  - Topography of the area;
  - Locality of the residential buildings at the site;
  - Environmental features; and
  - Discussions with the legal occupant.

(xi) Statement motivating the preferred site:
(Provide a statement motivating the final site layout that is proposed.)

The site was firstly determined as BDE had prospecting right over the properties. The final site layout was determined by taking into account all positive and negative environmental impacts, inputs from the legal occupant and all operational requirements.

i) **Plan of study for the Environmental Impact Assessment process:**

(i) Description of alternatives to be considered including the option of not going ahead with the activity:

- Land use development alternatives:
  The site layout may vary, depending on the operational requirements, but the final design and layout of the infrastructure can only be decided upon by the management team after granting and execution of the Mining Right and during the construction phase.

- No-go option:
  The following positive impacts will be lost if the proposed mining project is not developed:
  - Foreign income and TAX obligations to SARS
  - CAPEX spent locally and regionally
  - Employment
  - Payroll income
  - Operating expenditure and maintenance (OPEX)
  - Revenue

(ii) Description of the aspects to be assessed as part of the environmental impact assessment process:

(The EAP must undertake to assess the aspects affected by each individual mining activity whether listed or not, including activities such as blasting, loading, hauling and transport, and mining activities such as excavations, stockpiles, discard dumps or dams, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc…)

>>.

(iii) Description of aspects to be assessed by specialists:

Specialists / specialist companies will be appointed to conduct a site visit and assess the following baseline environment of the application area:

- Air quality;
- Archaeology, cultural & heritage;
- Fauna;
- Flora;
- Ground- and surface water;
- Noise;
- Socio-economic; and
- Soil.

(iv) Proposed method of assessing the environmental aspects including the proposed method of assessing alternatives:

The assessment of the impacts shall been conducted according to a synthesis of criteria required by the integrated environmental management procedure.

The findings in the specialists' reports will be evaluated and measured against the identified potential impacts that could occur from the mining activities.

(v) The proposed method of assessing duration significance:

The lifetime of the impact will be measured in the context of the lifetime of the proposed phase or activity.

- **Short term**
  The impact will either disappear with mitigation or will be mitigated through natural process in a short time period.
- **Medium term**
  The impact will last up to the end of the mining period, where after it will be entirely negated.
- **Long term**
  The impact will continue or last for the entire operational life of the mine, but will be mitigated by direct human action or by natural processes thereafter.

- **Permanent**
  The only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.

(vi) The stages at which the Competent Authority will be consulted:

Consultation with the Competent Authority will take place throughout the application process, however more specifically; consultation will take place before submission of the Scoping Report and again before submission of the EIA/EMPR Report.

(vii) Particulars of the public participation process with regard to the Impact Assessment process that will conducted:

1. **Steps to be taken to notify interested and affected parties:**
   (These steps must include the steps that will be taken to ensure consultation with the affected parties identified in (h)(ii) herein.)

   Registered interested and/or affected parties shall be notified of the EIA process as follows:
   - Notification letters;
   - Newspapers advert in one local and one regional newspaper; and
   - Notice board at the entrance of the site.

2. **Details of the engagement process to be followed:**
   (Describe the process to be undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings and record of such consultation will be required in the EIA at a later stage.)

   - One-on-One meeting with surface owner (should it be possible to arrange such a meeting) and legal occupant.
   - Public meeting with all other interested and/or affected parties.

3. **Description of the information to be provided to Interested and Affected Parties:**
   (Information to be provided must include the initial site plan and sufficient detail of the intended operation and the typical impacts of each activity, to enable them to assess what impact the activities will have on them or on the use of their land.)

   A draft copy of the EIA / EMPR document will be provided to the surface owner, legal occupant of the properties and all registered interested and / or affected parties for comment and input.

   A draft copy of the EIA / EMPR document will be placed at the Tsatsabane Local Municipality for comment and input from any other interested and/or affected party. I&AP's will be notified that the EIA/EMPR is available for review by means of a newspaper advert in one local and one regional newspaper.

(viii) Description of the tasks that will be undertaken during the environmental impact assessment process:

The process shall entail the appointment of specialists, review of all available information, impact assessment, consultation and drafting of EIA/EMPR.

