mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

ENVIRONMENTAL IMPACT ASSESSMENT REPORT
and
ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

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

NAME OF APPLICANT:	**Kophia Diamonds (Pty) Ltd**
TEL NO:	**082 450 7195 (Herman Olivier)**
CEL NO:	**082 450 7195 (Herman Olivier)**
FAX NO:	**086 510 7120**
POSTAL ADDRESS:	**PO Box 470** **Kimberley** **8300**
PHYSICAL ADDRESS:	**Phoenix Park** **De Beers Old Geology Complex** **Building 2, Section A** **Boshof Road** **Kimberley** **8300**
FILE REFERENCE NUMBER SAMRAD:	**(NC) 30/5/1/2/2/10052 MR**

1. IMPORTANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act, 2002 (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, 1998 (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 a 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 therefore 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.

2. OBJECTIVE OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

The objective of the environmental impact assessment process is to, through a consultative process—

(a) determine the policy and legislative context within which the activity is located and document how the proposed activity complies with and responds to the policy and legislative context;

(b) describe 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 the location of the development footprint within the preferred site based on an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects of the environment;

(d) determine the—

  (i) nature, significance, consequence, extent, duration and probability of the impacts occurring to inform identified preferred alternatives; and

  (ii) degree to which these impacts—

    (aa) can be reserved;

    (bb) may cause irreplaceable loss of resources; and

    (cc) can be avoided, managed or mitigated.

(e) identify the most ideal location for the activity within the preferred site based on the lowest level of environmental sensitivity identified during the assessment;

(f) identify, assess, and rank the impacts the activity will impose on the preferred location through the life of the activity;

(g) identify suitable measures to manage, avoid or mitigate identified impacts; and

(h) identify residual risks that need to be managed and monitored.

PART A

SCOPE OF ASSESSMENT AND ENVIRONMENTAL IMPACT ASSESSMENT REPORT

1. Contact Person and Correspondence Address

a) i) Details of the EAP

Name of the Practitioner:	**ROELINA OOSTHUIZEN**
Tel No.:	**053 8320029**
Cell No.:	**084 208 9088**
Fax No.:	**086 510 7120**
E-mail address:	**roosthuizen950@gmail.com**

ii) Expertise of the EAP

(1) The qualifications of the EAP

Masters in Environmental Management (UFS)
B-Comm in Human and Industrial- Psychology (NWU)
(With evidence attached as **Appendix 1**)

(2) Summary of the EAP's past experience

(In carrying out the Environmental Impact Assessment Procedure)

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. Please refer to attached CV.
(with evidence attached as **Appendix 2**)

b) Description of the property

Farm Name:	**Portion 4 of Farm Blaauwboschfontein No. 229, Boshof** **Farm No.:** 229 **Farm Name:** Blaauwboschfontein **Portion:** 4 **Magisterial District:** Boshof **Province:** Freestate **Title Deed No.:** T4833/2003
Application area (Ha):	41.0119 (Forty One comma zero one one nine hectares)
Magisterial district:	Boshof
Distance and direction from nearest town:	Blaauwboch Diamond mine is situated 23km East of the small town of Boshof in the Free State province - 75km east-north-east of Kimberley, Northern Cape Province in the Republic of South Africa.
21 digit Surveyor General	F00400000000022900004

Code for each farm portion:	
Description of the overall activity	Mining Right Application Kophia Diamonds (Pty) Ltd (1965/003692/07) is the lawful holder of a Converted Mining Right converted by the Minister of Mineral Resources in terms of Item 7(3) of Schedule 2 to the MPRDA the conversion have been granted, which mining right entitles the applicant to mine for diamonds (Kimberlite) in, on and under The farm Catherines Fancy No. 831 and previously Portion 4 of Farm Blaauwboschfontein No. 229, Situated in the District of Boshof, Measuring 126.6651 (One hundred and twenty six comma six six five one hectares). The farm Blaauwboschfontein was excluded from the conversion and the applicant were instructed to do a separate application for Portion 4 of Blaauwboschfontein 229 which comprise 41.0119 ha, the conversion was executed only for Catherines Fancy No. 831 (85.6532 ha). The two portions have been mined as an entity since the mine started up in 1912. The Blaauwbosch Kimberlite Pipe was mined, from surface (opencast) from 1912 – 1922. It was re-opened and mined via underground workings from 1965 to 1967. Mining recommenced in 2003, with the working of tailings dumps and underground mining.

Year	Company	Activity
1909	Blaaubosch Diamond and Development Syndicate Ltd	Company registered
1910	Blaaubosch Diamonds Ltd	Name changed
1912	Blaaubosch Diamonds Ltd	Opencast production commenced on both the pipe and the fissure
1922	Blaaubosch Diamonds Ltd	Production halted
1965	Kophia Diamonds Ltd	Company registered by the Snyman Family
1965	Blaaubosch Diamonds Ltd	Underground Mining re-commenced.
1967	Blaaubosch Diamonds Ltd	Mining suspended due to mud rush and the flooding of the mine workings
1981	Octha Group	Commenced exploration programme which included the drilling of nine boreholes.
1981	Bellsbank Mining Number One Pty Ltd	Purchase surface rights on Farm 831 and Portion 4 of Farm 220
1981	Unknown	Registration of Mineral Rights documents
1984	Octha Group	Exploration programme was halted but not completed
1991	Trans Hex Mynbou Limited	Purchase surface rights on Farm 831 and Portion 4 of Farm 229 (T8260/1991), for an amount of R200 000
2002	Kophia Diamonds (Pty) Ltd	Submitted EMPR prepared by Van Riet and Louw
2002	Department of Minerals and Energy	Approved EMPR
2003	Bellsbank Mining Number One Pty Ltd	Purchased surface rights on Farm 831 and Portion 4 of Farm 229 (T4633/2003) for an amount of R520 700
2003	Dr. MvR Steyn	Prepared a prefeasibility valuation

Blaauwboshch is a Group 2 kimberlite comprising of a relatively large pipe and a well-developed fissure which extends both north and south of the pipe, of which most is situated on the Catherines Fancy portion.

Historically, Blaauwbosch was the 19th largest producing kimberlite pipe and was mined to a depth of about 110m producing 967,000t of ore, yielding 338 carats of a grade of 35 cpht. After flooding in 1967, operations were ceased. The mines re-opened in 2004 with the resumption of production. However, tailings were processed since 2003. In 2005 production was halted to undertake plant redesign, shaft deepening and underground development.

The shaft was sunk to a depth of 185m and it allowed the shaft to reach 220m underground. This was done to allow for development in a deeper block of kimberlite ore.

c) Locality map

(show nearest town, scale not smaller than 1:250000)

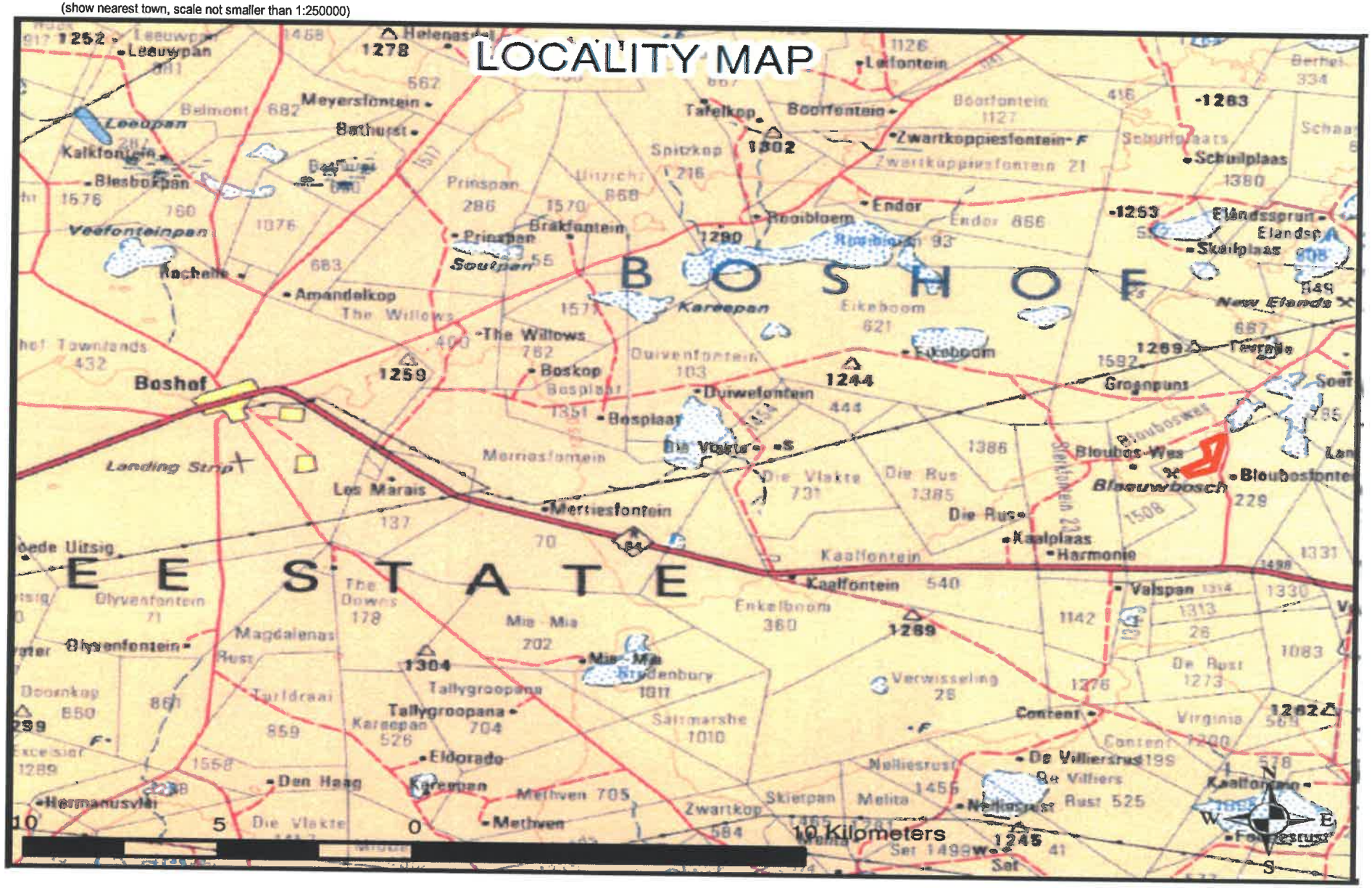

Figure 1. 1:250 000 topocadastral map indicating the locality of the proposed mining right in red.

d) Description of the scope of the proposed overall activity

(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)

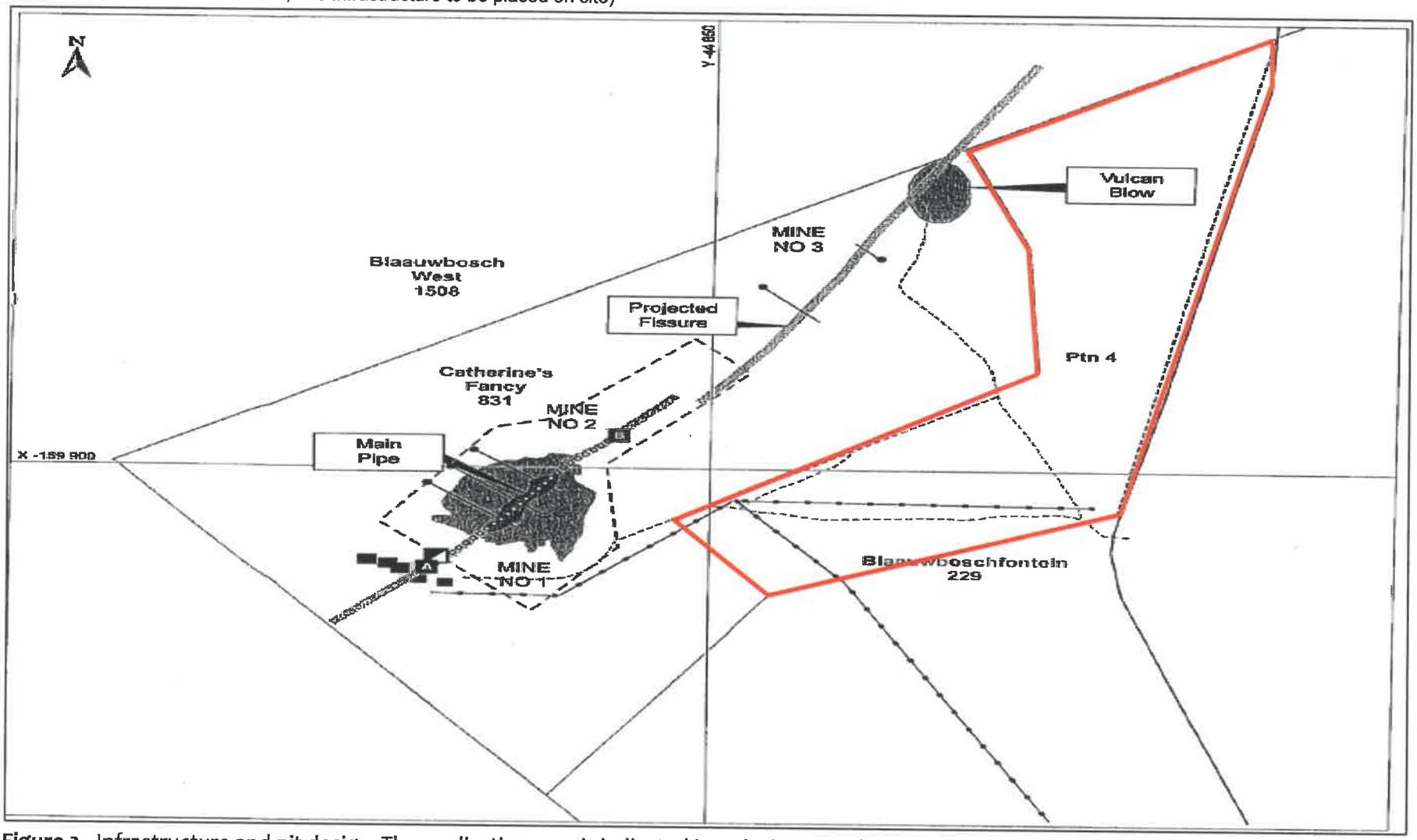

Figure 2. Infrastructure and pit design. The application area is indicated in red. The rest of the mine is located on Catherines Fancy

