



mineral resources

Department:

Mineral Resources

REPUBLIC OF SOUTH AFRICA

SCOPING REPORT

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

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

NAME OF APPLICANT: 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

IMPORTANT NOTICE

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

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

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

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a right or 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.

OBJECTIVE OF THE SCOPING PROCESS

The objective of the scoping report is to, through a consultative process—

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

PART A
SCOPE OF ASSESSMENT AND ENVIRONMENTAL IMPACT ASSESSMENT REPORT

2) Contact Person and Correspondence Address

a) Details of:-

i) Details of the EAP who prepared the report:

Name of the Practitioner:	ROELIEN OOSTHUIZEN
Tel No.:	084 208 9088
Fax No.:	086 510 7120
E-mail address:	roosthuizen950@gmail.com
Physical Address:	4 Millin Street, Hadisonpark 8301
Postal Address:	P.O. Box 110823, Hadisonpark 8306

ii) Appointed by:

Kophia Diamonds (Pty) Ltd

iii) 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.

See 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 Code for each farm portion:	F00400000000022900004
Description of the overall activity	<p>Mining Right Application</p> <p>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).</p> <p>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).</p> <p>The two portions have been mined as an entity since the mine started up in 1912.</p> <p>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 tallings dumps and underground mining.</p>

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 Steyn 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	Occha 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	Occha 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 (TB260/1991), 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
2005	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 cph. 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)

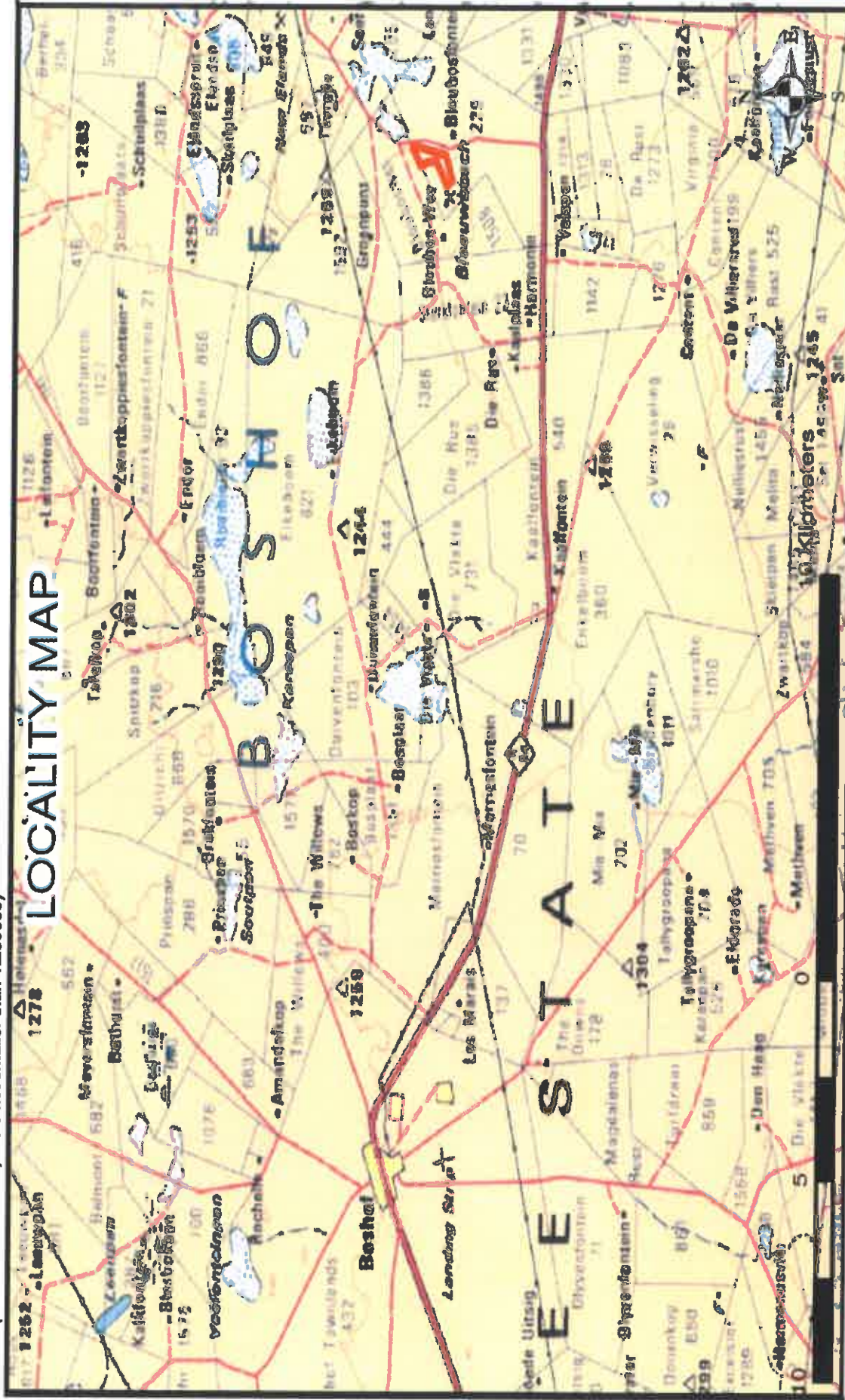


Figure 1. Image – indicating location of mining site east of Boshof

d) Description of the scope of the proposed overall activity

i) Listed and specified activities

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

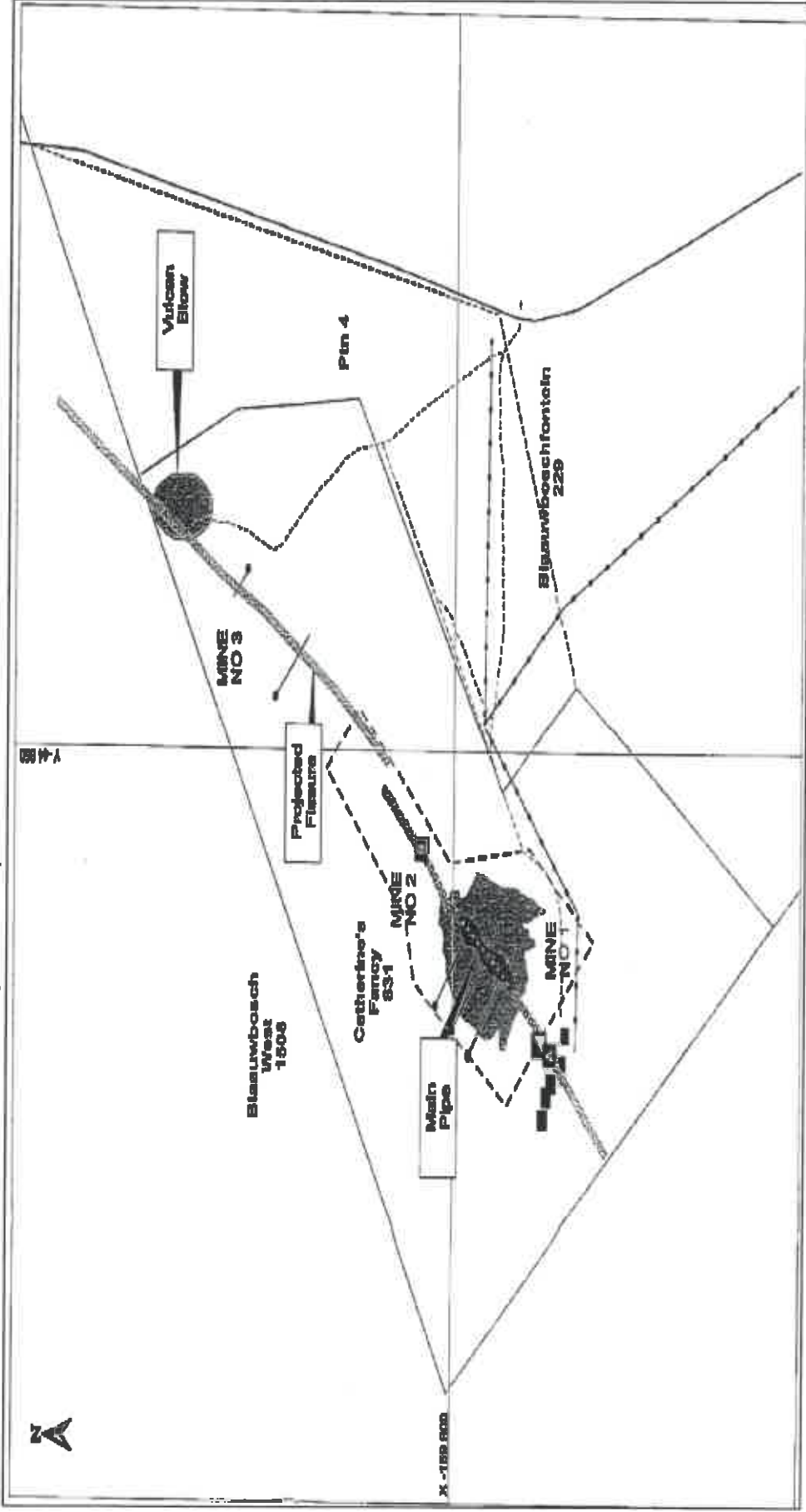


Figure 2. A map of the area indicating the overall location and extent of listed activities and main infrastructure on the mining site

Table 1: Listed and Specified Activities

NAME OF ACTIVITY (E.g. for prospecting – drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route, etc. ... etc. ... etc. E.g. for mining – excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc. ... etc. ... etc.)	Aerial extent of the Activity Ha or m ²	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)
<p>Activity 17 of NEMA Listing Notice 2</p> <p>"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</p> <p>(a) infrastructure, structures and earthworks, directly related to the extraction of a mineral resource; or</p> <p>(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, screening or washing;</p> <p>But excluding the secondary processing of a mineral resource, including the smelting, beneficiation, reduction, refining, calcining or gasification of the mineral resource in which case activity 6</p>	<p>41.0119 ha</p>	<p>X</p>	<p>GNR 325</p>	

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

<p>occur inside urban areas.</p>				
<p>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."</p>	<p>A total of at least 20 hectares will be physically disturbed where the diamond material will be removed and washed.</p>	<p>X</p>	<p>GNR 325</p>	
<p>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; (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;</p>	<p>250m²</p>	<p>X</p>	<p>GNR 324</p>	

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<p>(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</p>				
<p>Activity 9 of Category A under the National Environmental Management Waste Act 59 of 2008</p>	<p>The disposal of inert waste of 10 000 tons, excluding the disposal of such waste for the purposes of levelling and building which has been authorised by other legislation.</p>		<p>GNR 633</p>	<p>X</p>
<p>Activity 15 of Category A under the National Environmental Management Waste Act 59 of 2008</p> <p>The continuous establishment and reclamation of temporary stockpiles resulting from activities which require a mining right.</p>	<p>20 000m²</p>		<p>GNR 633</p>	<p>X</p>

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<p>OTHER ACTIVITIES (Associated Infrastructure not considered to be listed activities)</p>		
<p>Temporary Workshop Facilities Storage Facilities</p>	<p>±3000m²</p>	
<p>Concrete Bund walls and diesel Depots Ablution Facilities</p>	<p>±3000m²</p>	<p>NOT LISTED</p>
<p>Topsoil Stockpiles</p>	<p>±2500m²</p>	
<p>Overburden Stockpiles</p>	<p>±2500m²</p>	

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, advantage 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 southern 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 quality 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 from 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, compressed 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 compromising future production. This initially will require the development of a number of rock drives and crosscuts needed to provide the additional drawpoints necessary to introduce a systematic and controlled draw down of ore and float located above 145 m L.