(ix) Measures to avoid, reverse, mitigate, or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored:

ACTIVITY Whether listed or not listed (e.g. excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water suppy dams and boreholes, accommodation, offices, ablution, stores, workshops, processing lant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc…)	**POTENTIAL IMPACT** (e.g. dust, noise, drainage, surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc…etc…)	**MITIGATION TYPE** modify, remedy, control or stop (e.g. noise control measures, stormwater control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc…etc…) (e.g. modify through alternative method. Control through management and monitoring through rehabilitation.)	**POTENTIAL FOR RESIDUAL RISK**
Blasting	• Dust • Fly-rock • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Surface disturbance • Surface water contamination	• Dust control and monitoring • Noise control and monitoring • Access control. • Continuous rehabilitation. • Stormwater run-off control.	Medium
Chemical toilets	• Soil contamination • Groundwater contamination	• Maintenance of toilets on regular basis. • Removal of toilets upon closure.	Very low
Clean & Dirty water system	• Surface disturbance • Groundwater contamination • Soil contamination • Surface water contamination	• Maintenance of berms and trenches. • Groundwater levels and quality monitoring. • Oil traps used in relevant areas. • Drip trays used. • Immediately clean hydrocarbon spill.	Low
Diesel tanks	• Groundwater contamination • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance	• Maintenance of diesel tanks and bund walls. • Oil traps. • Groundwater quality monitoring. • Drip tray at re-fuelling point. • Immediately clean hydrocarbon spill.	Medium

Excavations	• Dust • Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance • Surface water contamination	• Access control • Dust control and monitoring • Groundwater quality monitoring • Noise control and monitoring • Continuous rehabilitation • Stormwater run-off control • Immediately clean hydrocarbon spill • Drip trays • Rock stability control and monitoring • Erosion control	Medium
Explosives magazine	• Groundwater contamination • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance • Surface water contamination	• Access control • Maintenance of magazines and fence. • Groundwater quality monitoring • Stormwater run-off control • Immediately clean spill	Very low
Generator	• Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance	• Access control • Maintenance of generator and bund walls • Noise control and monitoring • Oil traps • Groundwater quality monitoring • Immediately clean hydrocarbon spill	Medium
Office – mobile container	• Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance	• Immediately clean hydrocarbon spill • Rip disturbed areas to allow re-growth of vegetation cover	Very low
Parking bay	• Dust • Groundwater contamination • Noise • Removal and disturbance of	• Dust control and monitoring • Groundwater quality monitoring • Noise control and monitoring • Drip trays	Low

	vegetation cover and natural habitat of fauna • Surface disturbance	• Stormwater run-off control. • Immediately clean hydrocarbon spills • Rip disturbed areas to allow re-growth of vegetation cover	
Processing plant	• Dust • Noise • Groundwater contamination and usage • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance	• Access control • Maintenance of processing plant • Dust control and monitoring • Groundwater quality and level monitoring • Noise control and monitoring • Drip trays • Stormwater run-off control. • Immediately clean hydrocarbon spills • Rip disturbed areas to allow re-growth of vegetation cover	Medium
Rapid reloading area (explosives)	• Dust • Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Surface disturbance	• Access control • Dust control and monitoring • Groundwater quality monitoring • Noise control and monitoring • Drip trays • Stormwater run-off control. • Immediately clean hydrocarbon spills • Rip disturbed areas to allow re-growth of vegetation cover	Low
Recycling dam	• Surface disturbance • Groundwater contamination • Soil contamination • Surface water contamination	• Maintenance of dam walls. • Groundwater levels and quality monitoring.	Low
Roads	• Dust • Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat	• Maintenance of roads • Dust control and monitoring • Groundwater quality monitoring • Noise control and monitoring • Speed limits	Low

	of fauna • Surface disturbance	• Stormwater run-off control. • Erosion control • Immediately clean hydrocarbon spills • Rip disturbed areas to allow re-growth of vegetation cover	
Salvage yard	• Groundwater contamination • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance • Surface water contamination	• Access control • Maintenance of fence. • Groundwater quality monitoring • Stormwater run-off control • Immediately clean hydrocarbon spill	Low
Security access control point – mobile container	• Dust • Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Surface disturbance	• Access control • Maintenance of boom gates and container. • Dust control and monitoring • Noise control and monitoring • Groundwater quality monitoring • Immediately clean hydrocarbon spill • Rip disturbed areas to allow re-growth of vegetation cover	Low
Stockpile area	• Dust • Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Surface disturbance	• Dust control and monitoring • Groundwater quality monitoring • Noise control and monitoring • Drip trays • Stormwater run-off control. • Immediately clean hydrocarbon spills • Rip disturbed areas to allow re-growth of vegetation cover	Low
Storage facility – mobile containers	• Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination	• Immediately clean hydrocarbon spill • Rip disturbed areas to allow re-growth of vegetation cover	Very low