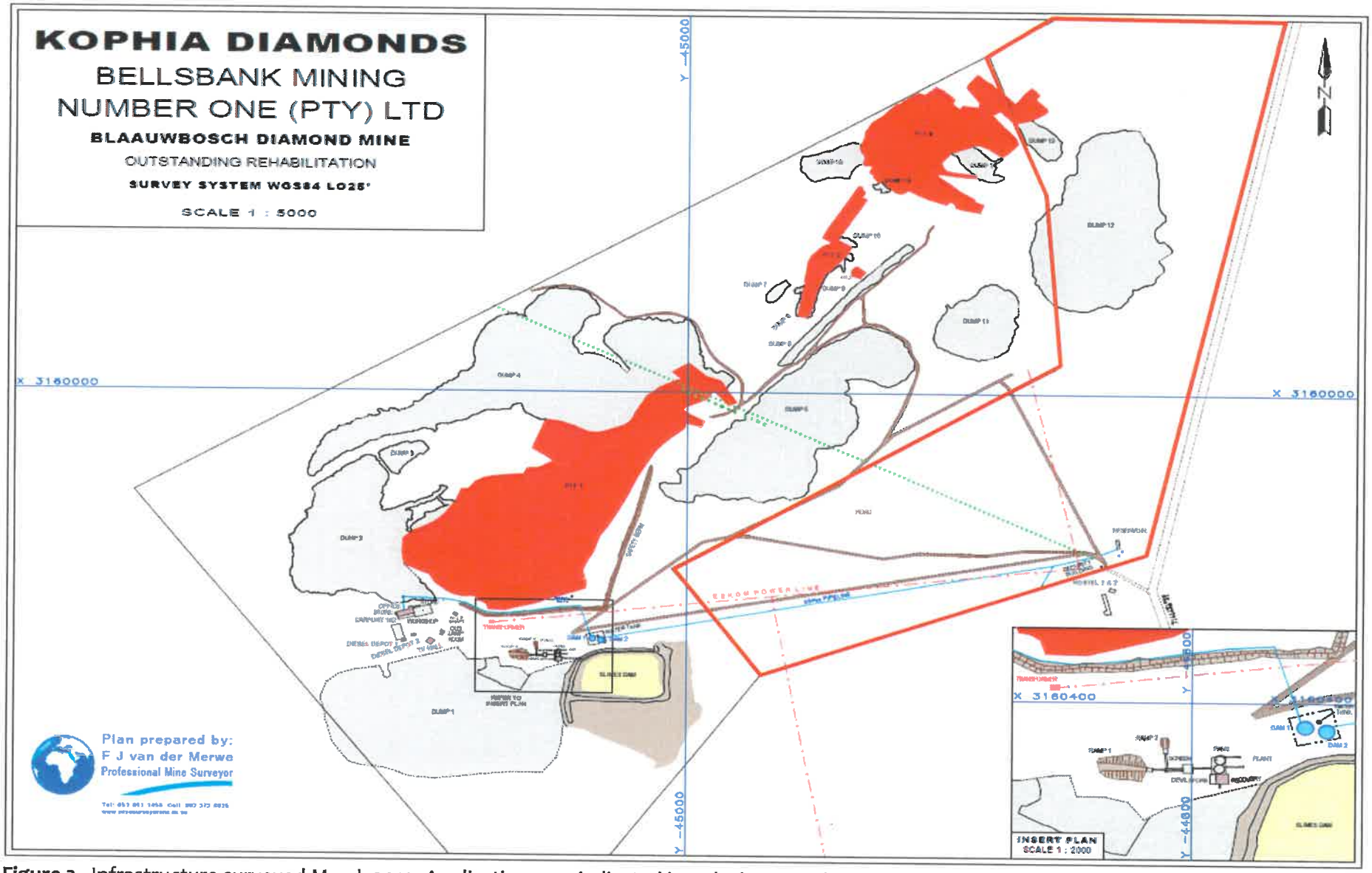

Figure 3. Infrastructure surveyed March 2019. Application area indicated in red. The rest of the mine is located on Catherines Fancy

i) Listed and specified activities

Table 1: Listed and Specified Activities

NAME OF ACTIVITY (E.g. for prospecting – drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route, etc. ... etc. ... etc. E.g. for mining – excavations, blasing, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc. ... etc. ... etc.)	Aerial extent of the Activity Ha or m²	LISTED ACTIVITY (Mark with an X where applicable or affected).	APPLICABLE LISTING NOTICE *(GNR 544, GNR 545 or GNR 546)*	WASTE MANAGEMENT AUTHORISATION (Indicate whether an authorisation is required in terms of the Waste Management Act). (Mark with an X)
Activity 17 of NEMA Listing Notice 2 "Any activity including the operation of that activity which requires a mining right as contemplated in section 22 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002), including (a) infrastructure, structures and earthworks, directly related to the extraction of a mineral resource; or (b) including activities for which exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, sreening or washing; But excluding the secondary processing of a mineral resource, including the	**41.0119 ha** .	X	GNR 325	

smelting, beneficiation, reduction, refining, calcining or gasification of the mineral resource in which case activity 6 in this notice applies.				
Activity 21 of NEMA Listing Notice 2 Any activity including the operation of that activity associated with the primary **processing of a mineral resource** including winning, reduction, extraction, classifying, concentrating, crushing, screening and washing but excluding the smelting, beneficiation, refining, calcining or gasification of the mineral resource in which case activity 6 in this Notice applies.	**1 ha will be used for the processing plant and associated infrastructure.**	X	GNR 325	
Activity 24(ii) of NEMA Listing Notice 1 A road with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres;	±5 000m² on the Area.	X	GNR 327	
Activity 56(ii) of NEMA Listing Notice 1 The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre- (i) where the existing reserve is wider than 13,5 meters; or	±5 000m² on the Area.	X	GNR 327	

(ii) where no reserve exists, where the existing road is wider than 8 metres; Excluding where widening or lengthening occur inside urban areas.				
Activity 15 of NEMA Listing Notice 2 "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."	A total of at least 20 hectares will be physically disturbed were the diamond material will be removed and washed.	X	GNR 325	
Activity 10 of NEMA Listing Notice 3: "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." b. Free State i Outside urban areas: (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas;	250m²	X	GNR 324	

(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (dd) Sites or areas identified in terms of an international convention; (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (ff) Core areas in biosphere reserves; (gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve; or (hh) Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland; or				
Activity 9 of Category A under the National Environmental Management: Waste Act 59 of 2008	The disposal of inert waste of 10 000 tons, excluding the disposal of such waste for the purposes of levelling and building which has been authorised by other legislation.		GNR 633	X
Activity 15 of Category A under the National Environmental Management:	20 000m²		GNR 633	X

Waste Act 59 of 2008 The continuous establishment and reclamation of temporary stockpiles resulting from activities which require a mining right.				
OTHER ACTIVITIES (Associated infrastructure not considered to be listed activities) Temporary Workshop Facilities Storage Facilities Concrete Bund walls and diesel Depots Ablution Facilities Topsoil Stockpiles Overburden Stockpiles	 ±3000m² ±3000m² ±2500m² ±2500m²		NOT LISTED	

ii) Description of the activities to be undertaken

(Describe methodology or technology to be employed, including the type of commodity to be mined and for a linear activity, a description of the route of the activity)

The mining venture has been divided into two phases: Phase one involves the reprocessing of the old tailings, while phase two entails the mining of the Kimberlite pipe beneath the blast hole using inclined chambering of which most of the infrastructure is situated on Catherines Fancy at present.

The Kimberlite is mined underground by means of inclined chambering which is essentially a combination of shrinkage, stoping and caving in which, advangtage is taken of the pressure exerted by the loose rock, which through the collapse of the kimberlite pipe walls, accumulates in the open excavations.

Entry into the mine is made through two shafts, south of the sourhern limit of the kimberlite is Shaft 2 and north of the northern limit is shaft No 1. No 2 Shaft is the main man and materials shaft and is situated near the open pit close to the mine site buildings.

The tunnel in the ore body are 1.8m X 1.8m. Tunnel support is not required at the current levels of operation but passive support is applied where necessary.

Drilling, charging and blasting takes place according to a mining plan. The mining official is responsible for checking the qualit of the air and for adhering to the fresh air re entry level standards after blasting have taken place.

The ore is loaded from the stockpiles onto small trolleys (coco pans) and tipped into ore passes. The ore moves down the pass form the production level to the collection point on the 225 m L by means of gravity. The ore is conveyed from the ore pass bin on 225 m L to the storage box at the shaft. Here it is tipped into the skip and hoisted to surface.

The blasting is carried out by a qualified miner and explosives are kept in a registered explosive magazine on site. African Explosives (Pty) Ltd (AEL) are responsible for the supply and delivery of explosives to the Blaauwbosch Mine.

No diesel operated equipment is used underground; a compressed air loader is used to scoop the ore into coco pans which have a capacity of 250 kg. The Coco pans are wheeled along tracks to the ore pass.

The main shaft provides the structure for hoisting equipment to raise the ore and rock to the surface, an access for water pipelines and pumping equipment to dewater the mine, compresssed air lines and the mechanical equipment for the shaft operations. The main man and materials shaft is located at the number 2 shaft close to the mine buildings. People are lowered and raised to the workings in the cage and ore is hoisted

in a skip to the surface. The skip has a capacity of approximately 3 tons. The ore is stockpiled on surface and loaded and trammed to the plant.

Planned production rate

The current maximum hoisting capacity of the No2 shaft is approximately 7000 tons per month. In future with a planned upgrade at a cost of approximately R800,000 this could increase to 12,000 tpm.

A provisional mine plan has been produced that focuses on applying a mining strategy aimed at improving ground conditions in the upper levels of the mine (down to 145 m L) without comprimising future production. This initially will require the development of a number of rock drives and crosscuts needed to provide the additonal drawpoints neccesary to introduce a systematic and controlled draw down of or eand float located above 145 m L.

The main shaft, No 2 shaft, goes down to 205 m level and shaft bottom is at 225metres. Development is to be done on the 145 m level to the south and the north lobes of the pipe in order that production may commence here.

Stoping of the Fissure between 104 m level and 53 level can be carried out on both the North and South sections of the fissure. Full production from underground will not take place until the shaft work and development has been completed. This will take about 3 months.

Initially a production rate of 80 000 t per annum is envisaged and if the refurbishment and upgrade plan is implemented it is estimated that 130 000 t of ground can be processed per annum.