The main shaft, No 2 shaft, goes down to 205 m level and shaft bottom is at 225 metres. 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.

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)	<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - Control measures are to be implemented upon the approval of the EMPR.
Constitution of South Africa (Act 108 of 1996)	<ul style="list-style-type: none"> - Section 24: Environmental right - Section 25: Rights in Property - Section 27: Water and sanitation right 	<ul style="list-style-type: none"> - To be implemented upon the approval of the EMPR.
Environment Conservation Act (Act 73 of 1989) and Regulations (ECA)	<ul style="list-style-type: none"> - Sections 21, 22, 25, 26 and 28: EIA Regulations, including listed activities that still relate to the existing section of ECA. - Section 28A: Exemptions. 	<ul style="list-style-type: none"> - To be implemented upon the approval of the EMPR.
Fencing Act (Act 31 of 1963)	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - Control measures are to be implemented upon the approval of the EMPR.
Hazardous Substances Act (Act 15 of 1973) and Regulations read together with NEMA and NEMWA	<ul style="list-style-type: none"> - Definition, classification, use, operation, modification, disposal or dumping of hazardous substances. 	<ul style="list-style-type: none"> - Noted and Considered measures are to be implemented upon the approval of the EMPR.
Intergovernmental Relations Act (Act 13 of 2005)	<ul style="list-style-type: none"> - This Act establishes a framework for the National, Provincial and Local Governments to promote and 	

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<p>Mine, Health and Safety Act (Act 29 of 1996) and Regulations</p>	<p>facilitate intergovernmental relations.</p> <ul style="list-style-type: none"> - Entire Act. 	<ul style="list-style-type: none"> - Control measures are to be implemented upon the approval of the EMPR.
<p>Mineral and Petroleum Resources Development Act (Act 28 of 2002) and Regulations as amended</p>	<ul style="list-style-type: none"> - Entire Act. - Regulations GN R527 	<ul style="list-style-type: none"> - A Mining Right has been applied for (FS) 30/5/12/2/10052 MR. - Rights and obligations to be adhered to.
<p>National Environmental Management Act (Act 107 of 1998) and Regulations as amended</p>	<ul style="list-style-type: none"> - 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 terms of NEMA (National appeal Amendment Regulations) - Regulations GN R1147, published on 20 November 2015 in terms of NEMA (Financial Provision) 	<ul style="list-style-type: none"> - Control measures are to be implemented upon the approval of the EMPR.

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<p>National Environmental Management: Air Quality Act (Act 39 of 2004)</p>	<ul style="list-style-type: none"> - 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) 	<ul style="list-style-type: none"> - 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.
<p>National Environmental Management: Biodiversity Act (Act 10 of 2004)</p>	<ul style="list-style-type: none"> - 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. <p>Commencement of Threatened or Protected Species Regulations 2007 : 1 June 2007 GNR 150/GG 29657/23-02-2007</p> <p>Publication of lists of critically endangered, vulnerable and protected species GNR 151/GG 29657/23-02-2007 *</p> <p>Threatened or Protected Species Regulations GNR 152/GG 29657/23-02-2007 *</p>	<ul style="list-style-type: none"> - A permit application regarding protected plant species need to be lodged with DENC if any protected species is encountered.

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	<ul style="list-style-type: none"> - 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) - Chapter 2 lists all protected areas. 		<p>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.</p> <p>National Environmental Management Act (Act 59 of 2008)</p>	<ul style="list-style-type: none"> - To be determined by specialists
	<ul style="list-style-type: none"> - 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) - National Norms and Standards for the Remediation of contaminated Land and Soil Quality published on 2 May 2014 in terms of 			<ul style="list-style-type: none"> - To be implemented upon the approval of the EMPR.

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	<ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> - Section 15: No person may cut, disturb, damage, destroy or remove any protected tree; or collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, except under a licence granted by the Minister.
National Heritage Resources Act (Act 25 of 1999) and Regulations	<ul style="list-style-type: none"> - 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 authority.
	<ul style="list-style-type: none"> - A permit application regarding protected tree species need to be lodged with DAFF if necessary.
	<ul style="list-style-type: none"> - Control measures are to be implemented upon the approval of the EMPR.

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	<ul style="list-style-type: none"> - 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 	
<p>National Water Act (Act 36 of 1998) and regulations as amended, <i>inter alia</i> Government Notice No. 704 of 1999</p>	<ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> (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) - Regulation GN R139, published on 24 February 	<ul style="list-style-type: none"> - 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.

	<p>2012 in terms of the National Water Act (Safety of Dams)</p> <ul style="list-style-type: none"> - 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), (i)) 	<ul style="list-style-type: none"> - Control measures are to be implemented upon the approval of the EMPR.
Nature Conservation Ordinance (Ord 19 of 1974)	<ul style="list-style-type: none"> - Chapters 2, 3, 4 and 6: Nature reserves, miscellaneous conservation measures, protection of wild animals other than fish, protection of Flora. 	<ul style="list-style-type: none"> - Control measures are to be implemented upon the approval of the EMPR.
Occupational Health and Safety Act (Act 85 of 1993) and Regulations	<ul style="list-style-type: none"> - 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. 	<ul style="list-style-type: none"> - Control measures are to be implemented upon the approval of the EMPR.
Road Traffic Act (Act 93 of 1997) and Regulations	<ul style="list-style-type: none"> - Entire Act. 	<ul style="list-style-type: none"> - Control measures are to be implemented upon the approval of the EMPR.
Water Services Amendment Act (Act 30 of 2007)	<ul style="list-style-type: none"> - 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). 	<ul style="list-style-type: none"> - Control measures are to be implemented upon the approval of the EMPR.
National Land Transport Act, (Act 5 of 1998)		<ul style="list-style-type: none"> - To take note.
Spatial Planning and Land Use	<ul style="list-style-type: none"> - To provide a framework for spatial planning and 	<ul style="list-style-type: none"> - To be implemented upon the

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Management (Act 16 of 2013 (SPLUMA) and regulations	land use management in the Republic; - 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	approval of the EMPR.
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

f) Need and desirability of the proposed activities

(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location)

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

Currently vegetation cover is sparse with bare areas open on the tailings on most of the area. Grass cover area scattered with mostly pioneer species evident. Trees are scattered all over the disturbed area. No endangered trees like *Acacia erioloba* were identified or noticed.

g) Period for which the environmental authorisation is required

10 years.

h) Description of the process followed to reach the proposed preferred site

NBII – This section is not about the impact assessment itself; it is about the determination of the specific site layout having taken into consideration (1) the comparison of the originally proposed site plan, the comparison of that plan with the plan of environmental features and current land uses, the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout as a result.

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.

Kophia Diamonds (Pty) Ltd has the right to mine the farm Catherine's Fancy 831, which forms part of the Blaauwbosch Mine property in the Boshof district of the Free State Province. The claims area consist of a blast hole, which will be re-commissioned, remnants of previous mine buildings which are in severe disrepair and old tailings dumps, which were never rehabilitated. While it is anticipated that any additional areas will be altered by the mining activities, the alterations that have already occurred are permanent in nature.

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.

i) Details of the development footprint alternatives considered

With reference to the site plan provided as Figure 2 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

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

Farm Name	Title Deed	In Extent
Portion 4 of Farm Blaauboschfontein No. 229, Boshof	T004833/2003	41.0119 (Forty One comma zero one one nine hectares)

The property on which the Mining Right application was lodged is determined by the geological location of the mineral resource. Therefore, there are no alternatives for the

location of the activity, except for not proceeding with the operation. This will however cause the underutilisation of a national economic resource.

The area is accessible via good roads from different directions.

Infrastructure in the area is very well developed with good road and rail networks, electricity grid and water. Experienced labour is available in the area as is an extensive network of secondary industries geared towards small and large-scale diamond mining. The blast hole will be de-watered, this water will be initially pumped to the process water storage dam and will be utilized for the processing plant.

Alternatives considered:-

As the Mining Right of Kophia had been granted over the Catherine's Fancy area and the properties had always been mined as unit, it would not be viable to consider an alternative site for the mine. Alternatives for land are thus not available, as the mining right application can not be considered over another area.

Therefore there are no alternatives to the area.

(a) The type of activity to be undertaken:

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.

Alternatives considered:-

The only alternative land use is for wilderness areas; however the applicant's main economic activity is mining and for this reason does not favour any other alternative land use.

Further, since a mining right has been granted over the area, the option of amending the mining area or the type of activity is neither available nor considerable.

(b) The design or layout of the activity:

The site infrastructure will need to be strategically placed by incorporating mining project demands and environmental sensitivities identified during the Environmental Impact Assessment process. Thus, the site layout will primarily be based on proximity to the existing delapidated infrastructure, access roads, proximity to the areas earmarked for mining as well as limited additional impact on the environmental, heritage resources and discussions with the owners.

The following infrastructure will be established and will be associated with the mining operation:

- Processing Plant : 2 X 14 feet

- **Ablution Facilities:** In terms of sewage the decision was made to use chemical toilets until existing infrastructure can be repaired which can be serviced regularly by the service provider.
- **Clean & Dirty water system: Berms**
It is anticipated that the operation will establish stormwater control berms and trenches to separate clean and dirty water on the mine site.
- **Fuel Storage facility (Concrete Bund walls and Diesel tanks):**
It is anticipated that the operation will utilize 2 x 23 000 litre diesel tanks. These tanks must be placed in bund walls, with a capacity of 1.5 times the volume of the diesel tanks. A concrete floor must be established where the re-fuelling will take place.
- **Mining Area:** Opencast mining to reclaim kimberlite tailings dumps and underground mining.
- **Processing plant:**
- **Roads (both access and haulage road on the mine site):**
Although it is recommended that the operation utilize existing roads as far as possible, it is anticipated that the mining operation will create an additional 2 - 4 km of roads, with a width of 20 meters. The width of the road is based on an operating width of the haul trucks of 5 meters. Best practice and the guideline from the DMR is to allow for 4 x Operating width of haul truck, in this case 20 meters wide roads. The current access road is deemed adequate for a service road into the mine.
- **Salvage yard (Storage and laydown area).**
- **Security Gate and guard house at access control point.**
- **Product Stockpile area.**
- **Waste disposal site**
The operation will establish a dedicated, fenced waste disposal site with a concrete floor and bund wall. The following types of waste will be disposed of in this area:
 - Small amounts of low level hazardous waste in suitable receptacles;
 - Domestic waste;
 - Industrial waste.
- **Temporary Workshop Facilities and Wash bay.**
- **Water distribution Pipeline.**
- **Water tank :** It is anticipated that the operation will establish 1 x 10 000 litre water tanks with purifiers for potable water.

Alternatives considered:-

Alternatives for fuel storage include surface storage, underground storage and the storage of fuel in mobile tanks with a metal bund wall. Underground storage has an adverse negative pollution potential, because it is not easy to monitor leakages. Remediation measures are also not as effective as compared to surface storage tanks. Mobile tanks are a viable option for infield screening activities, but the best viable long term option is the instalment of fuel tanks within a concrete bund wall. The final location of the fuel storage tanks will be determined based on proximity to site operations.