	• Surface disturbance		
Stormwater dam	• Surface disturbance • Groundwater contamination • Soil contamination • Surface water contamination	• Maintenance of dam walls. • Groundwater levels and quality monitoring.	Low
Subgrade stockpile area	• Dust • Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Surface disturbance	• Dust control and monitoring • Groundwater quality monitoring • Noise control and monitoring • Drip trays • Stormwater run-off control. • Immediately clean hydrocarbon spills • Rip disturbed areas to allow re-growth of vegetation cover	Low
Topsoil storage area	• Dust • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil disturbance • Surface disturbance	• Dust control and monitoring • Stormwater run-off control. • Continuous rehabilitation • Rip disturbed areas to allow re-growth of vegetation cover • Backfilling of topsoil during rehabilitation	Low
Washbay	• Groundwater contamination and usage • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination	• Groundwater quality and level monitoring • Concrete floor with oil/water separator • Stormwater run-off control • Immediately clean hydrocarbon spills	Low
Waste disposal site	• Groundwater contamination • Surface water contamination	• Storage of waste within receptacles • Storage of hazardous waste on concrete floor with bund wall • Removal of waste on regular intervals.	Low
Waste rock dumps	• Dust • Groundwater contamination • Noise	• Dust control and monitoring • Groundwater quality monitoring • Noise control and monitoring	Low

	• Removal and disturbance of vegetation cover and natural habitat of fauna • Surface disturbance	• Stormwater run-off control. • Rip disturbed areas to allow re-growth of vegetation cover	
Water dam	• Groundwater abstraction and usage • Surface disturbance	• Line dam • Maintenance of dam walls. • Groundwater levels and quality monitoring.	Low
Water distribution pipeline	• Groundwater abstraction and usage	• Maintenance of pipeline	Low
Water tank	• Groundwater abstraction and usage • Surface disturbance	• Maintain water tanks and structures. • Groundwater levels and quality monitoring.	Low
Weighbridge	• Dust • Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Surface disturbance	• Access control • Maintenance of weighbridge • Dust control and monitoring • Noise control and monitoring • Groundwater quality monitoring • Immediately clean hydrocarbon spill • Rip disturbed areas to allow re-growth of vegetation cover	Low
Weighbridge control room – mobile container	• Dust • Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Surface disturbance	• Access control • Maintenance of weighbridge control room • Dust control and monitoring • Noise control and monitoring • Groundwater quality monitoring • Immediately clean hydrocarbon spill • Rip disturbed areas to allow re-growth of vegetation cover	Low
Workshop – mobile containers	• Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat	• Access control • Concrete floor with oil/water separator • Maintenance of mobile containers • Noise control and monitoring	Low

	of fauna • Surface disturbance	• Groundwater quality monitoring • Immediately clean hydrocarbon spill	

(x) Other information required by the Competent Authority:

1. Compliance with the provisions of Sections 24(4)(a) and (b) read with Section 24(3)(a) and (7) of the National Environmental Management Act (Act 107 of 1998), the EIA report must include the:-

a. Impact on the socio-economic conditions of any directly affected person:

(Provide the results of investigation, assessment and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as Appendix '7' and confirm that the applicable mitigation is reflected in 2.5.3, 2.11.6 and 2.12 herein.)

- Impact on landowner:
  Positive: Compensation of land lost to mining.
  Negative: Loss of grazing land

- Impact on other I&AP:
  - To be determined during consultation process. The results shall be included in the EIA/EMPR document.

A specialist company will be appointed to conduct a study of the socio-economic impact of the project. The findings of this report will be included in the EIA/EMPR document.

b. Impact on any national estate referred to in Section 3(2) of the National Heritage Resources Act:

(Provide the results of investigation, assessment and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in Section 3(2) of the National Heritage Resources Act, 1999 (Act 25 of 1999) with the exception of the national estate contemplated in Section 3(2)(i)(vi) and (vii) of that Act, attach the investigation report as Appendix '8' and confirm that the applicable mitigation is reflected in 2.5.3, 2.11.6 and 2.12 herein.)

A specialist company will be appointed to conduct an archaeological assessment. The findings of this report will be included in the EIA/EMPR document.

(xi) Other matters required in terms of Sections 24(4)(a) and (b) of the Act:

(The EAP managing the application must provide the Competent Authority with details, written proof of an investigation as required by Section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist. The EAP must attach such motivation as Appendix '9'.)

There are no viable alternatives as JRM has a prospecting right over the properties and over which the resources has been proven through prospecting activities.

(xii) Undertaking regarding correctness of information:

Name: M Mcguire
Date:19 /09/2017

(xiii) Undertaking regarding level of agreement:

-END-