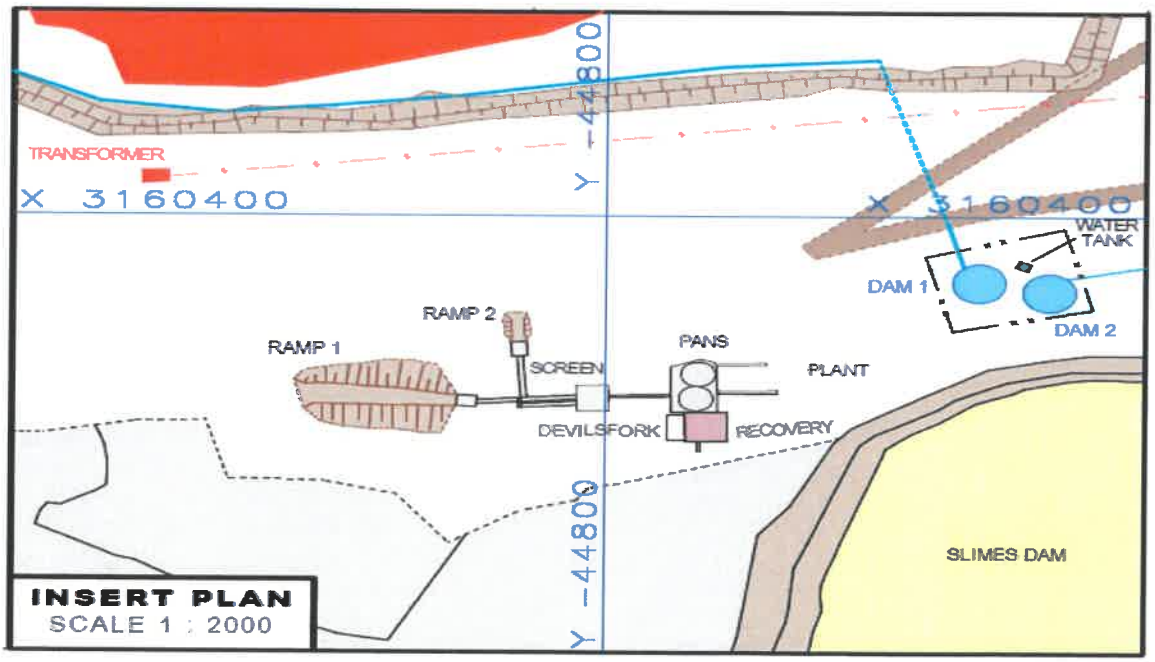

Figure 4. Conceptual schematic flow diagram of the plant standing on Catherines Fancy.

e) Policy and Legislative Context

Table 2: Applicable legislation and guidelines used to compile the report

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	HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE POLICY AND LEGISLATIVE CONTEXT (E.g In terms of the National Water Act:- Water Use License has/has not been applied for).
Conservation of Agricultural Resources Act (Act 43 of 1983) and Regulations (CARA)	- Section 5: Implementation of control measures for alien and invasive plant species; - Section 6: Control measures. - Regulation GN R1048, published on 25 May 1984, in terms of CARA	- Control measures are to be implemented upon the approval of the EMPR.
Constitution of South Africa (Act 108 of 1996)	- Section 24: Environmental right - Section 25: Rights in Property - Section 27: Water and sanitation right	- To be implemented upon the approval of the EMPR.
Environment Conservation Act (Act 73 of 1989) and Regulations (ECA)	- Sections 21, 22, 25, 26 and 28: EIA Regulations, including listed activities that still relate to the existing section of ECA. - Section 28A: Exemptions.	- To be implemented upon the approval of the EMPR.
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.	- Control measures are to be implemented upon the approval of the EMPR.
Hazardous Substances Act (Act 15 of 1973) and Regulations read	- Definition, classification, use, operation, modification, disposal or dumping of hazardous substances.	- Noted and Considered measures are to be implemented upon the

together with NEMA and NEMWA		approval of the EMPR.
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	- Entire Act.	- Control measures are to be implemented upon the approval of the EMPR.
Mineral and Petroleum Resources Development Act (Act 28 of 2002) and Regulations as amended	- Entire Act. - Regulations GN R527	- A Mining Right has been applied for (FS) 30/5/1/2/2/10052 MR. - Rights and obligations to be adhered to.
National Environmental Management Act (Act 107 of 1998) and Regulations as amended	- Section 2: Strategic environmental management principles, goals and objectives. - Section 24: Foundation for Environmental Management frameworks. - Section 24N: - Section 24O: - Section 28: The developer has a general duty to care for the environment and to institute such measures to demonstrate such care. - Regulations GN R547, more specifically Chapters 5 and 7, where applicable (the remainder was repealed) published on 18 June 2010 in terms of NEMA (Environmental Management Framework Regulations) - Regulations GN R982 to R985, published on 4 December 2014 in terms of NEMA (Listed Activities) - Regulations GN R993, published on 8 December 2014 in terms of NEMA (Appeal) - Regulations GN R994, published on 8 December 2014 in terms of NEMA (exemption) - Regulations GN R205, published on 12 March 2015 in	- Control measures are to be implemented upon the approval of the EMPR.

	terms of NEMA (National appeal Amendment Regulations) - Regulations GN R1147, published on 20 November 2015 in terms of NEMA (Financial Provision)	
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 - Regulation GN R551, published on 12 June 2015 (amended Categories 1 to 5 of GN 983) in terms of NEM:AQA (Atmospheric emission which have a significant detrimental effect on the environment) - Regulation GN R283, published on 2 April 2015 in terms of NEM:AQA (National Atmospheric Emissions Reporting Regulations) (Group C-Mines)	- Control measures are to be implemented upon the approval of the EMPR. - This is also legislated by Mine Health and Safety from DMR and is to be adhered to.
National Environmental Management: Biodiversity Act (Act 10 of 2004)	- Section 52 of The National Environmental Management Act: Biodiversity Act (NEMBA) (Act 10 of 2004) states that the MEC/Minister is to list ecosystems that are threatened and in need of protection. - Section 53 states that the Minister may identify any process or activity in such a listed ecosystem as a threatening process. - A list of threatened and protected species has been published in terms of Section 56(1) GG 29657 GNR 151 and GNR 152, Threatened or Protected Species Regulations. Commencement of Threatened or Protected Species Regulations 2007 : 1 June 2007 GNR 150/GG 29657/23-02-2007 Publication of lists of critically endangered, vulnerable and protected species GNR 151/GG 29657/23-02-2007 *	- A permit application regarding protected plant species need to be lodged with DENC if any protected species is encountered.

	Threatened or Protected Species Regulations GNR 152/GG 296547/23-02-2007 * - 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. - Regulation GN R151, published on 23 February 2007 (List fo Critically Endangered, Vulnerable and Protected Species, 2007) in terms of NEM: BA - Regulation GN R152, published on 23 February 2007 (TOPS) in terms of NEM:BA - Regulations GN R507 to 509 of 2013 and GN 599 of 2014 in terms of NEM:BA (Alien Species)	
The National Environmental Management Act: Protected Areas Act (NEMPAA) (Act 57 of 2003) provides for the protection of ecologically viable areas that are representative of South Africa"s natural biodiversity and its landscapes and seascapes.	- Chapter 2 lists all protected areas.	- To be determined by specialists
National Environmental Management: Waste Management Act (Act 59 of 2008)	- Chapter 4: Waste management activities - Regulations GN R634 published on 23 August 2013 in terms of NEM:WA (Waste Classification and Management Regulations) - Regulations GN R921 published on 29 November 2013 in terms of NEM:WA (Categories A to C – Listed activities)	- To be implemented upon the approval of the EMPR.

	- National Norms and Standards for the Remediation of contaminated Land and Soil Quality published on 2 May 2014 in terms of NEM:WA (Contaminated land regulations) - Regulations GN R634 published on 23 August 2013 in terms of NEM: WA (Waste Classification and Management Regulations) - Regulations GN R632 published on 24 July 2015 in terms of NEM: WA (Planning and Management of Mineral Residue Deposits and Mineral Residue Stockpiles) - Regulations GN R633 published on 24 July 2015 in terms of NEM: WA (Amendments to the waste management activities list published under GN921)	
National Forest Act (Act 84 of 1998) and Regulations	- 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.	- A permit application regarding protected tree species need to be lodged with DAFF if necessary.
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 paleontological 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	- Control measures are to be implemented upon the approval of the EMPR.

	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. - Regulation GN R548 published on 2 June 2000 in terms of NHRA	
National Water Act (Act 36 of 1998) and regulations as amended, *inter alia* Government Notice No. 704 of 1999	- Section 4: Use of water and licensing. - Section 19: Prevention and remedying the effects of pollution. - Section 20: Control of emergency incidents. - Section 21: Water uses In terms of Section 21 a licence is required for: (a) taking water from a water resource; (b) storing water; (c) impeding or diverting the flow of water in a watercourse; (f) Waste discharge related water use; (g) disposing of waste in a manner which may detrimentally impact on a water resource; (i) altering the bed, banks, course or characteristics of a watercourse; (j) removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people; and; - Regulation GN R704, published on 4 June 1999 in terms of the National Water Act (Use of water for mining and related activities) - Regulation GN R1352, published on 12 November 1999 in terms of the National Water Act (Water use to be registered)	- A water use application will be applicable as a Section 21 (b) for the storage of water and 21 (g) for the sewage disposal will be lodged. - Control measures are to be implemented upon the approval of the EMPR.

	- Regulation GN R139, published on 24 February 2012 in terms of the National Water Act (Safety of Dams) - Regulation GN R398, published on 26 March 2004 in terms of the National Water Act (Section 21 (j)) - Regulation GN R399, published on 26 March 2004 in terms of the National Water Act (Section 21 (a) and (b) - Regulation GN R1198, published on 18 December 2009 in terms of the National Water Act (Section 21 (c) and (i) – rehabilitation of wetlands) - Regulations GN R1199, published on 18 December 2009 in terms of the National Water Act (Section 21 (c) and (i)) - Regulations GN R665, published on 6 September 2013 in terms of the National Water Act (Amended GN 398 and 399 – Section 21 (e), (f), (h), (g), (j))	
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.	- Control measures are to be implemented upon the approval of the EMPR.
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.	- Control measures are to be implemented upon the approval of the EMPR.
Road Traffic Act (Act 93 of 1997) and Regulations	- Entire Act.	- Control measures are to be implemented upon the approval of the EMPR.
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 (giving effect to section 27 of the Constitution).	- Control measures are to be implemented upon the approval of the EMPR.
National Land Transport Act, (Act 5 of 1998)		- To take note.
Spatial Planning and Land Use Management (Act 16 of 2013	- To provide a framework for spatial planning and land use management in the Republic;	- To be implemented upon the approval of the EMPR.

(SPLUMA) and regulations	- To specify the relationship between the spatial planning and the land use management, amongst others - Regulations GN R239 published on 23 March 2015 in terms of SPLUMA	
Subdivision of Agricultural Land Act, 70 of 1970 and regulations	- Regulations GN R373 published on 9 March 1979 in terms of Subdivision of Agricultural Land	- To take note.
Basic Conditions of Employment Act (Act 3 of 1997)) as amended	- To regulate employment aspects	- To be implemented upon the approval of the EMPR
Community Development (Act 3 of 1966)	- To promote community development	- To be implemented upon the approval of the EMPR
Development Facilitation (Act 67 of 1995) and regulations	- To provide for planning and development	- To take note.
Development Facilitation (GN24, PG329, 24/07/1998)	- Regulations re Northern Cape LDO's	- To take note.
Development Facilitation (GNR1, GG20775, 07/01/2000)	- Regulations re application rules S26, S46, S59	- To take note.
Development Facilitation (GN732, GG14765, 30/04/2004)	- Determines amount, see S7(b)(ii)	- To take note.
Land Survey Act (Act 8 of 1997)) and regulations, more specifically GN R1130	- To control land surveying, beacons etc. and the like; - Agriculture, land survey S10	- To take note.
National Veld and Forest Fire Act (Act 101 of 1998)) and regulations, more specifically GN R1775	- To regulate law on veld and forest fires - (Draft regulations s21)	- To be implemented upon approval of the EMPR

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

1) Draft environmental management programme

a) Details of the EAP (Confirm that the requirement for the provision of the details and expertise of the EAP are already included in PART A, section 1(a) herein as required)

I hereby confirm that the requirement for the provision of the details and expertise of the EAP is already included in Part A as required.

b) Description of the Aspects of the Activity (Confirm that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (1)(h) herein as required)

I hereby confirm that the requirement for the aspects of the activity is already included in Part A as required.

c) Composite Map

(Provide a map **(Attached as an Appendix)** at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers)