In terms of water use alternatives; 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. Plastic pipelines are considered to be the best long term option for transferring water, due to their temporary nature which causes minimum environmental disturbances.

Therefore, a pipeline route will be designed based on the principle of minimum impacts to the environment.

In terms of power generation the options available was for Eskom lines pass the site approximately 3km to the north-west as well as approximately 1km to the south of the mining area. These lines run from the town of Boshof nearby. There is a power connection point on site which provides power for the mining operations.

In terms of sewage the decision was made to use chemical toilets which can be serviced regularly by the service provider.

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

- **Technique**

The tailings will be loaded with an excavator on to dump trucks for conveyance to the Processing Plant. At the Processing Plant the run of mine tailings will be fed onto a grizzly for screening out oversize material.

The Kimberlite is mined underground by means of inclined chambering which is essentially a combination of shrinkage, stoping and caving in which, advantage 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 southern 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 quality 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 from 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, compressed 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.

- Technology

The tailings will be processed through a screening and crushing section for delivery to the plant.

Hoisted ore from underground is fed into the plant. The ground is crushed until it is smaller than 6mm. This fine material is then put through a pan plant and the concentrate is retained. The light material is conveyed out onto the fine ore residue (slimes dams, the coarse waste is disposed to the coarse tailings dumps.

The current processing plant can treat between 5,000 and 7000 tonnes per month. The existing plant can be reconfigured and refurbished so that the tons treated can be doubled within 5 years and extra diamond pan capacity be provided for. The plant reduces ore fragments to -6,0mm. The feasibility trials will determine the production rates to begin with and will probably be estimated to be in the region of 60 000 tons for the first year and thereafter production rates will be ramped up.

The diamond extraction process from the Kimberlite ore is essentially a physical one which depends on the physical properties of diamonds. Diamonds have a high specific density, repel water and have an affinity for grease.

The ore is processed by crushing, washing and screening in order to size the material for further treatment. The kimberlite ore is mined under dry conditions underground and is hoisted to surface and tipped onto stockpiles. From the stockpile the ore is trammed by truck to the receiving bin at the plant where it is fed into the primary crusher, a 1224 Jaw crusher. The ore is crushed to -75mm

screened and then reports to the secondary gyratory crushing plant where the ore is size is reduced to -19mm.

From the secondary crusher the ore reports to the rotary 14 foot pan plant where the diamond concentrate is separated from the ore by means of gravity. The ore is washed and separated into the heavy concentrate fraction and the lighter "floats"

The water for the washing and screening is drawn from the process water dam.

Alternatives considered:-

The planned mining activities include the re-processing of kimberlitic tailings and underground mining. The operation is also associated with processing techniques that make use of modern technologies. These are the most economic viable method currently being used by the diamond fraternity. There is no other feasible, alternative mining method for the mining and extraction of diamonds in tailings.

(d) The operational aspects of the activity:

The tailings will be loaded with an excavator on to dump trucks for conveyance to the Processing Plant. At the Processing Plant the run of mine tailings will be fed onto a grizzly for screening out oversize material. The tailings will be processed through a screening and crushing section for delivery to a plant.

Mining activities will primarily make use of existing roads created by previous mining activities, but additional roads will most likely be created. A crushing and screening plant will also be erected on site.

Alternatives considered:-

The conventional opencast load-haul-mining method has been proven to be the most economic viable method currently being used by the diamond fraternity. There is no other feasible, alternative mining method for the mining and extraction of diamonds in Kimberlite.

(e) The option of not implementing the activity:

The claims area has already been mined and environmental damage has already occurred. The site is currently in a degraded state as no rehabilitation of the site has been undertaken since closure 35 years ago. The option to mine this site has been determined to have greater benefits than the option of not implementing the activity as mining activity will involve the reprocessing of old tailings dumps and the rehabilitation of the mine. In addition the mine will have a positive socio-economic impact on the region through expenditure and job creation.

Therefore, mining activities are believed to be the most economically beneficial option for the area.

Mining forms an integrated part of the social and economical growth of South Africa.

Socio-Economy

The operation will make provision for 48 job opportunities. This will be lost if the project does not proceed. Substantial tax benefits to the State and Local Government will also be lost.

Biodiversity

The majority of the relevant area is covered by old tailings deposits with no vegetation and very little natural vegetation remaining on the periphery of the stockpiles.

The vegetation cover of the area is pure grassveld, comprising of Western Free State Clay Grassland veldt types.

Currently vegetation cover is sparse with bare areas open on the tailings on most of the area. Grass cover area scattered with mostly pioneer species evident. Trees are scattered all over the disturbed area of which most of them will be classified as alien species according to CARA regulations.

The mobility and in many cases the adaptability of many bird species has meant that they more than any other vertebrate group have taken advantage of many of the changes we have brought about in the environment.

As this site was severely disturbed for the past more than 100 years this has caused that all wildlife has probably immigrated to adjacent undisturbed areas.

Heritage and Cultural Resources

This information is taken out of the Heritage report done by PGS Heritage, Henk Steyn, 30 July 2018 on Catherines Fancy, Blaauwbosch Mine (See Report attached as Appendix 5).

Heritage resources are unique and non-renewable and as such any impact on such resources must be seen as significant. This report focuses expressly on the area affected by current mining activities, other management measures as listed and required in other HIA's conducted in the area must still be implemented for other heritage features identified in the larger mining area.

The HIA has shown that the Kophia Diamond Mine has heritage resources present on the affected properties. This has been confirmed through a field survey, archival research and evaluation of aerial photography of the sites.

During the field assessment seven heritage resources were located, not including the accidentally discovered burial ground. These include three Middle Stone Age sites (207, 208 and 212) and four historical structures (209, 210, 211 and 213).

These sites have LOW heritage significance and no further mitigation measures are required, except that a permit from SAHRA is required if the mining activity is expected to destroy the three MSA sites.

The burial ground is currently undergoing a full grave relocation process, for which a permit application is in progress, as required by various authorities. This HIA report forms part of the permit application.

It is my considered opinion that overall impact on heritage resources after the implementation of the recommended mitigation measures is acceptably low and that the project can be approved from a heritage perspective.

Should any other heritage features and/or objects be located or observed, a heritage specialist will be contacted immediately. Observed or located heritage features and/or objects may not be disturbed or removed in any way until such time that a heritage specialist has been able to make an assessment as to the significance of the site (or material) in question. If the mining operation is approved, the heritage resources if any other had been encountered will be protected through the demarcation of no-go zones and fencing off.

ii) Details of the Public Participation Process Followed

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

- Notification letters were sent to all interested and/or affected parties on the 04 December 2018. Attached to each of these letters was a Background Information Document (BID), containing information relating to proposed project and a concerns and comments form for registration and to submit concerns and comments.
- A newspaper advert was placed in the Volksblad local newspaper on the 12th December 2018.
- A site notice was placed at the entrance to the site.
- The Scoping Report was sent per registered post to all parties on the 14 December 2018 with a concerns and comments form for comments or concerns.
- The Scoping Report was also placed at the public library in Boshof as well as site notices were placed to inform the general public.

Proof of notification and consultation is attached as Appendix 3. The consultation process is still ongoing.

Summary of issues raised by I&APs

(Complete the table summarising comments and issues raised, and reaction to those responses)

Table 3: Consultation with I&APs

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted	Date Comments Received	Issues Raised	EAP's response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and/or response were incorporated
AFFECTED PARTIES				
Landowner/s	X			
Belisbank Mining Number One (Pty) Ltd P.O. Box 2766 Kimberley 8300	X			
Lawful occupier/s of the land There are no lawful occupiers.				
Landowners or lawful occupiers on adjacent properties	X			
Jaco Botha PO Box 70 Boshof 8340	X			
Nico Oosthuizen PO Box 144 Boshof 8340				
Municipal Councillor	X			
Municipality	X			
Mayor	X			
Tokologo Local Municipality Private Bag X 46 Boshof 8340				
Municipal Manager Tokologo Local Municipality Private Bag X 46 Boshof 8340				
Lejwelephutswa District Municipality PO Box 2163 Welkom 9460				

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Organs of State (Responsible for Infrastructure that may be affected Roads Department, Eskom, Telkom, DWS)									
SANRAL P.O. Box 415 Pretoria 0001	X								
Transnet PO Box 72501 Parkview 2122	X								
Department of Agriculture, Forestry & Fisheries Directorate: Forestry Management Private Bag X 528 Bloemfontein 9300	X								
Dept. of Agriculture & Rural Development Private Bag X01 Glen 9630	X								
ESKOM NC Operation Unit Land Development PO Box 356 Bloemfontein 9300	X								
ESKOM Environmental Division PO Box 356 Bloemfontein 9300	X								
Free State Department : Police, Roads and Transport PO Box 119 Bloemfontein 9300	X								
Department of Water & Sanitation PO Box 528 Bloemfontein 9300	X								
National Dept. of Public Works P.O. Box 1931 Kimberley 8300	X								
SAHRA P.O. Box 4637	X								

Cape Town 8000							
Free State Department : Public Works and Infrastructure PO Box 690 Bloemfontein 9301							
National Dept. of Public Works Private Bag X20605 Bloemfontein 9301	X						
Department of Economic, small business development tourism and environmental affairs Private Bag X20801 Bloemfontein 9300	X						
Communities							
Dept. Land Affairs No land claim							
Traditional Leaders No Traditional Leaders							
Dept. Environmental Affairs Dept. of Environment & Nature Conservation Private Bag X6102 Kimberley 8300	X						
Other Competent Authorities affected							
<u>OTHER AFFECTED PARTIES</u>							
<u>INTERESTED PARTIES</u>							

iv) The Environmental attributes associated with the development footprint alternatives (The environmental attributes described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects)

(1) Baseline Environment

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

(1) GEOLOGY:

Regional Geology

The area in the Northwest Free State, in which the Blaaubosch Kimberlite occur, is underlain by flat-lying shale's, siltstones and mudstone of the lower Karoo Supergroup (Dwyka Formation). This group has an estimated thickness of approximately 190m. These rocks unconformably overlie the andesitic lavas of the Ventersdorp Supergroup, which have a thickness of approximately 500m. The Karoo Supergroup is locally intruded by dolerite sills and Kimberlites.

Blaaubosch is one of a number of known Kimberlite intrusions, occurring as both small pipes and fissures in a belt trending at N60°E. This belt is 30km long and 6km wide and is centred on a point 35km east of Boshof. These Kimberlites are known as the Boshof Group. Three of these Kimberlites (Blaauwbosch, New Elands and Roberts Victor) have a history of diamond production, and many of the others have proved, via prospecting to be diamondiferous.

Local Geology

The Blaaubosch kimberlites comprise a small pipe, at least one Fissure, and a blow or fissure expansion referred to as the Vulcan blow. These have been intruded into the flat lying shales of the Dwyka Formation. According to the Steyn report and the mine plan, these are 180m thick and underlain by Ventersdorp lavas. Data obtained from various kimberlites in the area indicate an age of intrusion of 125 – 134 million years. Orientation data from the Roberts Victor fissure confirms the direction of the fissure belt.

The Blaaubosch pipe is irregular in shape and elongated in plan. It measures 125m in the NE-SW direction with a width of 35 m on the 43D foot level (131m). The kimberlite footprint area was measured at 0.321ha at surface (Wagner 1914) tapering to 0.260ha at a depth of 131m. This equates to a centripetal dip of the NW and SE walls of the pipe of 85°, assuming the NE and SW walls to be vertical in the plane of the fissure.

The Vulcan blow is situated some 680m northeast of Blaauwbosch. There is no information on the dimensions of the blow, but the shallow pit on surface measures some 35m by 12m, including the access ramp.

A fissure zone, which was mined adjacent to the pipe, connects the two bodies and has been traced for 200m to the southwest and for 700m to the northeast of the pipe. The fissures are quoted by Steyn to be younger than the pipe, but two borehole intersections indicate that the fissure occurs on the pipe contact, and does not cut through it. Wagner considers the fissures to be “antecedent” to the pipe, this being the normal situation in the area. Borehole intersections indicate that the fissures within the fissure zone vary in width from 0.03m to 3.78m with an average of 0.87m. The average width of the widest fissure in the zone, excluding stringers is 1.82m, ranging from 0.21 to 3.78 m. For comparison, the average fissure width of the New Elands drilling programme is 0.31m.

The original drilling results have not been obtained and therefore neither the coordinates of the boreholes nor the intersections with the orebody could be confirmed.

The orientation of the excavation of the Vulcan blow is oblique to the strike of the fissure zone, trending roughly N-S parallel to one of the two fissure trends at New Elands Mine, suggesting that the blow is genetically related to this system, rather than to Blaaubosch. However, according to Snyman, the fissure running into the Vulcan Blow has an E-W orientation.

It must be noted that fissures occurring in shale often do not outcrop (Wagner), a phenomenon attributed to solution leaching of the fissure at surface and the subsequent closure of the fracture into which the fissure was intruded.

Kimberlite Geology

The Blaauwbosch kimberlite pipe comprises a typical diatreme-facies tuffsilic kimberlite breccia, with a single phase of intrusion. The kimberlite is classified as a Group II Type Kimberlite, with a fine-grained micaceous matrix crowded with shale, lava and occasionally numerous granite-gneiss xenoliths. Pyrope garnet, chromite, pyroxene, and olivine are present as xenocrysts.

The fissure/blow kimberlite is variable in character, judging by the samples collected in the vicinity of the Vulcan excavation. It varies from a pinkish micaceous variety with virtually no xenoliths, through a hard grey variety with numerous small shale fragments through to a green-streaked pink rock with abundant secondary epidate.

LITHOLOGY LITOLOGIE		ECONOMIC DATA EKONOMIESE GEGEWENS	
Qa	Alluvial diamondiferous gravel Alluviale diamantdraende gruis		
Qc	Calcrete, calcified pedunc and surface limestone Kalkreot, verkalkte panduin en opperveldkalksteen		
~	Alluvium and scree Alluvium en glooingspuin	X	Mine in production Myn in produksie
Qb	Sand: Red and grey aeolian dune sand Sand: Rooi en grys aeoliese duinsand	DA	Diamond (alluvial) Diamant (alluviaal)
	Kimberlite pipe (+), fissure (-+) Kimberlitetyp (+), -epies (-+)	DK	Diamond (in Kimberlite) Diamant (in Kimberlit)
Jd	Dolerite: dolerite dyke shown as (—) Doleriet: dolerietegang aangetoon deur (—)	GPP	Apophyllite Apoofiliet
Pa	Mudstone, sandstone Moddersteen, sandsteen	Gy	Gypsum Gips
Ppr	Shale Skale	He	Helium Helium
Pt	Shale, siltstone, sandstone Skale, siltsteen, sandsteen	LB	Limestone Kalksteen
Pw	White-weathering carbonaceous shale Witverwerende koolstofhoudende skale	Na	Salt Sout
C-Pd	Tillite, sandstone, mudstone, shale Tiliet, sandsteen, moddersteen, skale	QB	Building Sand Bousand
		St	Stone aggregate Klipaggregaat
		To	Torbanite/Oil shale Torbaniet/Olieskale

(2) CLIMATE:

Regional Climate:-

This climatic zone is characterised by hot summers and cold dry winters.

Rainfall in the area is unpredictable. The majority of rain (88.2%) falls between October and April in the form of thunderstorms. During this period rain can be expected every 5 days.

The winters are very dry and rainfall is rare. Any precipitation that does take place tends to be brought about by cyclones penetrating the interior of the country.

The prevailing winds in this area are from a north-westerly direction. The strongest winds tend to blow from a west-south-westerly direction to a north-north westerly direction and occur from August to December. October and November are the windiest months.

The various climatic parameters such as rainfall data, temperature data, evaporation rates, wind speed and direction have been obtained from the weather station at Kimberley.

Average Annual Rainfall:-

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Annual
Rainfall (mm)	7.0	7.0	12.0	30.0	42.0	48.0	57.0	76.0	65.0	49.0	16.0	7.0	384.8
Days of Rain	0.8	1.0	1.5	3.6	5.0	6.0	6.8	7.0	7.7	5.2	2.6	1.3	

Rainfall Intensity:-

Most of the rainfalls occur during thunderstorms in the Summer months as well as during cloud bursts where maximum rainfalls were measured of up to 88mm at a downpour of approximately 24 hours.

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
24 HRS	22.0	26.0	44.0	35.0	60.1	60.5	45.0	88.0	54.0	51.0	55.0	18.0
24 HRS / 50 YRS	26.8	23.4	24.1	53.8	41.2	70.7	65.1	58.9	72.1	65.9	36.8	26
24 HRS / 100 YRS	31	27.3	28	61.8	46.7	80.9	73.8	68.5	81.4	75.2	42.4	30.4

Average Maximum and Minimum Temperatures:

The average maximum temperature measured during the Summer is 26.575°C and the minimum during the Winter months is 9.675°C.

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Maximum	19	22.2	24.7	29.2	30.4	32.7	32.9	31.2	29.2	25.8	22.4	19.2
Minimum	0.4	3.3	7.0	12.1	14	16.2	16.9	16.2	14.0	9.7	5.0	1.3

Average Monthly Wind Direction and Speed:-

The prevailing wind direction in the area is mainly from the north to north-westerly with the strongest winds from the west-southwest to north-northwest that occurs between August and December. October and November month are common for high wind speeds of up to 4.85 metres per second.

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Speed (m/s)	4.0	4.3	4.6	4.8	4.9	4.7	4.4	4.0	3.8	3.7	3.6	3.8

	N	NE	E	SE	S	SW	W	NW
Wind Direction (m/s)	159	98	39	95	55	78	110	155

Average Monthly Evaporation:-

It is estimated that the average annual evaporation rate is approximately 2365mm which indicates the dry climate conditions in this area. Thus, with an annual rainfall of 380,8mm the net evaporation may be calculated to be 1984mm.

Presence of Extreme Climatic Conditions:-

Hail: This is a very rare occurrence in the region. Hail does however occur at an average of 1,2 days per year in the area.

Frost: This can occur from April to October and temperatures during this period can be extremely low. The lowest recorded temperature in this area is -7.8°C.

Strong Winds: Occasional strong winds occur but not often

Droughts: Temperatures during the summer months frequently exceed 30°C and can reach up to 40°C at times. These high temperatures coupled with low rainfall make the region susceptible to very dry conditions.

(3) TOPOGRAPHY:

The site is situated on the Highveld of the inland plateau at an altitude of 1200m – 1400m above sea level. The landscape slopes generally to the south west and gradients are very shallow.

There is much local disturbance in and on the claims area where the topography has been significantly altered due to previous mining activities. The blast hole currently measures about 250m in diameter and is estimated to be approximately 50m deep with steep sides (ie up to 1:1 gradients). Significant erosion has occurred around the perimeter of this blast hole, causing it to have become larger than when the mine was still operational.

The old slimes dam is evident and the tailings dumps are prominent, currently covering an area of about 5ha. A small pan has formed as a result of contained runoff within the tailings dumps.

(4) SOILS:

Soil classification is done according to the Taxonomic System for South Africa (Macvicar et al, 1991). The site falls under land type Db3a, according to Land Type map 2824 Kimberley (Department of Agriculture – Technical Services). These soils are characterised by a dominant prisma-cutanic and / or pedo-cutanic horizon and a non-red B-horizon.

Erosion

The soils of the claims area are very erodible and classified into the Valsrivier form. The topsoil is a bleached sandy clay Orthic A horizon that overlies a sandy clay pedocutanic sub- horizon. The depth of the topsoil is 250mm and that of the pedocutanic horizon 550mm.

(5) LAND CAPABILITY AND LAND USE:

Mining activity on Blaauwbosch was discontinued in 1967, so it is difficult to determine with certainty the pre-mining land capability of the mine. It can however be stated, given consideration of the surrounding un-mined areas that the land would have been suitable for grazing.

The claims area is mostly disturbed as a result of the aforementioned mining activities.

Land use

Pre-mining land use

The claims area was previously mined, before which the site was most likely used for grazing.

Historical agricultural production

Much of the adjacent land is presently used for grazing and the production of crops. The nature of the grazing is sweet due to the clay substrates, but production of sweet grass is limited nowadays due to the condition of the pastures. This, mainly as a result of overgrazing, has resulted in sub-optimal grazing.

Evidence of misuse

In addition to the disturbance caused by past mining activities, which were left un-rehabilitated, the general condition of the site and surrounds is degraded. Overgrazing on the sensitive Valsrivier soils is reflected in the dominance of sub-climax grasses. Outside the property next to the road reserve where the area is protected against grazers, red grass (*Themeda triandra*) dominates.

Existing structures

Remnant structures from past mining operations still exist on the site, most of which will be used in the new mining operation. Those that will not be used will be demolished during the initial site cleanup.

(6) NATURAL FAUNA:

The mobility and in many cases the adaptability of many bird species has meant that they more than any other vertebrate group have taken advantage of many of the changes we have brought about in the environment.

As this site was severely disturbed for the past 30 years and the fact that this area is adjacent to a residential area has caused that all wildlife has probably immigrated to adjacent undisturbed land.

(7) NATURAL VEGETATION:

The vegetation of the area may be described as Pan Turf Veld (Veld Types of Southern Africa. Acocks 1975). This is veld occurring on the turf soils of the flats around the pans and constitute a very dense Themeda veld. Not much of this veld is left in its original condition, however, and overgrazing has led to other species replacing Themeda as well as some invasion by Karoo species.

Little natural vegetation remains within the claims area as most has been degraded by previous mining activities and the construction of associated infrastructure.

The following species were noted on the site:

- *Aristida congesta* ssp. *barbicollis*;
- *Cynodon dactylon*;
- *Enneapogon cenchroides*;
- *Eragrostis Lehmanniana*;
- *Eragrostis obtuse*;
- *Eragrostis superba*;
- *Fingerhuthia Africana*;
- *Panicum sp*;
- *Sporobolus sp* and
- *Themeda triandra*.

The woody layer is not well represented, but the following species were noted:

- *Acacia tortilis* and
- *Rhus lancea*

Endangered or rare species

No endangered or rare species were noted on the site.

Invader or exotic species

[SCOPING REPORT – KOPHIA DIAMONDS]

Exotic invaders species that were noted on the site include the following:

- Syringa (Mella azedarach) and
- Mesquite (Prosopis glandilosa).