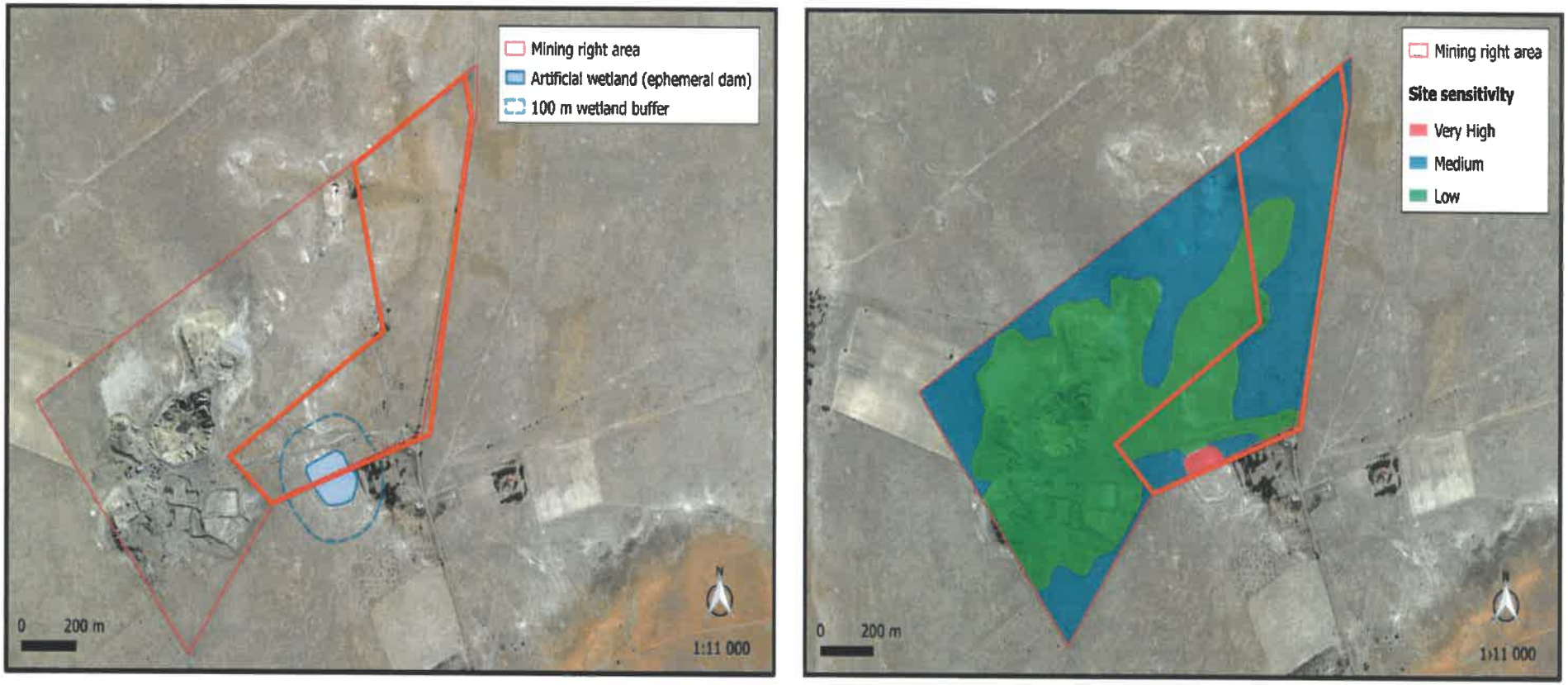

Figure 21. The delineation of the artificial wetland on Blaauwboschfontein, along with its buffer zone and site sensitivity maps. (map taken out of the Ecological and wetland Study of Dr. Betsie Milne).

d) Description of impact management objectives including management statements

i) Determination of closure objectives (ensure that the closure objectives are informed by the type of environment described in 2.4 herein)

The main closure objectives of the planned mining operation are:

- To restore the site to its current land capability in a sustainable manner.
- To prevent the sterilization of any diamond reserves.
- To prevent the establishment of any permanent structures or features.
- To manage and limit any impact to the surface and groundwater aquifers in such a way that an acceptable water quality and yield can still be obtained when a closure certificate is issued.
- To establish a stable and self-sustainable vegetation cover.
- To limit and rehabilitate any erosion features and prevent any permanent impact to the soil capability.
- To limit and manage the visual impact of the mining activities.
- To safeguard the safety and health of humans and animals on the site.
- To close the mining operation efficiently, cost effectively and in accordance with Government Policy.

The key aim decommissioning and closure is to ensure that all the significant impacts are ameliorated. All rehabilitated areas should be left in a stable, self-sustainable state. Proof of this should be submitted at closure. Specific objectives include:

Rehabilitation of infrastructure areas

The objectives for the removal of infrastructure and the subsequent rehabilitation of the areas they occupied include:

- To ensure that infrastructure identified for removal is successfully demolished and removed.
- To ensure that infrastructure identified to remain after mine closure is maintained until the issue of a closure certificate.
- The removal, decommissioning and disposal of all mining infrastructure, will comply with all conditions contained in the MPRDA. To this end, decommissioning and rehabilitation of all infrastructure areas will follow the following principles:
- The plant and associated disused infrastructure will be dismantled or demolished. Any building foundations will be removed and land exposed to the demolition and dismantling of infrastructure and all other disturbed land will be rehabilitated.
- Rubble will be disposed of at a suitable site. The site will be selected in consultation with DENC.

- Any surface water management infrastructure will be maintained to ensure they are stable and functional.
- Just before closure, when disturbed land has been rehabilitated and erosion is controlled by vegetation cover, all disused surface water management facilities will be decommissioned.

Open Pit and Mine Residue Deposits

The objectives pertaining to the effective management and rehabilitation of the Open Pit and Residue Deposits include:

- To ensure that the Open Pit and Mine Residue Deposits are stable and that there is an acceptably low risk of failure of the pit or Deposits during the decommissioning phase and following mine closure; To establish self-sustainable vegetation cover on the benches that are not backfilled or sloped so that the visual impact of the Open Pit and Deposits is improved and in order to prevent erosion.

Management principles pertaining to Open Pit and Mine residue Deposits include:

- The Open Pit and Deposits will continuously be inspected by a suitable qualified professional engineer to ensure their stability. If they are unstable, the appropriate remedial measures will be implemented.
- Inspection and monitoring should continue until a suitable qualified profession engineer has confirmed the long-term stability of the Open Pit and Mine Residue Deposits.
- Any infrastructure or facilities that serve the Open pit or Mine Residue Deposits will be maintained to ensure that they are both stable and functional.

Maintenance

The necessary agreements and arrangement will be made by the Kophia Diamonds to ensure that all natural physical, chemical and biological processes for which a closure condition were specified are monitored until they reach a steady state or for three (3) years after closure or as long as deemed necessary at the time.

- Such processes include erosion of the Open Pit, Mine Residue Deposits, rehabilitated surfaces, surface water drainage, air quality, surface water quality, ground water quality, vegetative re-growth, weed encroachment.
- The closure plan will be reviewed yearly.
- Rehabilitation of the land will be maintained until a closure certificate is granted or until the land use is regarded as sustainable.

- All rehabilitated areas will be monitored and maintained until such time as required to enable the mine to apply for closure of these different areas.

Performance assessments

As per the MPRDA and associated Regulations, as well as NEMA and associated Regulations, this Environmental Management Programme will be continually assessed in terms of its appropriateness and adequacy. In order to achieve this, Kophia Diamonds will undertake the following:

- Implement the necessary monitoring programmes, as discussed as part of this EMPR;
- Conduct performance assessments of this EMPR; and
- Compile and submit the afore-mentioned performance assessment reports to the DMR. The frequency of the performance assessments will be **annually**. An independent and competent person will undertake all performance assessments.

Decommissioning and closure objectives

The key aim decommissioning and closure is to ensure that all the significant impacts are ameliorated. All rehabilitated areas will be left in a stable, self-sustainable state. Proof of this will be submitted at closure. Specific objectives include:

- To identify potential post-closure land uses in consultation with the surrounding land owners and land users. This should be done during the operational phase of the mine;
- Rehabilitate disturbed land to a state suitable for its post-closure uses;
- Rehabilitate disturbed land, Mine Residue Deposits and the open pit to a state that facilitates compliance with applicable environmental quality objectives;
- Limit the impact on staff whose positions become redundant at the time of mine closure, as addressed in the SLP;
- Keep relevant authorities informed of the progress of the decommissioning phase;
- Submit monitoring data to the relevant authorities;
- Maintain required pollution control facilities and rehabilitated land until closure.

Negative economic impacts

The objective is to alleviate the negative socio-economic impacts that will result from mine closure. Management principles to achieve this include:

- Kophia Diamonds will undertake a carefully planned step-wise decommissioning process.
- Closure planning will form an integral part of mine planning.

- Strategies for sustainable development have been and will continue to be developed by the project in collaboration with district and local authorities, local businesses and other interested parties. Early warning of impending closure will be given to IAPs.
- In conjunction with long-term closure planning, the mine will actively participate in regional and local planning to enhance the economic benefits of the project through development of alternative forms of income generation.
- Kophia Diamonds will initiate and participate in regional planning exercises that will mitigate the impacts of closure of the mine, the local and regional economies and associated abandonment of community infrastructures surrounding the mine.
- The mine will fulfil the requirements for closure.

ii) The process for managing any environmental damage, pollution, pumping and treatment of extraneous water or ecological degradation as a result of undertaking a listed activity

All components of any of the ecosystems (physical environment, vegetation, animals) of a site are interrelated and interdependent. A holistic approach is therefore imperative to effectively include any proposed development, utilisation and where necessary conservation of the given natural resources in an integrated development plan, which will address all the needs of the modern human population (Bredenkamp & Brown 2001). Ideally the area should be developed so that the quality of the resources does not decrease, as this would inevitably lead to ecosystem degradation and lower productivity. It is therefore necessary to make a thorough inventory of the plant communities at the site of the proposed development, their biota and their associated habitats (=ecosystems), in order to evaluate its potential for development, or conservation. This inventory should then serve as a scientific and ecological basis for the planning exercises.

The broad-scale vegetation unit of the study area is classified as least threatened and therefore no formal fine-scale conservation planning has been conducted for it, but according to the Mining and Biodiversity Guidelines (DENC et al. 2013) a portion of the site is regarded for Biodiversity Importance. The eastern section is classified to have Highest Biodiversity Importance, which constitute the highest risk for mining. These guidelines were developed to identify and categorize biodiversity priority areas sensitive to the impacts of mining in order to support mainstreaming of biodiversity issues in decision making in the mining sector.

The proposed mining site does not fall within any formally protected area or within a National Protected Areas Expansion Strategy Focus Area (NPAES). It

does however neighbour the Free State Highveld Grassland focus area (NPAES #12). This focus area includes some of the last remaining opportunities for relatively large protected areas in the highly threatened Grassland Biome, as well as the opportunity to incorporate intact river reaches and a number of threatened river types. Options for meeting protected area targets are retreating rapidly in this area, making protected area expansion urgent.

According to the Free State Province Biodiversity Plan (Collins 2019) the site is classified as ecological support areas. These are areas that play an important role in supporting the ecological functioning of a protected area or critical biodiversity areas, or in delivering ecosystem services. In most cases ecological support areas (ESAs) are currently in at least fair ecological condition, and should remain in at least fair functioning condition. The ESA1 represent areas with minimal degradation, while ESA2 are those with degradation.

The Tokologo 4th generation Integrated Development Plan 2017/18, regards rivers and wetlands as core ecological corridors that need to be protected by a setback line of at least 32 m, from the banks of all rivers and water bodies. The artificial wetland on site is however not regarded as a sensitive or important system and it falls outside the boundaries of the mining operation. Although this artificial wetland on the site is in itself not sensitive, an ephemeral pan, which is a unique habitat protected in terms of the National Water Act (Act No 36 of 1998), is situated in very close proximity (400 m) to the site. However, the mining activities are not hydrologically connected to this pan and are not expected to have any effect on its functioning. (Taken out of the Ecological and wetland assessment study by Boscia Ecological Consultants, Dr B Milne, May 2019).

iii) Potential risk of Acid Mine Drainage (Indicate whether or not the mining can result in acid mine drainage)

No potential risk for Acid Mine Drainage exists.

iv) Steps taken to investigate, assess, and evaluate the impact of acid mine drainage

Not applicable, there is no potential risk of acid mine drainage.

v) Engineering or mine design solutions to be implemented to avoid or remedy acid mine drainage

Not applicable, there is no potential risk of acid mine drainage.

vi) Measures that will be put in place to remedy any residual or cumulative impact that may result from acid mine drainage

There is no residual or cumulative impact that may result from acid mine drainage.

vii) Volumes and rate of water use required for the mining, trenching or bulk sampling operation

The only activity relating to the cost of water in the mining operations relates to dust suppression in the mining area, pan plants and on the roads when hauling and transporting material to the processing plant, and for ablution facilities.

The Blaauwbosch Kimberlite Pipe was mined, from surface (opencast) from 1912 – 1922. It was re-opened and mined via underground workings from 1965 to 1967. Mining recommenced in 2003, with the working of tailings dumps and underground mining.

The Kimberlite is mined underground by means of inclined chambering which is essentially a combination of shrinkage, stoping and caving in which, advangtage is taken of the pressure exerted by the loose rock, which through the collapse of the kimberlite pipe walls, accumulates in the open excavations.

Entry into the mine is made through two shafts, south of the sourhern limit of the kimberlite is Shaft 2 and north of the northern limit is shaft No 1. No 2 Shaft is the main man and materials shaft and is situated near the open pit close to the mine site buildings.