The negative impact of the historical mining activities and the legacy thereof with the sterilizing of the area by tailings, which impact is severe on the natural environment and evident in this area. No suitable ameliorative actions were taken to prevent pollution of the area as no Acts had in that time forced Mining Companies to do rehabilitation.



Figure 4. Regional vegetation map with the application area indicated in red

(8) SURFACE WATER

Numerous pans in the facility constitute the only perennial or seasonal surface water near the site. The blast hole contains permanent water as a result of some seepage and surface runoff. A small pan which is enclosed by tailings dumps holds surface runoff. A small pan which is enclosed by tailings dumps holds surface runoff water, but it is unlikely that this is a natural feature.

Floodpeaks and volumes are not applicable as the claims area is situated well away from any perennial watercourse. No river diversions will be required.

Drainage density

No drainage areas outside of the disturbed claims area will be affected as the required infrastructure will be rebuilt on previously disturbed land.

Surface water use

Some of the pans in the area are used for agricultural purposes, and a few small dams have been built on nearby farms for irrigation and stock watering. The mine does not however affect any of these pans or dams, and consequently no surface water users in the area will be affected.

Water Authority

The provincial department of Water and Sanitation has authority over all underground and surface water resources. Boshof and Dealesville fall within the Lower Vaal Management Area. The application area falls within Quaternary catchment area C91C.

Wetlands

No natural wetlands or pans are present in the claims area or on the site. The small pan is not believed to be a natural feature, but rather formed as a result of altered runoff because of the old tailings dumps.

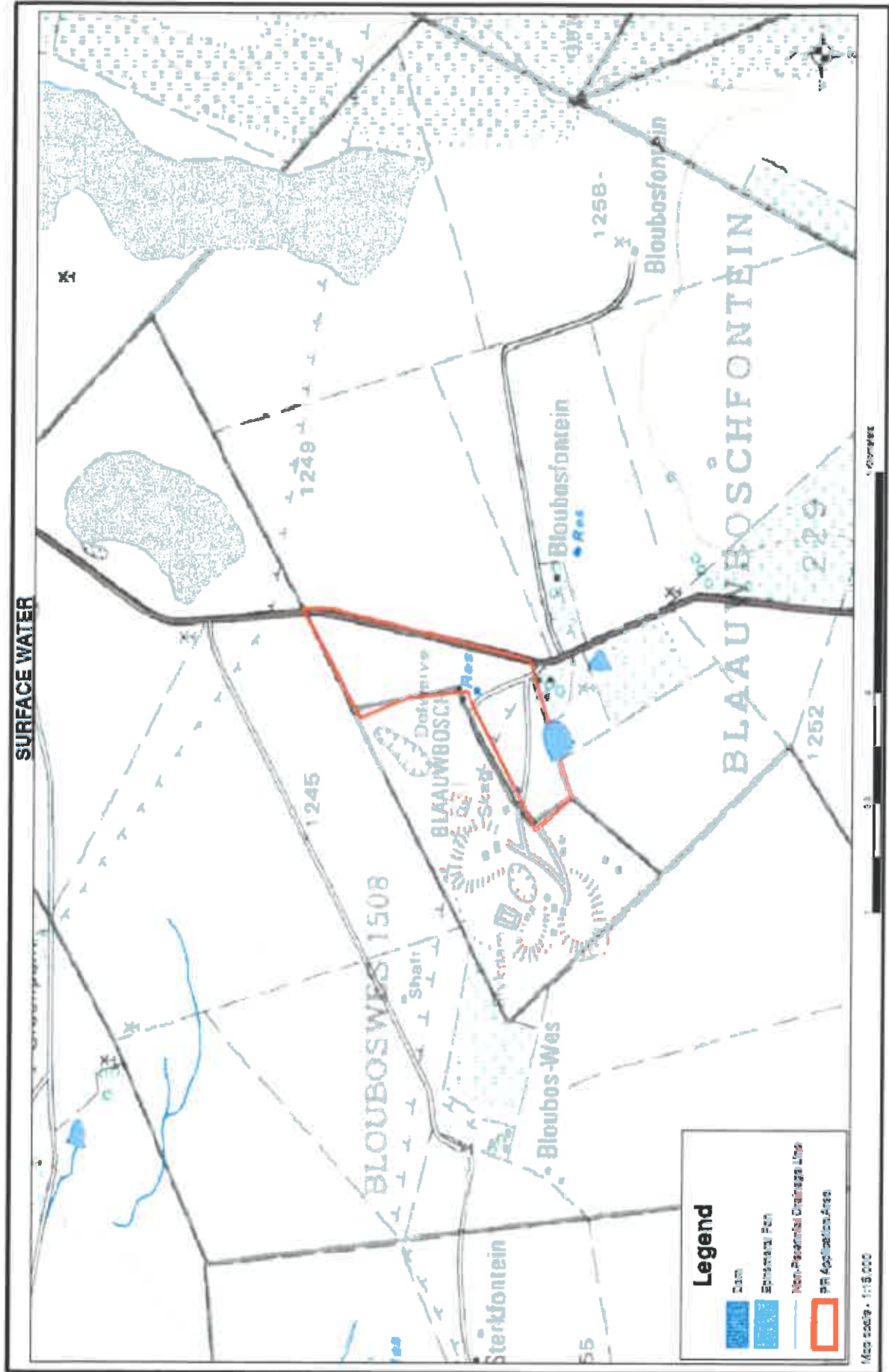


Figure 5. Surface water map the application area is indicated in red.

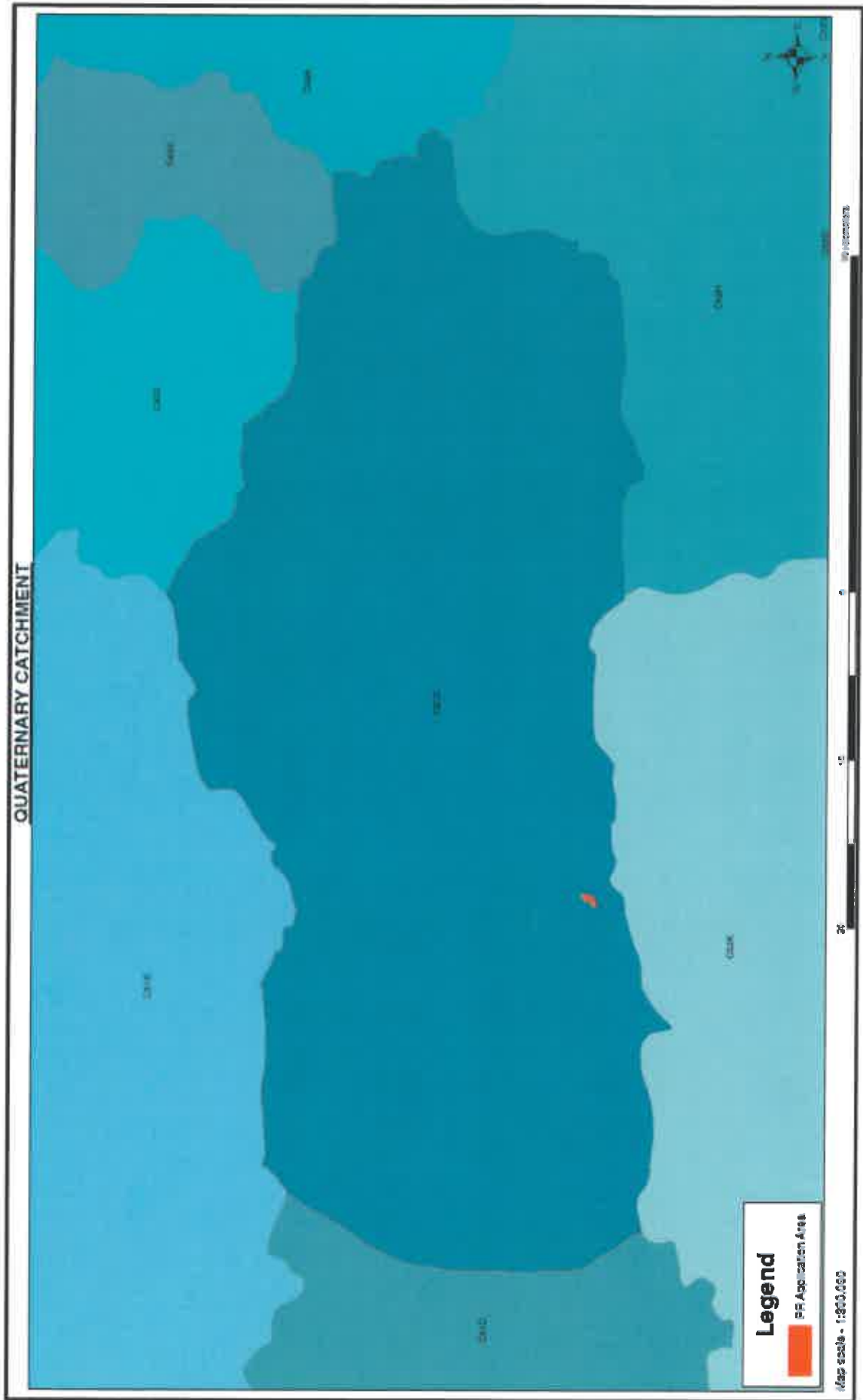


Figure 6. Quaternary catchment map, the application area is indicated in red.

(9) GROUND WATER:**Depth of the wate table**

No assessment was undertaken to establish ground water table, but it may be assumed that permanent water would occur at 40m, which is the level of water in the boreholes on the Blaauwbosch site.

Water boreholes and springs

No natural springs occur on the site. Two boreholes dating from previous mining activities are to be found at the site gate and near the old manager's house. Only the borehole at the managers house will be used for mining and / or domestic use on Blaauwbosch site. And it is estimated to have a maximum yield of 8000 litres/hr.

Ground water quality

Previous water quality samples reported that it was in good condition with no element exceeding recommended limits.

Ground water use

The farms to the west and east of the mine both utilise ground water for domestic and agricultural purposes. Regionally, most farms make use of ground water supplemented by surface water from local pans and farm dams. Mining operations in the area also make use of ground water.

The Blaauwbosch mining operation use approximately 15000 litres of water per day, obtained mostly from the borehole and from ground water pumped from the mine. Excess water from the slimes dam, surface runoff from the claims area and some seepage water from the blast hole will supplement the supply. All this water will be captured and stored in a process water storage dam for use in the plant.

(10) AIR QUALITY AND NOISE:

The areas surrounding the Blaauwbosch mine are characterized mostly by farming and some mining activity.

Due to the arid conditions of the region and historical overgrazing practices, the vegetative cover has been depleted Soil particles are easily airborne and thus contribute to the cumulative impact of dust as an air pollutant.

Ploughing and harvesting of croplands are a seasonal source of dust, especially during dry years.

Additional sources of air pollution are the Zoet and Zuur Diamond Mine approximately 3km to the north east and the New Elands Diamond Mine (Which may be recommissioned in the near future) beyond that. Furthermore the roads in the area are predominantly gravelled and generate considerable dust through daily use.