The tunnel in the ore body are 1.8m X 1.8m. Tunnel support is not required at the current levels of operation but passive support is applied where necessary.

Drilling, charging and blasting takes place according to a mining plan. The mining official is responsible for checking the qualit of the air and for adhering to the fresh air re entry level standards after blasting have taken place.

The ore is loaded from the stockpiles onto small trolleys (coco pans) and tipped into ore passes. The ore moves down the pass form the production level to the collection point on the 225 m L by means of gravity. The ore is conveyed from the ore pass bin on 225 m L to the storage box at the shaft. Here it is tipped into the skip and hoisted to surface.

The blasting is carried out by a qualified miner and explosives are kept in a registered explosive magazine on site. African Explosives (Pty) Ltd (AEL) are responsible for the supply and delivery of explosives to the Blaauwbosch Mine.

No diesel operated equipment is used underground; a compressed air loader is used to scoop the ore into coco pans which have a capacity of 250 kg. The Coco pans are wheeled along tracks to the ore pass.

The main shaft provides the structure for hoisting equipment to raise the ore and rock to the surface, an access for water pipelines and pumping equipment to dewater the mine, compresssed air lines and the mechanical equipment for the shaft operations.

viii) Has a water use licence been applied for?

An application for a WULA has been loaded onto the E-WULA system and the application is in process. The Proof of submission has been included into the public participation documents as Appendix 3.

ix) Impact to be mitigated in their respective phases

Measure to rehabilitate the environment affected by the undertaking of any listed activity

ACTIVITY Whether listed or not listed. (E.g. 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.).	**PHASE** of operation in which activity will take place. State; Planning and design, Pre-Construction' Construction, Operational, Rehabilitation, Closure, Post closure.	**SIZE AND SCALE** of disturbance (volumes, tonnages and hectares or m²)	**MITIGATION MEASURES** (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when Required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:-.. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.
Processsing Plant The Kimberlite is mined underground by means of inclined chambering which is essentially a combination of shrinkage, stoping and caving in which, advangtage is taken of the pressure exerted by the loose rock, which through the	Construction Commissioning Operational Decommissioning Closure	0.3 ha Steel, concrete, electric wires	Access control Maintenance of processing plant Dust control and monitoring Noise control and monitoring Drip trays Storm water run-off control Immediately clean		Removal of processing plant upon closure of mining right.

collapse of the kimberlite pipe walls, accumulates in the open excavations. Entry into the mine is made through two shafts, south of the sourhern limit of the kimberlite is Shaft 2 and north of the northern limit is shaft No 1. No 2 Shaft is the main man and materials shaft and is situated near the open pit close to the mine site buildings. The tunnel in the ore body are 1.8m X 1.8m. Tunnel support is not required at the current levels of operation but passive support is applied where necessary. Drilling, charging and blasting takes place according to a mining plan. The mining official is responsible for checking the qualit of the air and for adhering to the fresh air re entry level standards after blasting			hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover		

have taken place. The ore is loaded from the stockpiles onto small trolleys (coco pans) and tipped into ore passes. The ore moves down the pass form the production level to the collection point on the 225 m L by means of gravity. The ore is conveyed from the ore pass bin on 225 m L to the storage box at the shaft. Here it is tipped into the skip and hoisted to surface. The blasting is carried out by a qualified miner and explosives are kept in a registered explosive magazine on site. African Explosives (Pty) Ltd (AEL) are responsible for the supply and delivery of explosives to the Blaauwbosch Mine. No diesel operated equipment is used underground; a compressed air loader is					

used to scoop the ore into coco pans which have a capacity of 250 kg. The Coco pans are wheeled along tracks to the ore pass. The main shaft provides the structure for hoisting equipment to raise the ore and rock to the surface, an access for water pipelines and pumping equipment to dewater the mine, compresssed air lines and the mechanical equipment for the shaft operations.					
Ablution facilities	Construction Commissioning Operational Decommissioning Closure	25m² or 0.0025ha	Maintenance of ablution facilities.		Removal ablution facilities upon closure of the mining Right.
Clean & Dirty water systems: Berms	Construction Commissioning Operational Decommissioning Closure	This area also includes the re-fuel and lubrication station, wash bay and office area.	Maintenance of berms and trenches Oil traps used in relevant areas. Drip trays used. Immediately clean hydrocarbon spill.		Upon cessation of the individual activity (continuous rehabilitation)
Fuel Storage facility	Construction	250m²	Maintenance of diesel		Removal of diesel

(Diesel tanks)	Commissioning Operational Decommissioning Closure	Concrete, bricks, and steel	tanks and bund walls. Oil traps Drip tray at re-fuelling point Immediately clean hydrocarbon spill.		tanks upon closure of mining Right.
Mining Area	Commissioning Operational Decommissioning Closure	Provision is made for a maximum footprint of 0 hectares of Open Pit. The open pit is located on Catherine's Fancy	No dumping of materials prior to approval by exploration geologist; Proper planning of the Open Pit Access control Dust control and monitoring Noise control and monitoring Continuous rehabilitation Stormwater run-off control Immediately clean hydrocarbon spill Drip trays Dump control and monitoring Erosion control		Upon cessation of the individual activity (continuous rehabilitation)
Salvage yard (Storage and laydown area)	Construction Commissioning Operational Decommissioning Closure	1000m² or 0.1 ha No construction material, area to be levelled with a grader and	Access control Maintenance of fence Storm water run-off control Immediately clean		Removal of fence around salvage yard and ripping of salvage yard area upon closure of the Mining

		fenced with a gate and access control	hydrocarbon spill		right.
Waste disposal site (domestic and industrial waste):	Construction Commissioning Operational Decommissioning Closure	15m x 30m = 450m²	Storage of Waste within receptacles Storage of hazardous waste on concrete floor with bund wall Removal of waste on regular intervals		Removal of waste receptacles, breaking and removal of rubble from the concrete floors and bund walls upon closure of Mining right.
Roads (both access and haulage road on the mine site):	Construction Commissioning Operational Decommissioning Closure	Additional mine haul road = 5000m²	Maintenance of roads Dust control and monitoring Noise control and monitoring Speed limits Storm water run-off control Erosion control Immediately clean hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover		Upon cessation of the individual activity (continuous rehabilitation) Ripping of roads upon closure of the mining right.
Workshop and Wash bay	Construction Commissioning Operational Decommissioning Closure	1500m² Concrete and Steel	Concrete floor with oil/water separator Storm water run-off control Immediately clean hydrocarbon spills		Removal of wash bay equipment, breaking and removal of rubble from the concrete floors and bund walls upon closure of mining right

Water distribution Pipeline	Construction Commissioning Operational Decommissioning Closure	HDPE Pipes	Maintain water pipeline and structures		Removal of pipeline upon closure of the mining right.
Water tanks:	Construction Commissioning Operational Decommissioning Closure	3m X 3m = 9m²	Maintain water tanks and structures		Removal of water tank and steel structure upon closure of the mining right.

e) Impact Management Outcomes

(A description of impact management outcomes, identifying the standard of impact management required for the aspects contemplated in paragraph()

ACTIVITY Whether listed or not listed.	**POTENTIAL IMPACT** (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater, contamination, air pollution)….	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated (e.g. construction, commissioning, operational, Decommissioning, closure, post closure)	**MITIGATION TYPE** (modify, remedy, control or stop) through (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity	**STANDARD TO BE ACHIEVED** (impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
Processing Plant	Dust Noise Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance	Air Quality Fauna Flora Noise Soil Surface water Safety	Construction Commissioning Operational Decommissioning Closure	Access control Maintenance of processing plant Dust control and monitoring Noise control and monitoring Drip trays Storm water run-off control Immediately clean hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and	Safety ensured. Dust levels minimized Minimize potential for hydrocarbon spills to infiltrate into groundwater Noise levels minimized Rehabilitation standards and closure objectives to be met. Erosion potential minimized.

				compressor components; Develop a mechanism to record and respond to complaints.	
Ablution facilities	Soil contamination Possible Groundwater contamination	Soil Groundwater	Construction Commissioning Operational Decommissioning Closure	Maintenance of sewage facilities on a regular basis.	Minimize the potential for a chemical spill on soil, which could infiltrate to groundwater.
Clean & Dirty water systems:	Surface disturbance Groundwater Contamination Soil contamination Surface water contamination	Soil Groundwater Surface Water	Construction Commissioning Operational Decommissioning Closure	The re-vegetation of disturbed areas is important to prevent erosion and improve the rate of infiltration. Erosion channels that may develop before vegetation has established should be rehabilitated by filling, levelling and re-vegetation where topsoil is washed away. Monitoring and maintenance of oil traps in relevant areas. Drip trays used. Immediately clean hydrocarbon spill. Linear infrastructure such as roads and pipelines will be inspected at least monthly to check that the	Safety ensured. Minimize potential for hydrocarbon spills to infiltrate into groundwater. Rehabilitation standards and closure objectives to be met.

				associated water management infrastructure is effective in controlling erosion.	
Fuel Storage facility (Diesel tanks)	Groundwater contamination Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance	Soil Groundwater Surface water	Construction Commissioning Operational Decommissioning Closure	Maintenance of Diesel tanks and bund walls. Oil traps Drip tray at re-fuelling point. Refuelling must take place in well demarcated areas and over suitable drip trays to prevent soil pollution. Spill kits to clean up accidental spills from earthmoving machinery must be well-marked and available on site. Workers must undergo induction to ensure that they are prepared for rapid clean-up procedures. All facilities where dangerous materials are stored must be contained in a bund wall. Vehicles and machinery should be regularly serviced and maintained.	Minimize potential for hydrocarbon spills to infiltrate into groundwater. Rehabilitation standards and closure objectives to be met.
Mining Area.	Dust	Air quality Fauna	Commissioning Operational	Access control Dust control and	Safety ensured. Dust levels minimized

	Noise Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance Surface water contamination	Flora Groundwater Noise Soil Surface Water Topography Safety	Decommissioning Closure	monitoring Noise control and monitoring Continuous rehabilitation Storm water run-off control Immediately clean hydrocarbon spill Drip trays Dump stability control and monitoring Erosion control Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor components; Develop a mechanism to record and respond to complaints. Mining activities must be planned, where possible in order to encourage (faunal dispersal) and should minimise dissection or fragmentation of any	Minimize potential for hydrocarbon spills to infiltrate into groundwater Noise levels minimized Rehabilitation standards and closure objectives to be met. Erosion potential minimized.

				important faunal habitat type. The extent of the Mining area should be demarcated on site layout plans (preferably on disturbed areas or those identified with low conservation importance). No construction personnel or vehicles may leave the demarcated area except those authorized to do so. Those areas surrounding the mine site that are not part of the demarcated development area should be considered as a no go zone for employees, machinery or even visitors. Appointment of a full-time ECO must render guidance to the staff and contractors with respect to suitable areas for all related disturbance, and must ensure that all contractors and workers undergo Environmental Induction prior to commencing with work on site.	

				All those working on site must undergo environmental induction with regards to fauna and in particular awareness about not harming or collecting species such as snakes, tortoises and owls which are often persecuted out of superstition. All those working on site must be educated about the conservation importance of the fauna and flora occurring on site. The environmental induction should occur in the appropriate languages for the workers who may require translation. Reptiles and amphibians that are exposed during the clearing operations should be captured for later release or translocation by a qualified expert. Employ measures that ensure adherence to the speed limit. Careful consideration is	

				required when planning the placement for stockpiling topsoil and the creation of access routes in order to avoid the destruction of habitats and minimise the overall mining footprint. The Footprint areas of the mining activities must be scanned for Red Listed and protected plant species prior to mining; Snares & traps removed and destroyed; and Maintenance of firebreaks. The re-vegetation of disturbed areas is important to prevent erosion and improve the rate of infiltration. Erosion channels that may develop before vegetation has established should be rehabilitated by filling, levelling and re-vegetation where topsoil is washed away.	
Salvage yard (Storage and	Groundwater contamination	Fauna Flora Groundwater	Construction Commissioning Operational	Access Control Maintenance of fence Storm water run-off	Minimize potential for hydrocarbon spills to infiltrate into

laydown area)	Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance Surface water contamination	Soil Surface Water	Decommissioning Closure	control Immediately clean hydrocarbon spill	groundwater Rehabilitation standards and closure objectives to be met. Erosion potential minimized.
Product Stockpile area	Dust Noise Removal and disturbance of vegetation cover and natural habitat of fauna Surface disturbance	Air Quality Fauna Flora Noise Soil Surface Water	Commissioning Operational Decommissioning Closure	Dust Control and monitoring Noise control and monitoring Drip trays Storm water run-off control Immediately clean hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers	Dust levels minimized Minimize potential for hydrocarbon spills to infiltrate into groundwater Noise levels minimized Rehabilitation standards and closure objectives to be met. Erosion potential minimized.

				on engine exhausts and compressor components; Installing acoustic Develop a mechanism to record and respond to complaints.	
Waste disposal site (domestic and industrial waste):	Groundwater contamination Contamination of soil Surface water contamination	Groundwater Soil Surface water	Construction Commissioning Operational Decommissioning Closure	Storage of Waste within receptacles Storage of hazardous waste on concrete floor with bund wall Removal of waste on regular intervals	Minimize potential for hydrocarbon spills to infiltrate into groundwater Noise levels minimized Rehabilitation standards and closure objectives to be met.
Roads (both access and haulage road on the mine site):	Dust Noise Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance	Air quality Fauna Flora Noise Soil Surface water	Construction Commissioning Operational Decommissioning Closure	Maintenance of roads Dust control and monitoring Noise control and monitoring Speed limits Storm water run-off control Erosion control Immediately clean hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover Noise control Well maintained equipment Selecting equipment with lower sound power levels;	Dust levels minimized Minimize potential for hydrocarbon spills to infiltrate into groundwater Noise levels minimized Rehabilitation standards and closure objectives met. Erosion potential minimized.

				Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor components; Develop a mechanism to record and respond to complaints. Linear infrastructure such as roads and pipelines will be inspected at least monthly to check that the associated water management infrastructure is effective in controlling erosion.	
Workshop and Wash bay	Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination	Groundwater Soil Surface water	Construction Commissioning Operational Decommissioning Closure	Concrete floor with oil/water separator Storm water run-off control Immediately clean hydrocarbon spills	Minimize potential for hydrocarbon spills to infiltrate into groundwater Noise levels minimized Rehabilitation standards and closure objectives to be met. Erosion potential minimized.
Water distribution Pipeline	Surface disturbance	Fauna Flora Surface Water	Construction Commissioning Operational Decommissioning Closure	Monitor pipeline for water leaks Maintenance of pipeline Linear infrastructure such as roads and pipelines will	Rehabilitation standards and closure objectives to be met. Erosion potential minimized.

				be inspected at least monthly to check that the associated water management infrastructure is effective in controlling erosion.	
Water tanks:	Surface disturbance	Fauna Flora Surface Water	Construction Commissioning Operational Decommissioning Closure	Maintain water tanks and structures	Safety ensured. Rehabilitation standards and closure objectives to be met.

f) Impact Management Actions

(A description of impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraph (c)

ACTIVITY **Whether listed or not listed.**	**POTENTIAL IMPACT** **(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater, contamination, air pollution)....**	**MITIGATION TYPE** (modify, remedy, control or stop) through (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity	**TIME PERIOD FOR IMPLEMENTATION** **Describe the time period when the measures in the environmental management programme must be implemented. Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation, therefore state either:- Upon cessation of the individual activity or Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.**	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
Processing Plant: The Kimberlite is mined underground by means of inclined chambering which is essentially a	Dust Noise Removal and disturbance of vegetation cover	Access control Maintenance of processing plant Dust control and monitoring Noise control and monitoring Drip trays Storm water run-off control Immediately clean hydrocarbon	Removal of processing plant upon closure of mining right.	The following must be placed at the site and is applicable to all activities: • Relevant Legislation; • Acts;

combination of shrinkage, stoping and caving in which, advangtage is taken of the pressure exerted by the loose rock, which through the collapse of the kimberlite pipe walls, accumulates in the open excavations. Entry into the mine is made through two shafts, south of the sourhern limit of the kimberlite is Shaft 2 and north of the northern limit is shaft No 1. No 2 Shaft is the main man and materials shaft and is situated near the open pit close to the mine site buildings.	and natural habitat of fauna Soil contamination Surface disturbance	spills Rip disturbed areas to allow re-growth of vegetation cover Noise control Well maintained equipment Selecting equipment with lower sound power levels; Installing silencers for fans; Installing suitable mufflers on engine exhausts and compressor components; Develop a mechanism to record and respond to complaints.		• Regulations • COP's • SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the contents of these documents, and to adhere thereto. Annual performance Assessment Reports and quantum Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.

The tunnel in the ore body are 1.8m X 1.8m. Tunnel support is not required at the current levels of operation but passive support is applied where necessary. Drilling, charging and blasting takes place according to a mining plan. The mining official is responsible for checking the qualit of the air and for adhering to the fresh air re entry level standards after blasting have taken place. The ore is loaded from the stockpiles onto small trolleys (coco pans) and tipped into ore passes. The ore				

moves down the pass form the production level to the collection point on the 225 m L by means of gravity. The ore is conveyed from the ore pass bin on 225 m L to the storage box at the shaft. Here it is tipped into the skip and hoisted to surface. The blasting is carried out by a qualified miner and explosives are kept in a registered explosive magazine on site. African Explosives (Pty) Ltd (AEL) are responsible for the supply and delivery of explosives to the Blaauwbosch Mine.				

No diesel operated equipment is used underground; a compressed air loader is used to scoop the ore into coco pans which have a capacity of 250 kg. The Coco pans are wheeled along tracks to the ore pass. The main shaft provides the structure for hoisting equipment to raise the ore and rock to the surface, an access for water pipelines and pumping equipment to dewater the mine, compresssed air lines and the mechanical equipment for the shaft operations.				
Ablution Facilities	Soil contamination	Maintenance of sewage facilities	Removal of facility upon closure	The following must be placed at

	Groundwater contamination	on a regular basis.	of the mining Right.	the site and is applicable to all activities: • Relevant Legislation; • Acts; • Regulations • COP's • SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the contents of these documents, and to adhere thereto. Annual performance Assessment Reports and quantum Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.

Clean & Dirty water systems: Berms	Surface disturbance Groundwater Contamination Soil contamination Surface water contamination	The Open Pit, where and when applicable, should be rehabilitated concurrently as mining progresses. The re-vegetation of disturbed areas is important to prevent erosion and improve the rate of infiltration. Erosion channels that may develop before vegetation has established should be rehabilitated by filling, levelling and re-vegetation where topsoil is washed away. Maintenance of trenches Monitoring and maintenance of oil traps in relevant areas. Drip trays used. Immediately clean hydrocarbon spill. Linear infrastructure such as roads and pipelines will be inspected at least monthly to check that the associated water management infrastructure is effective in controlling erosion.	Upon cessation of the individual activity (continuous rehabilitation) Levelling of storm water berms upon closure of mining Right	The following must be placed at the site and is applicable to all activities: • Relevant Legislation; • Acts; • Regulations • COP's • SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the contents of these documents, and to adhere thereto. Annual performance Assessment Reports and quantum Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.

Fuel Storage facility (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 Drip tray at re-fuelling point. Refuelling must take place in well demarcated areas and over suitable drip trays to prevent soil pollution. Spill kits to clean up accidental spills from earthmoving machinery must be well-marked and available on site. Workers must undergo induction to ensure that they are prepared for rapid clean-up procedures. All facilities where dangerous materials are stored must be contained in a bund wall. Vehicles and machinery should be regularly serviced and maintained.	Removal of diesel tanks upon closure of Mining Right.	The following must be placed at the site and is applicable to all activities: • Relevant Legislation; • Acts; • Regulations • COP's • SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the contents of these documents, and to adhere thereto. Annual performance Assessment Reports and quantum

				Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.
Mining Area	Dust 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 Continuous rehabilitation Storm water run-off control Immediately clean hydrocarbon spill Drip trays Dump stability control and monitoring Erosion control Noise control Well maintained equipment Selecting equipment with lower sound power levels; Taking advantage during the design stage of natural topography as a noise buffer; Develop a mechanism to record and respond to complaints. Mining activities must be planned, where possible in order to encourage (faunal dispersal) and should minimise dissection or fragmentation of any important faunal habitat type. The extent of the mining area should be demarcated on site	Upon cessation of the individual activity (continuous rehabilitation)	The following must be placed at the site and is applicable to all activities: • Relevant Legislation; • Acts; • Regulations • COP's • SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the contents of these documents, and to adhere thereto.

		layout plans (preferably on disturbed areas or those identified with low conservation importance). No construction personnel or vehicles may leave the demarcated area except those authorized to do so. Those areas surrounding the mining site that are not part of the demarcated development area should be considered as a no go zone for employees, machinery or even visitors. Appointment of a full-time ECO must render guidance to the staff and contractors with respect to suitable areas for all related disturbance, and must ensure that all contractors and workers undergo Environmental Induction prior to commencing with work on site. All those working on site must undergo environmental induction with regards to fauna and in particular awareness about not harming or collecting species such as snakes, tortoises and owls which are often persecuted out of superstition. All those working on site must be educated about the conservation importance of the		Annual performance Assessment Reports and quantum Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.

		fauna and flora occurring on site. The environmental induction should occur in the appropriate languages for the workers who may require translation. Reptiles and amphibians that are exposed during the clearing operations should be captured for later release or translocation by a qualified expert. Employ measures that ensure adherence to the speed limit. Careful consideration is required when planning the placement for stockpiling topsoil and the creation of access routes in order to avoid the destruction of habitats and minimise the overall mining. The Footprint areas of the mining activities must be scanned for Red Listed and protected plant species prior to mining; Snares & traps removed and destroyed; and Maintenance of firebreaks. The Open Pit, where and when applicable, should be rehabilitated concurrently as mining progresses. The re-		

		vegetation of disturbed areas is important to prevent erosion and improve the rate of infiltration. Erosion channels that may develop before vegetation has established should be rehabilitated by filling, levelling and re-vegetation where topsoil is washed away.		
Salvage yard (Storage and laydown area)	Surface Water contamination 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 Storm water run-off control Immediately clean hydrocarbon spill	Removal of fence around salvage yard and ripping of salvage yard area upon closure of the mining right.	The following must be placed at the site and is applicable to all activities: • Relevant Legislation; • Acts; • Regulations • COP's • SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the

				contents of these documents, and to adhere thereto. Annual performance Assessment Reports and quantum Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.
Product Stockpile area	Surface Water contamination Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance Surface water contamination		Dust Control and monitoring Noise control and monitoring Drip trays Storm water run-off control Immediately clean hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover Noise control Well maintained equipment Selecting equipment with lower sound power levels; Develop a mechanism to record and respond to complaints.	Dust levels minimized Minimize potential for hydrocarbon spills to infiltrate into groundwater Noise levels minimized Rehabilitation standards and closure objectives to be met. Erosion potential minimized.
Waste disposal site (domestic and industrial waste):	Groundwater contamination Surface Water contamination Contamination of soil	Storage of Waste within receptacles Storm water control Ground water monitoring Storage of hazardous waste on concrete floor with bund wall Removal of waste on regular intervals	Removal of waste receptacles, breaking and removal of rubble from the concrete floors and bund walls upon closure of mining right.	The following must be placed at the site and is applicable to all activities: • Relevant Legislation; • Acts; • Regulations • COP's

	Surface water contamination			• SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the contents of these documents, and to adhere thereto. Annual performance Assessment Reports and quantum Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.
Roads (both access and haulage road on the mine site):	Dust Surface Water contamination Groundwater contamination	Maintenance of roads Dust control and monitoring Noise control and monitoring Speed limits Storm water run-off control Erosion control Immediately clean hydrocarbon	Upon cessation of the individual activity (continuous rehabilitation) Ripping of roads upon closure of the mining right.	The following must be placed at the site and is applicable to all activities: • Relevant Legislation; • Acts; • Regulations

	Noise Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance	spills Rip disturbed areas to allow re-growth of vegetation cover Noise control Well maintained equipment Selecting equipment with lower sound power levels; Develop a mechanism to record and respond to complaints. Linear infrastructure such as roads and pipelines will be inspected at least monthly to check that the associated water management infrastructure is effective in controlling erosion.		• COP's • SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the contents of these documents, and to adhere thereto. Annual performance Assessment Reports and quantum Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.
Workshop and Wash bay	Surface Water contamination Removal and disturbance of vegetation cover	Concrete floor with oil/water separator Storm water run-off control Immediately clean hydrocarbon spills	Removal of wash bay equipment, breaking and removal of rubble from the concrete floors and bund walls upon closure of mining right	The following must be placed at the site and is applicable to all activities: • Relevant Legislation; • Acts;

	and natural habitat of fauna Soil contamination			• Regulations • COP's • SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the contents of these documents, and to adhere thereto. Annual performance Assessment Reports and quantum Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.
Water distribution Pipeline	Surface disturbance	Monitor pipeline for water leaks Maintenance of pipeline Linear infrastructure such as roads and pipelines will be inspected at least monthly to	Removal of pipeline upon closure of the mining right.	The following must be placed at the site and is applicable to all activities: • Relevant Legislation;

		check that the associated water management infrastructure is effective in controlling erosion.		• Acts; • Regulations • COP's • SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the contents of these documents, and to adhere thereto. Annual performance Assessment Reports and quantum Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.
Water tanks:	Surface disturbance	Maintain water tanks and structures	Removal of water tank and steel structure upon closure of the mining right.	The following must be placed at the site and is applicable to all activities:

				• Relevant Legislation; • Acts; • Regulations • COP's • SOP's Management and staff must be trained to understand the contents of these documents and to adhere thereto. • Environmental Awareness training must be provided to employees. • The operation must have a rehabilitation and closure plan. • Management and staff must be trained to understand the contents of these documents, and to adhere thereto. Annual performance Assessment Reports and quantum Calculations must be done to ensure that the operation adheres to the contents of the EIA and EMPr documents.

i) Financial Provision

(1) Determination of the amount of Financial Provision

(a) Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under Regulation 22(2)(d) as described in 2.4 herein.