The trucks involved in the transport would potentially be an insignificant source of re-suspension of soil on the gravel roads and the vehicle entrained dust will be bounded near the road where it is generated from. Regardless fall-out dust buckets will be placed strategic points along the gravel road. These buckets would be used to assess the dust fall-out from the trucks travelling along the gravel roads (source) and mitigation strategies would be implemented if guideline values for the dust fall-out monitoring programme require so.

No impact of tailings dust is anticipated beyond the 500 meter guideline and therefore most fall-out dust buckets for managing and mitigating fall-out dust would be placed 500 meters from the tailings facility in the predominant wind directions. Extensive dust monitoring would be done at selected sites with potential significant environmental and health impacts and mitigation of mining methods and activities pertaining to tailings source would be managed accordingly.

A complain register for surrounding owners will be kept on site and the management of dust would be guided by these additionally comments of public.

Noise

Currently no noise pollution is noticeable on site, and the potential impact of noise is not expected to be significant, even with the undertaking of activities such as blasting and crushing. The two neighbouring farms of which the homesteads are less than 2km away may experience some disturbance.

Noise will be generated during the mechanically tailings reclamation operation (excavating, stockpiling and loading and transportation).

Noise is normally encountered during the normal operation hours at the processing plant. Processing plant noise and mine vehicles are limited between 7am and 5pm every day during the week. Noise levels are monitored on the mining area and where necessary, protective equipment is used in certain areas where machinery is used.

(11) VISUAL ASPECTS:

The mine is located well away from tourist routes, scenic areas and residential areas. The secluded nature of the site as well as the limited infrastructure means that the visual impact will be small despite the flat topography. When approaching the mine, the tailings dumps and mining infrastructure will be visible from both neighbouring farms and from the gravel access road (leading off the R64). The mine will also be visible from the R64, although not significantly apparent as it is situated approximately 3km from this road.

No dust or any other atmospheric pollution is evident as the mine is not yet operational, but dust generated from mining activity may be evident from the two neighbouring farms and the gravel road.

(12) BROAD-SCALE ECOLOGICAL PROCESSES:

Transformation of intact habitat on a cumulative basis could contribute to the fragmentation of the landscape and could potentially disrupt the connectivity of the landscape for fauna and flora and impair their ability to respond to environmental fluctuations.

(13) SOCIO-ECONOMIC STRUCTURE OF THE REGION:

Tokologo Local Municipality is located within the Lejweleputswa District Municipality's area of jurisdiction. Tokologo Local Municipality area covers 9326 sq km and consists of three former Transitional Local Councils namely, Boshof, Dealesville and Hertzogville, as well as a portion of a former Transitional Rural Council (Modderdal) which contained approximately 1480 farms.

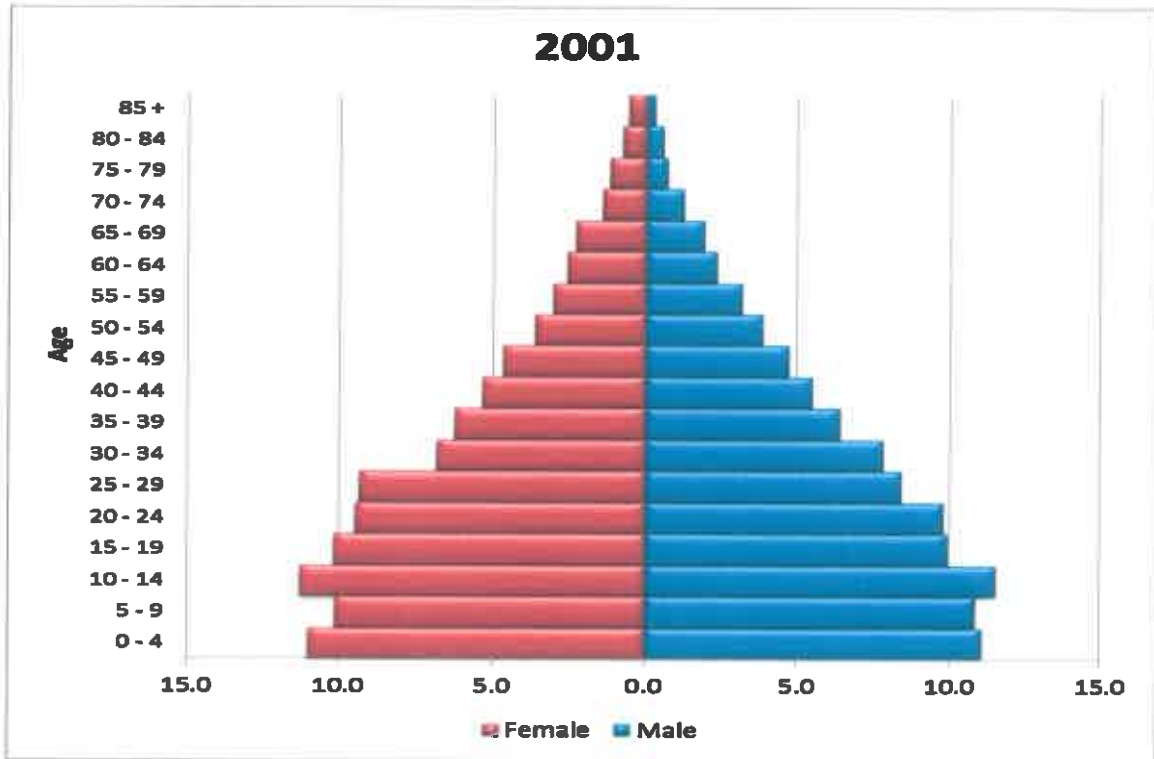
Boshof (the capital town) is situated in the center; Dealesville is further east, and Hertzogville is situated in the north of the municipal area. Dealesville is the smallest town within Tokologo Local Municipality.

The following matrix that is provided in the ensuing pages was followed to compile the applicable demographic and socio-economic data as presented and the population in terms of numbers, growth, gender, age, etc.

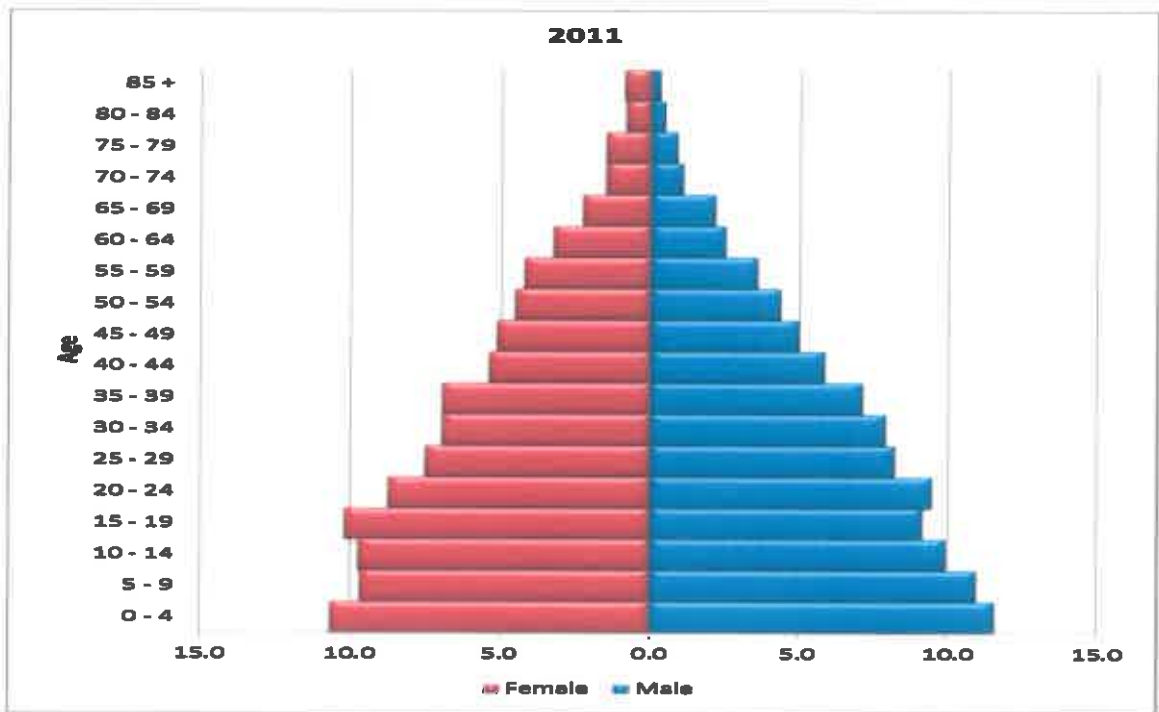
The total population in 2007 was 32457, which represented total population by race. The data used was obtained from the new IDP for Tokologo, see **APPENDIX 4**.

APPENDIX 4: IDP Tokologo 2015

Population density, growth and location



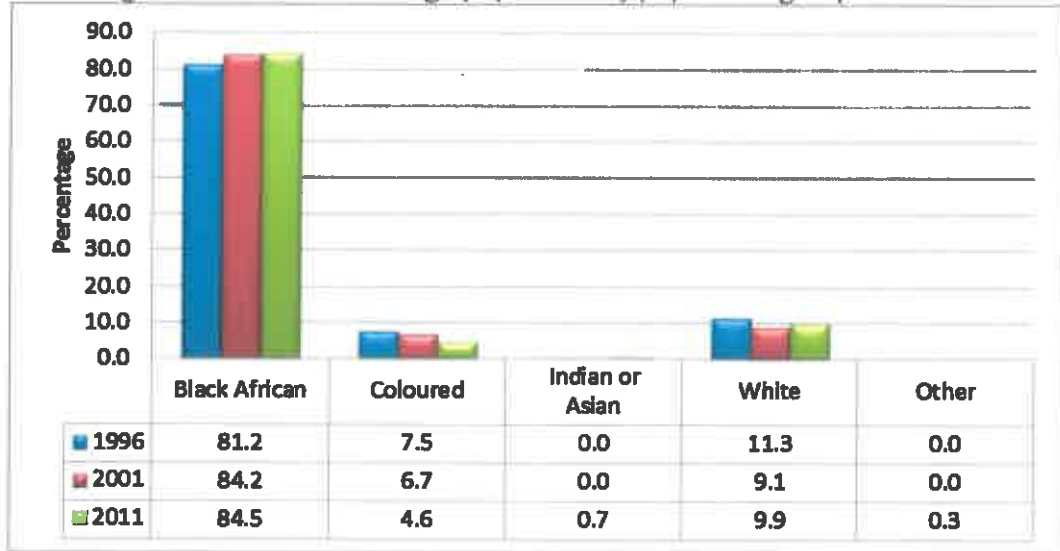
Data source: Statistics South Africa



Data source: Statistics South Africa Census 2011

The figure above shows that the largest proportion for both males and females was for people aged between 0-4 years. From age 15 years and above for females and 20 years and above for males, as the age increases, the population decreases.

Percentage distribution of Tokologo population by population group



Data source: Statistics South Africa Census 1996, Census 2001 and Census 2011

The above figure shows population distribution of Tokologo local municipality by racial groups. Since 1996 to 2011, the black and Indian population increased gradually from 81.2% to 84.5% and 0.0% to 0.7% respectively whereas the coloured population decreased from 7.5% to 4.6%.

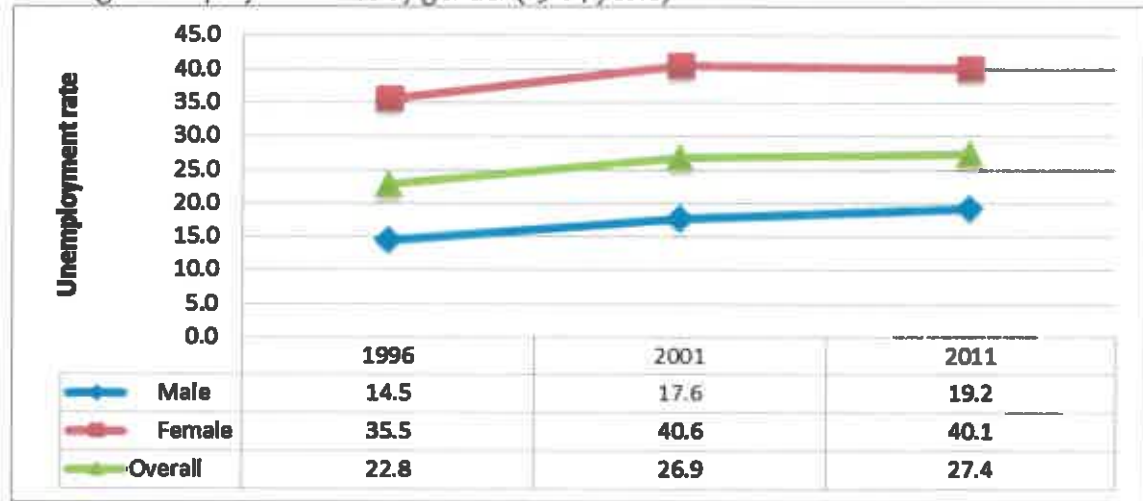
Major economic activities and sources of employment:

The municipality is composed of the following towns; Hertzogville, Dealesville and Boshof. The municipality’s spatial character of note is that it has vast tracts of land which are mostly agricultural. A range of agricultural activities takes place there with the following being dominant; maize and wheat farming. There are also mining deposits in the area which have not been exploited to the full. Game farming takes a larger portion of available land space in the area. There is also a conservation area Boshof that must be considered during planning. There is currently the R64 road which links the towns with Bloemfontein as well as R708 road which links the local municipality and the district with North West province and Christiana town.

The relative contribution of Tokologo municipality per sector in the Lejweleputswa District, 2004 Agriculture 6.3 Mining 0.2 Manufacturing 1.4 Electricity 1.5 Construction 1.9 Trade 0.9 Transport 1.0 Finance 1.2 Community 2.1

Unemployment estimate for the area:

Tokologo unemployment rate by gender (15-64 years)

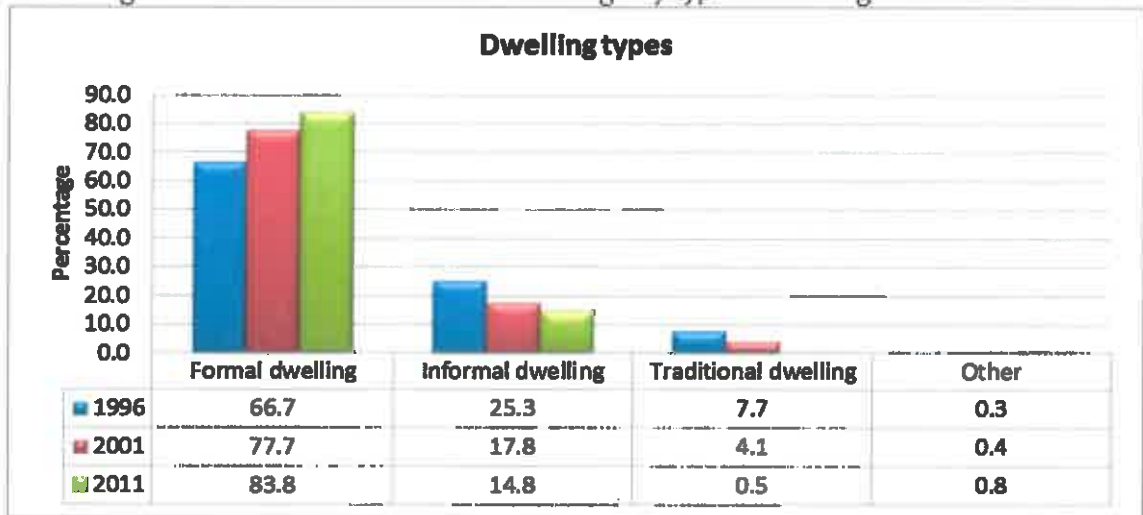


Data source: Statistics South Africa Census 1996, Census 2001 and Census 2011

From the above, indicators are that the overall unemployment rate for Tokologo increased steadily from 22.8% in 1996 to 27.4% in 2011 whereas in 2001 it was 16.9%. Female unemployment rate over the years 1996, 2001 and 2011, is greater than that of males.

Housing – demand, availability:

Percentage distribution of households in Tokologo by type of dwelling



Data source: Statistics South Africa Census 1996, Census 2001 and Census 2011

The figure above shows types of dwellings that households in Tokologo local municipality occupied since 1996 to 2011. The number of households in formal dwelling increased from 66.7% in 1996 to 83.8% in 2011 whereas those in informal and traditional dwellings decreased from 25.3% and 7.7% to 14.8% and 0.5% respectively.

Social Infrastructure:

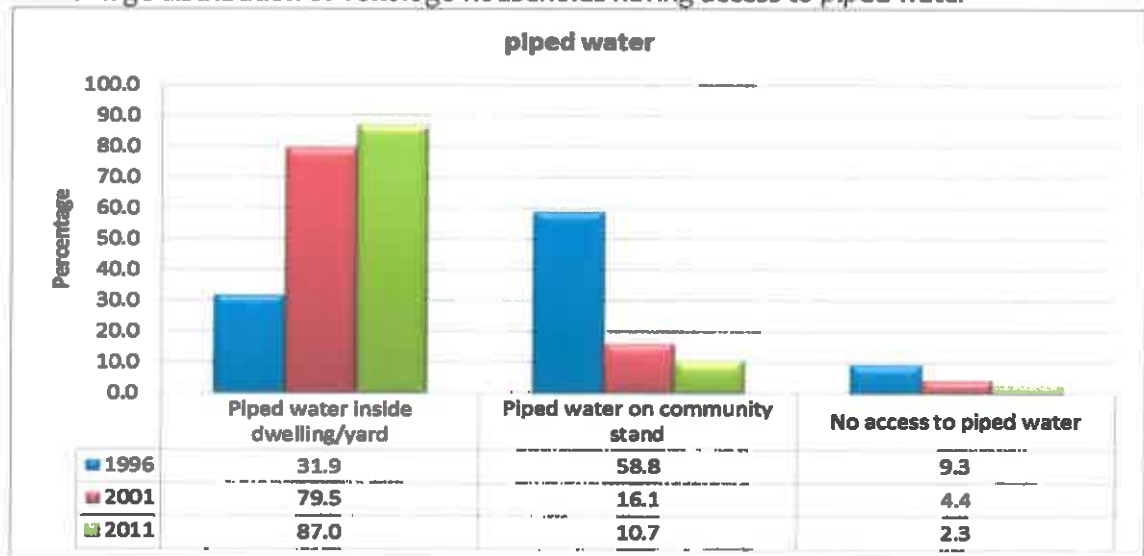
The social infrastructure in the Tokologo Local Municipality area is typical of a rural area, with most of the infrastructure located in and

around the bigger towns. The industries available to this local municipality consist of agricultural, mining & quarrying, manufacturing, electricity; gas & water supply, construction, wholesale and retail trade, transport; storage & communication, financial; insurance; real estate & business service, community; social & personal services and private households.

Water supply:

All towns are dependent on ground water extraction. Farmers are also dependent on ground water, but the quality varies substantially becoming more brackish further west. The town of Brandfort extracts water from the Vet river south-west of Theunissen, which is then pumped along the road to Brandfort. The north-western and northern areas of the region have access to the Vaal River system. There are also the Erfenis and Allemanskraal dams in Maslonyana that can supply water to the surrounding areas of the municipality. The following table below provides statistical analysis of the current reticulation levels of potable water to households throughout the district.

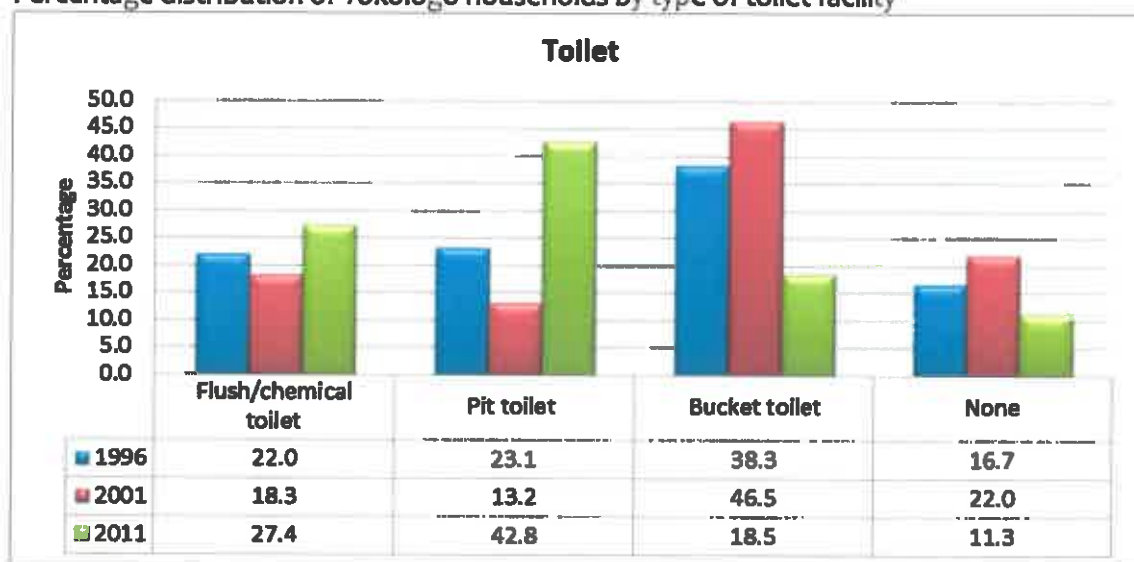
Percentage distribution of Tokologo households having access to piped water



Data source: Statistics South Africa Census 1996, Census 2001 and Census 2011

The above figure shows distribution of households in Tokologo local municipality with access to piped water. Accesses to piped water in dwelling/yard increased from 31.9% in 1996 to 87.0% whereas access to piped water on community stands decreased from 58.8% in 1996 to 10.7% in 2011. As for households without water access decreased from 9.3% in 1996 to 2.3%