The key aim of decommissioning and closure is to ensure that all the significant impacts are ameliorated and that the environment is returned to its original state, based on the baseline information, as far as is practically possible. Therefore, all rehabilitated areas should be left in a stable, self-sustainable state and proof of this should be submitted at closure.

The baseline environmental information is usually determined by reviewing all applicable information available for the site and the overall region. This information is gathered through a combination of on-site observations, spatial information and specialist baseline studies. Information regarding current land uses and existing biophysical environment gathered from interested and affected parties during the public consultation process are also taken into consideration when describing the baseline environment.

General closure objectives include the following:

Adhere to all statutory and other legal requirements;

Identify potential post-closure land uses in consultation with the future landowner, surrounding land owners and land users; well in advance, before closure and preferably during the operational phase of the mine;

Remove, decommission and dispose all infrastructures, and ensure that these processed comply with all conditions contained in the MPRDA

Rehabilitate disturbed land to a state suitable for its post-closure uses, and which are stable, sustainable and aesthetically acceptable on closure;

Rehabilitate disturbed land and Open Pit to a state that facilitates compliance with applicable environmental quality objectives;

Physically stabilise remaining structures to minimise residual risks;

Ensure the health and safety of all stakeholders during closure and post closure and that future land users are not exposed to unacceptable risks;

To alleviate the negative socio-economic impacts that will result from closure;

Promote biodiversity and ecological sustainability as far as practically possible;

Keep relevant authorities informed of the progress of the decommissioning phase;

To ensure that all natural physical, chemical and biological processes for which a closure condition were specified are monitored until they reach a steady state, for two years after closure, or for long as deemed necessary at the time and to submit such monitoring data to the relevant authorities;

Maintain required facilities and rehabilitated land until closure.

(b) Confirm specifically that the environmental objectives in relation to closure have been consulted with landowner and interested and affected parties.

The surface owner is Bellsbank Mining Number 1.
A surface use agreement had been concluded with them. A public meeting will be conducted during May 2019, The documents presentations and the minutes of the meeting will be attached in the final document for submission as a part of Appendix 3.

(c) Provide a rehabilitation plan that describes and shows the scale and aerial extent of the main mining activities, including the anticipated mining area at the time of closure.

The rehabilitation of land disturbed by the operation during the life of the mining Right will be accompanied by ongoing monitoring of the environment, until a stable state is reached. The main objectives are to have an uncontaminated, rehabilitated and safe environment, and to restore the area and habitats to a condition acceptable for obtaining a closure certificate.

Final rehabilitation of the site is expected to be within 15 years after the right has been granted. Final rehabilitation will be executed

systematically and will consist of the elements and procedures as listed below. More realistic closure elements will be fully determined by a Professional Mine Surveyor once the operation is active.

Dismantling of processing plant and related structures:

- The processing plant in total is expected to cover an area of ± 265 m2, of which all should be dismantled and removed. This includes related infrastructures, equipment, machinery, screening plant, and other items used during the processing activities, such as conveyor belts, pipelines and power lines.
- The topography should then be restored to its natural contours, and any compacted area should be ripped to a depth no deeper than 300 mm;
- The prepared surfaces should then be covered with 300 mm of topsoil or suitable growth medium, which includes a viable seed bank; in order to encourage restoration of natural vegetation.

Demolition of steel buildings and structures:

- All steel buildings and structures are expected to amount to 1500m2. These include mobile stores, workshops, offices, ablutions, water tanks, etc. Those in disuse and which cannot be sold, donated, or used for future purposes should be dismantled and removed or demolished.
- Any associated foundations associated with dismantled steel buildings and structures should also be demolished to 1 m below ground level;
- The topography should then be restored to its natural contours, and any compacted area should be ripped to a depth no deeper than 300 mm;
- The prepared surfaces should then be covered with 300 mm of topsoil or suitable growth medium, which includes a viable seed bank; in order to encourage restoration of natural vegetation.

Demolition of reinforced concrete buildings and structures

- All brick buildings and concrete structures are expected to amount to ± 1500 m2. These include French drains, wash bays, refuelling depots and concrete floors. Those in disuse and which cannot be donated or used for future purposes should be demolished.
- The foundations of these buildings should also be demolished and to a depth of 1 m below ground level;
- The topography should then be restored to its natural contours, and any compacted area should be ripped to a depth no deeper than 300 mm;

- The prepared surfaces should then be covered with 300 mm of topsoil or suitable growth medium, which includes a viable seed bank; in order to encourage restoration of natural vegetation.

Rehabilitation of access roads

- Mine roads in total, is expected to cover an area of 5000 m2. After general site rehabilitation has been completed, all redundant roads should be ripped or ploughed.
- The prepared surfaces should then be covered with 300 mm of topsoil or suitable growth medium, which includes a viable seed bank; in order to encourage restoration of natural vegetation.

Demolition and rehabilitation of electrified railway lines

- There are no electrified railway lines associated with the mining activities.

Demolition and rehabilitation of non-electrified railway lines

- There are no non-electrified railway lines associated with the mining activities.

Demolition of housing and/or administration facilities

- There are 0 ha other housing or administration facilities associated with the Mining activities. The office is on Catherine's Fancy.

Opencast rehabilitation including final voids and ramps

- Opencasts and ramps associated with the Mining activities are expected to cover 0ha. The blasts is on Catherine's Fancy.
- In-filling of the pits should take place concurrently and by obtaining material from the closest adjacent excess material heaps;
- The topography should then be shaped to the natural contours;
- The prepared surfaces should finally be covered with 300 mm of topsoil or suitable growth medium, which includes a viable seed bank; in order to encourage restoration of natural vegetation.

Sealing of shafts, adits and inclines

- There are a shafts associated with the Mining activities that will be sealed and made safe.

Rehabilitation of overburden and spoils

- The total final overburden and spoils are estimated to amount to 0.5 ha and includes waste dumps as well as earth walls. Pre-planning should be conducted in order decide the fate of these features. For example, if the material from these features will be used for in-filling, or if the features will remain after closure.

- The slopes of those features selected to remain after closure, should be downgraded to such an extent that they are not visually intrusive to the skyline after closure, and/or at least have an average outer slope of 1:3 (18°); or as predetermined by a specialist, depending on the type of material;
- The prepared surfaces should then be covered with 300 mm of topsoil or suitable growth medium, which includes a viable seed bank; in order to encourage restoration of natural vegetation, to ensure stability, improve the visual impact, and minimise erosion.

Rehabilitation of processing waste deposits and evaporation ponds with pollution potential

- No processing waste deposits and evaporation ponds with pollution potential are associated with the Mining activities.

Rehabilitation of processing waste deposits and evaporation ponds with no pollution potential

- There will be processing waste deposits on the Mining area which is estimated to cover an area of ± 0 ha. All Slimes dams is located on Catherine's Fancy. Pre-planning should be conducted in order decide the fate of this feature. For example, if the material from these features will be used for in-filling, or if the features will remain after closure. The processing waste deposits would remain as the open pit will not be allowed to filled back as it will pose a huge threat to underground workings at a later stage in the mine's life.

- The toe trenches should be backfilled by obtaining material from the closest adjacent heaps deemed appropriate for such purpose;

The slopes of those features selected to remain after closure, should be downgraded to such an extent that they are not visually intrusive to the skyline after closure, and/or at least have an average outer slope of 1:3 (18°); or as predetermined by a specialist, depending on the type of material;

- For backfilled trenches the topography should be shaped to be in line with the natural contours, but where compaction occurred, the areas should be ripped to a depth no deeper than 300 mm;
- The prepared surfaces should then be covered with 300 mm of topsoil or suitable growth medium, which includes a viable seed bank; in order to encourage restoration of natural vegetation, to ensure stability, improve the visual impact, and minimise erosion.

Storm water management

Storm water runoff arising from the upper and outer slopes of the rehabilitated residue deposit should be managed to
(1) prevent uncontrolled runoff from the residue deposit, which in turn creates surface erosion and resultant damage to the cover material and could also expose deposited material;
(2) route the runoff arising from the rehabilitated residue deposit into the surrounding surface water drainage regime in a manner that would limit the creation of secondary erosion in the receiving surface water environment and/or possible damage to downstream surface infrastructure; and
(3) allow for the control routing of the runoff collected on the rehabilitated residue deposit across cut-off, seepage or solution trenches provided to handle excess contaminated seepage from the residue deposit.

Rehabilitation of subsided areas
The EAP is aware of one areas of subsidence on site on Catherines Fancy near the old slimesdam. However, any potential for such occurrences should be actively investigated and should be included in the rehabilitation plan, if and when such areas are identified.

General surface rehabilitation
Final surface rehabilitation of areas disturbed by mining and related activities should be aligned to the selected final land use. General surface rehabilitation encompasses the reinstatement of natural topography, the top soiling and the re-vegetation of all those areas where infrastructure have been dismantled and removed or demolished. It also includes any industrial waste or scrap material that need to be removed from site. The total area that will need general surface rehabilitation at the time mine closure is estimated to be ± 0.5 ha.

River diversions
No river diversions are planned.

Fencing
It is not known at this stage if any fencing is planned except for fencing for Mine Health and safety that is prescribed.

Water management
No treatment of water will be necessary for the Mining activities.

Maintenance and aftercare
Maintenance and aftercare should be planned for two to three years after mine production have ceased and should include the following:

- Annual fertilising of rehabilitated areas.
- Monitoring of surface and subsurface water quality,
- Control of alien plants, and
- General maintenance, including rehabilitation of cracks and subsidence.
- Erosion control and monitoring of the slopes of the slimes dams;

Specialist study

A screening level risk assessment should be completed by a specialist environmental practitioner during mine closure in order to ensure that all of the rehabilitation objectives have been met and that all of the potential risks have been eliminated and/or are controlled. This assessment should specifically emphasis on those risks relating to wetland disturbances, groundwater quality and slope stabilities, but should not neglect progress made in natural vegetation restoration or success in alien invasive eradications. The current average specialist fees are estimated at R 50 000.

(d) Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives.

The rehabilitation plan was primarily designed with the closure objectives in mind and therefore it relates to all the various objectives as set out above in Section 1) g) 1) a) of this EMPR. In general, the main objectives are to have an uncontaminated, rehabilitated and safe environment, and to restore the mining area to a condition acceptable for obtaining a closure certificate. Each and every element in the rehabilitation plan was designed in order to meet these closure objectives.

The ultimate rehabilitation of the site that involves the sloping, levelling, replacement of topsoil and the seeding of an grass seed mix in areas that does not recover acceptably as agreed to by the land owner will ensure that the site could be regarded as safe for humans and animals and will also ensure that the site is stable from an erosion point of view and also ensuring that the site could be used for grazing or wildlife again.

The major land use in the region is agriculture; with the main agricultural enterprise in the region designated for grains. The site is classified as non-arable land with potential for grazing, woodland or wildlife. The proposed stocking rate for the region is 10 Ha per large stock unit. The site itself is classified to be most suitable for wheat, with an estimated yield of 0.5 – 1.5 ton/Ha.

(e) Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline.

The total cost to rehabilitate and mitigate the site as it stands currently (risking premature rehabilitation) is estimated to be R 1434527 according to the DMR calculations for the first phases of the project. The detailed calculation DMR quantum is presented in Table 16. The total rehabilitation costing is based on the assumption that the mining operation will do continuous concurrent rehabilitation throughout the project.

Table 16: Financial Quantum

No.	Description	Unit	A	B	C	D	E=A*B*C*D
			Quantity	Master Rate	Multiplication factor	Weighting factor 1	Amount (Rands)
1	Dismantling of processing plant and related structures	m3	795	14.45	1	1	11487.75
2 (A)	Demolition of steel buildings and structures	m2	1500	201.35	1	1	302025
2(B)	Demolition of reinforced concrete buildings and structures	m2	1500	296.75	1	1	445125
3	Rehabilitation of access roads	m2	5 000	45	1	1	225000
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	349.71	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	190.75	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	402.7	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0	204951.85	0.52	1	0
7	Sealing of shafts adits and inclines	m3	0	108.09	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0.5	140732.19	1	1	70366.095
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	175279.45	1	1	0
					1	1	
8 (C)	Rehabilitation of processing waste deposits and evaporation	ha	0	509094.45	1	1	0
9	Rehabilitation of subsided areas	ha	0	117842.01	1	1	0
10	General surface rehabilitation	ha	0.5	27870.9	1	1	13935.45
11	River diversions	ha	0	111483.63	1	1	0
12	Fencing	m	0	127.17	1	1	0
13	Water management	ha	0	42389.21	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0.5	14836.22	1	1	7418.11
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum	0			1	0
					Sub Total 1		1075357.405
1	Preliminary and General		64521.4443		weighting factor 2 1		64521.4443
2	Contingencies				107535.7405		107535.7405
					Subtotal 2		1247414.59
					VAT (15%)		187112.19
					Grand Total		1434527

(f) Confirm that the financial provision will be provided as determined.

It is hereby confirmed that the financial provision will be provided as determined.

Mechanisms for monitoring compliance with and performance assessment against the environmental management programme and reporting thereon, including

g) Monitoring of Impact Management Actions
h) Monitoring and Reporting Frequency
i) Responsible persons
j) Time Period for Implementing Impact Management Actions
k) Mechanisms for Monitoring Compliance

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Topography	To minimise the reduction of land capability.	To ensure that rehabilitation post-mining slopes are stable, free draining and no slopes have an angle in excess of 18º.	Site Manager/ Environmentalists	Monitoring will be done on an *annual basis* to ensure that the levels and the slopes are in order.
Soil	To prevent soil pollution; To limit soil compaction; To curb soil erosion; and To reinstate a growth medium able to sustain plant life.	Soil depth and chemical composition will be tested and possible erosion damage will be assisted and rectified.	Site Manager/ Environmentalists	Monitoring will be done on an *annual basis* or after a heavy rain event.
Air Quality	To control the incidence of unacceptable levels of dust pollution on site.	To ensure that the mine minimizes dust omissions, so that dust does not become a nuisance for affected parties and a health hazard.	Site Manager/Foreman appointed SHE Consultant	Visual inspections will be done and managed by dust suppression by a water tanker. Quarterly tests will also be conducted by a Safety Health and Environmental Consultant and submitted to Mine Health and Safety for monitoring purposes. The implementation of continuous dustfall monitoring as part of the project's air quality management plan. Monitoring should be undertaken throughout the life of the mine to provide air quality trends and indicate compliance with NAAQSs. □ The delineation of an air quality buffer zone is not deemed necessary, considering the "low" to "medium" significance rating assigned to pollutants impacts.
Fauna	To minimise vegetation destruction in mining areas, and therefore a habitat for wildlife; and To eliminate poaching and the extermination of animal species within the boundaries of the study area as well as the surrounding areas.	To ensure that the species diversity and abundance is not significantly reduces.	Site Manager/ Environmentalists	Monitoring will be done at rehabilitated area on an *annually basis* to investigate species diversity and abundance.

Flora	To minimise the destruction of vegetation units; and To control invasion of exotic and invasive plant species.	To ensure that the rehabilitated areas become self-maintaining.	Site Manager/ Environmentalists	Monitoring will be done at the rehabilitated areas on a *twice a year basis* (mid-summer and mid-winter), where species diversity and vegetation cover will be investigated.
SOURCE ACTIVITY	**IMPACTS REQUIRING MONITORING PROGRAMMES**	**FUNCTIONAL REQUIREMENTS FOR MONITORING**	**ROLES AND RESPONSIBILITIES** (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	**MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS**
Noise	To ensure that the legislated noise levels will be adhered to at all times. To control the incidence of unacceptable noise levels on site.	The management objective will be to reduce any level of noise, shock and lighting that may have an effect on persons or animals, both inside the area and that which may migrate outside the area.	The manager .	Quarterly reports on fall-out dust and noise monitoring will be conducted as required by legislation. If any complaints are received from the public or state department regarding noise levels the levels will be monitored at prescribed monitoring points.
Surface Water	To conserve water; and To eliminate the contamination of run-off.	There are no perennial Rivers in the vicinity of the mining operation. Water will be obtained from the shaft.	Site Manager/Water Supply	Monitoring takes place by collecting surface water samples every quarter if available.
Ground Water	To conserve water; and To eliminate the contamination of Ground Water.	There are no municipal water services on the site, nor does any municipal service exist. Ground water pumped from a borehole is used for domestic use on site and for mining purposes. Most water used for ore treatment is supplied by the groundwater that is pumped out of the mine to keep it dry.	Site Manager/Water Supply	Monitoring takes place by collecting ground water samples every quarter

l) Indicate the frequency of the submission of the performance assessment report

Auditing of compliance with environmental authorisation, the environmental management programme and the closure plan should be conducted annually by an independent EAP and an Environmental Audit Report should be compiled in such a way that it meets the requirements in terms of Regulation 34 of the National Environmental Management Act 107 of 1998): Environmental Impact Assessment Regulation, 2014.

The rehabilitation plan should also be reviewed annually in order to fulfil the requirements of Section 41(3) of the MPRDA and should be conducted by an independent EAP. Subsequently, an Annual Rehabilitation Plan should be developed to meet the various requirements set out in the National Environmental Management Act (No 107 of 1998) (NEMA) Regulations pertaining to the financial provision for prospecting, exploration, mining or production operations (as amended in 2015).

These reports should be submitted annually to the Northern Cape DMR offices in Kimberley.

m) Environmental Awareness Plan

The objective of the environmental awareness plan is to ensure that:

- Training needs are identified and all personnel whose work may create a significant impact upon the environment have received appropriate training;
- All employees are aware of the impact of their activities;
- Procedures are established and maintained to make appropriate employees aware of:
    - The significant environmental impacts (actual or potential) of their work activities and environmental benefits of improved personal performance,
    - Their roles and responsibilities in achieving conformance with environmental policies, procedures, and any implementation measures,
    - The potential consequences of departure from specified operating procedures.
- Personnel performing tasks, which can cause significant environmental impacts, are competent in terms of appropriate education, training and / or experience.

Environmental awareness will be part of the existing training and development plan. Key personnel with environmental responsibilities will be identified and the following principles will apply:

- Procedures will be developed to facilitate training of employees, on-site service providers and contractors;
- Environmental awareness will focus on means to enhance the ability of personnel and ensure compliance with the environmental requirements;

Top management will build awareness and motivate and reward employees for achieving environmental objectives;

- Environmental policies will be availed to mine employees and contractors;
- Environmental inductions will be conducted for employees, contractors and visitors;
- There will be an ongoing system of identifying training needs.

General environmental awareness training as part of the induction at the Kophia Diamonds Operation should focus on the following:

- General environmental awareness
- The mine policies and vision concerning environmental management
- Legal requirements
- Mine activities and their potential impacts
- Different management measures to manage identified impacts
- Mine personnel's role in implementing environmental management objectives and targets

(1) Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work.

It is the responsibility of management to ensure that all employees, contractors and visitors are trained to understand the impacts of their tasks on the environment and to reduce them wherever possible. Environmental awareness should be part of the existing training and development plan. Key personnel with environmental responsibilities should be identified and the following principles should be applied:

- Procedures should be developed to facilitate training of employees, on-site service providers and contractors;
- Environmental awareness should focus on means to enhance the ability of personnel and ensure compliance with the environmental requirements;
- Top management should build awareness and motivate and reward employees for achieving environmental objectives;
- There should be an ongoing system of identifying training needs.
- An environmental, health and safety induction programme should be provided to all employees, contractors and visitors prior to commencing work or entering the site, and they should sign acknowledgement of the induction. An attendance register and agenda/programme should be filed for each induction.
- A daily "toolbox talk" should be held prior to commencing work, which will include discussions on health, safety and environmental considerations. The toolbox talks should be led by the site manager or the appointed supervisor/s.
- Refresher training should also be given to permanent employees and long-term contractors on an annual basis, to ensure that all are competent to perform their duties, thereby eliminating negative impacts on their safety, health and environment.

General environmental awareness training as part of the induction at **Kophia Diamonds** should focus on the following:

- General environmental awareness, which incorporates environmental, ecological and heritage elements;
- The mine policies and vision concerning environmental management;
- Legal requirements;
- Mine activities and their potential impacts;
- Different management measures to manage identified impacts;
- Mine personnel's role in implementing environmental management objectives and targets.

Environmental awareness topics to be covered in training should include:

- Natural resource management and conservation;
- Biodiversity awareness and conservation principles;
- Heritage resource awareness and preservation principles;
- Hazardous substance use and storage;
- Waste management; and
- Incident and emergency actions and reporting;

(2) Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment.

Environmental incident reporting will be a vital part of communication in order to deal with risks and ultimately avoid pollution or the degradation of the environment. Such communication should take place through the management, administrative and worker sectors of the operation, as well as contractors and visitors. Employees should be required to report any and all environmentally related problems, incidents and pollution, so that the appropriate mitigation actions can be implemented timeously. In the event of an environmental incident, the reporting procedure as indicated in the table below should be followed.

ENVIRONMENTAL INCIDENT REPORTING STRUCTURE	ACTIONS REQUIRED
Person causing or observing the incident	The first person causing or observing the incident shall report the incident to an immediate supervisor where the environmental incident is observed.
Line management in the relevant area of responsibility where the incident occurred	Line management in the relevant area of responsibility where the incident occurred shall: • Investigate the incident and record the following information: - How the incident happened; - The reasons the incident happened; - How rehabilitation or clean up needs to take place; - The nature of the impact that occurred; - The type of work, process or equipment involved; - Recommendations to avoid future such incidents and/or occurrences; • Inform the environmental manager/ECO and the Operations Manager on a daily basis of all incidents that were reported on site; • Consult with the relevant department/person for recommendations on actions to be taken or implemented where appropriate (e.g. clean-ups). • Assist the Environmental Manager and/or Operations Manager with applicable data in order to accurately capture the incident into the reporting database; • Ensure that remediation measures are implemented as soon as possible.

Site managers	The site managers shall: • Forward a copy of the incident form to other line managers; • Forward a copy of the incident form to the Environmental manager/ECO; • Inform the relevant department/person on a weekly basis of the incident by e-mail or by submitting a copy of the incident report. Once a High Risk Incident (any incident which results from a significant aspect and has the potential to cause a significant impact on the environment) occurred it must be reported immediately to the Environmental Manager and the Operations Manager by telephone or email to ensure immediate response/action. • Forward a copy of the completed Incident Reporting Form (and where applicable a copy of the incident investigation) to the relevant department/person.
Environmental manager/ECO	The appointed environmental manager or ECO shall: • Complete an incident assessment form to assess what level of incident occurred; • Make recommendations for clean-up and/or appropriate alternate actions; • Enter actions necessary to remediate environmental impacts into the database in conjunction with the responsible line manager; • Enter the incident onto the database in order to monitor the root causes of incidents; • Include the reported incidents in an appropriate monthly/quarterly report; • Highlight all incidents for discussion at HSEC meetings.

n) Specific information required by the Competent Authority

(Among others, confirm that the financial provision will be reviewed annually)

Section 41 of the MPRDA and regulations 53 and 54 promulgated in terms of the MPRDA deal with financial provision for mine rehabilitation and closure.

The holder of a right as described in the relevant sections of the MPRDA and its regulations must provide the Department of Mineral Resources (DMR) with sufficient financial provision. Officials in the DMR Regional Offices are required to assess, review and approve the quantum of financial provision submitted (that is, the monetary value of the financial provision that has been computed by the holder of a prospecting right, mining right or mining permit during the annual review) as being sufficient to cover the environmental liability at that time and for closure of the mine at that time.

The holder of a prospecting right, mining right or mining permit is required to **annually assess the total quantum of environmental liability for the mining operation and ensure that financial provision are sufficient to cover the current liability** (in the event of premature closure) as well as the end-of-mine liability.

DEPARTMENT OF ENVIRONMENTAL AFFAIRS No. 940 31 October 2014 in terms of the National Environmental Management Act, 1998 (Act no 107 of 1998).
Regulations pertaining to the financial provision for the rehabilitation, closure and post closure of prospecting, exploration, mining or production operations.

With the DEPARTMENT OF ENVIRONMENTAL AFFAIRS NO. R. 1147 20 NOVEMBER 2015 NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) REGULATIONS PERTAINING TO THE FINANCIAL PROVISION FOR PROSPECTING, EXPLORATION, MINING OR PRODUCTION OPERATIONS.

It is hereby confirmed that the financial provision will be reviewed annually.

2) UNDERTAKING

The EAP herewith confirms

a) the correctness of the information provided in the reports;

b) the inclusion of comments and inputs from stakeholders and I&APs;

c) the inclusion of inputs and recommendations from the specialist reports where relevant; and

d) the acceptability of the project in relation to the finding of the assessment and level of mitigation proposed.

Signature of the Environmental Assessment Practitioner:

Wadala Mining and Consulting (Pty) Ltd

Name of Company:

Date: 13 May 2019

- END –