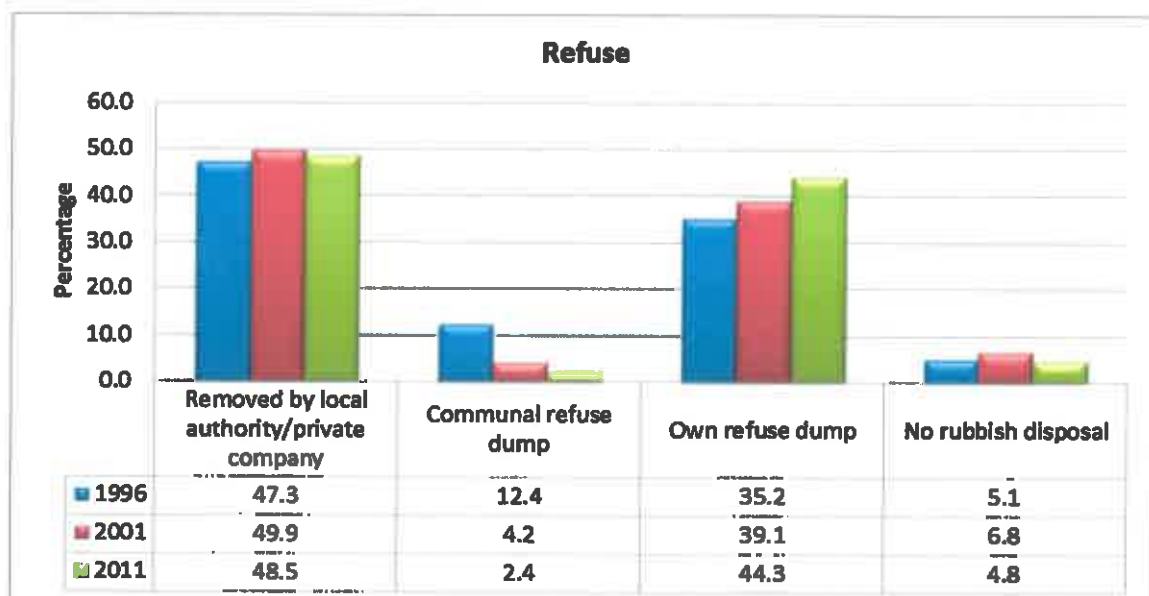
Percentage distribution of Tokologo households by type of toilet facility



Data source: Statistics South Africa Census 1996, Census 2001 and Census 2011

The above figure shows the distribution of households with type of toilet facilities in Tokologo local municipality. In 1996 and 2001 most of households in Tokologo were found to be using bucket toilets with 38.3% and 46.5% and the number decreased to 18.5% in 2011.

Percentage distribution of Tokologo Households by type of refuse removal

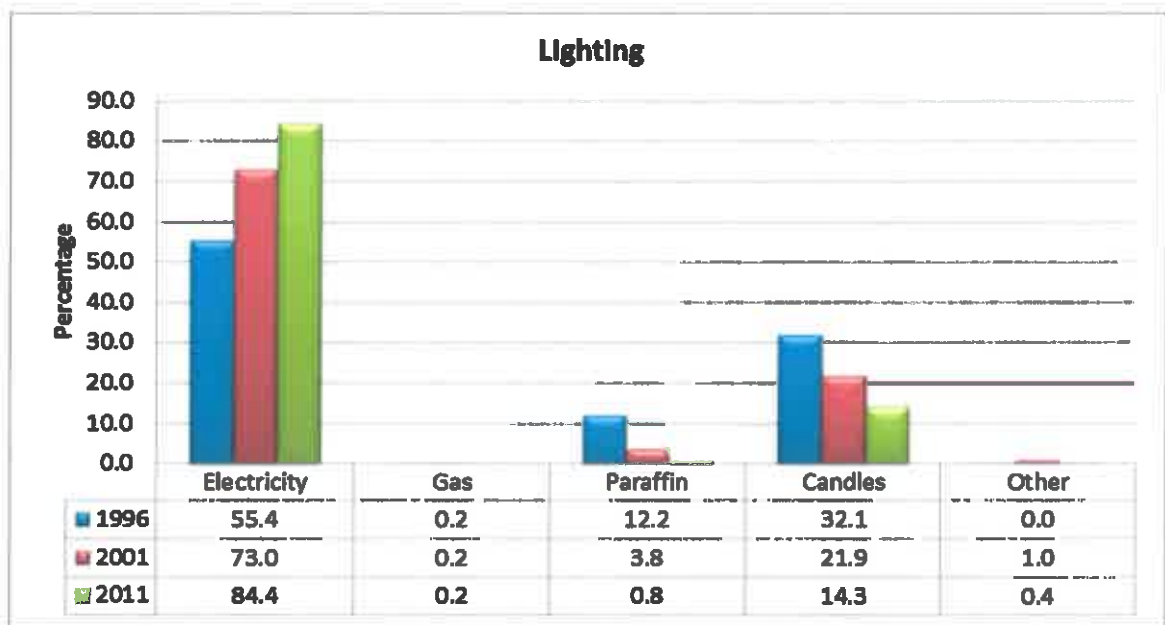


Data source: Statistics South Africa Census 1996, Census 2001 and Census 2011

The figure above shows distribution of households with type of refuse removal. Households with own refuse dump increased from 35.2% in 1996 to 44.3% in 2011 whereas households whose refuse are removed by local authority/private company increased from 47.3% in 1996 to 49.9% in 2001 then decreased in 2011 to 48.5%.

Power supply:

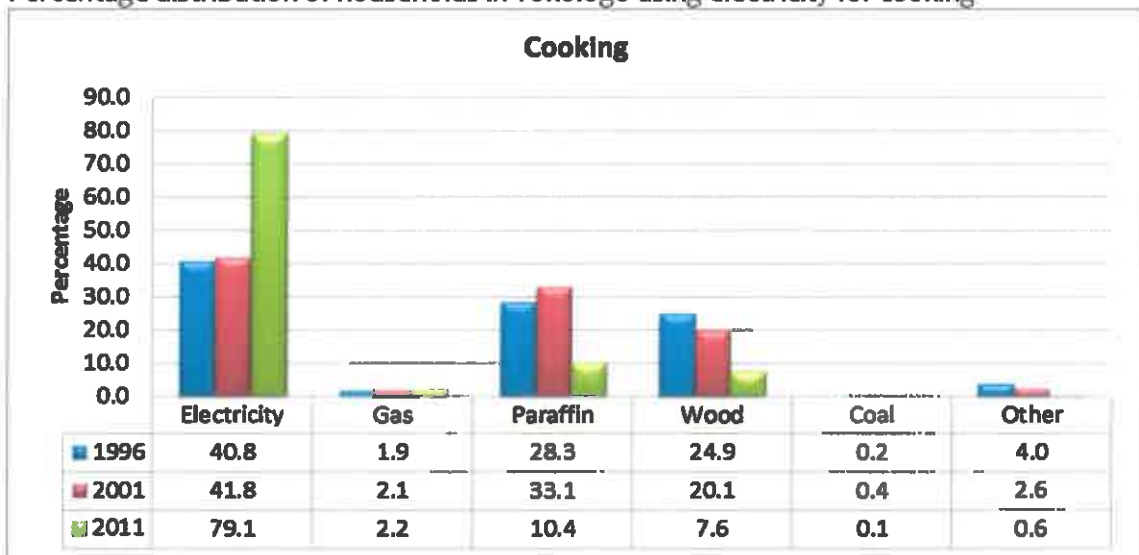
Percentage distribution of households in Tokologo using electricity for lighting



Data source: Statistics South Africa Census 1996, Census 2001 and Census 2011

The above figure shows the distribution of households in Tokologo local municipality with access to electricity for lighting. In 1996, 55.4% of households were using electricity for lighting and the number increased in 2001 and 2011 to 73.0% and 84.4% respectively. The number of households with usage of candles for lighting decreased from 32.1% in 1996 to 14.3% in 2011.

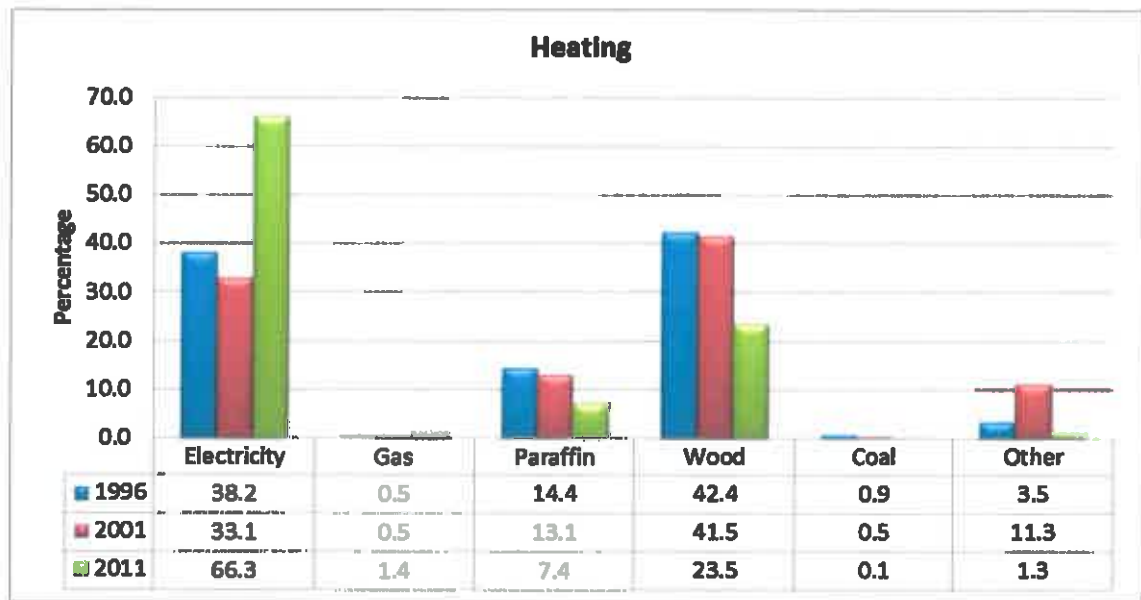
Percentage distribution of households in Tokologo using electricity for cooking



Data source: Statistics South Africa Census 1996, Census 2001 and Census 2011

The above figure shows the distribution of households in Tokologo local municipality with access to electricity for cooking. In 1996, 40.8% of households were using electricity for cooking and the number increased in 2001 and 2011 to 41.8% and 79.1% respectively. The number of households with usage of paraffin for cooking decreased from 28.3% in 1996 to 10.4% in 2011.

Percentage distribution of households in Tokologo using electricity for heating



Data source: Statistics South Africa Census 1996, Census 2001 and Census 2011

The above figure shows the distribution of households in Tokologo local municipality with access to electricity for heating. In 1996, 38.2% of households were using electricity for heating and the number decreased in 2001 to 33.1% and then increased in 2011 to 66.3%. The number of households with usage of wood for heating decreased from 42.4% in 1996 to 23.5% in 2011.

(15) **SENSITIVE LANDSCAPES:**

“Sensitive Environments” that have statutory protection are the following:-

1. Limited development areas (Section 23 of the Environmental Conservation Act, 1989 (Act 73 of 1989).
2. Protected natural environments and national heritage sites.
3. National, provincial, municipal and private nature reserves.
4. Conservation areas and sites of conservation significance.
5. National monuments and gardens of remembrance.
6. Archaeological and palaeontological sites.
7. Graves and burial sites.
8. Lake areas, offshore islands and the admiralty reserve.
9. Estuaries, lagoons, wetlands and lakes.
10. Streams and river channels and their banks.
11. Dunes and beaches.
12. Caves and sites of geological significance.
13. Battle and burial sites.
14. Habitat and/or breeding sites of Red Data Book species.
15. Areas or sites of outstanding natural beauty.
16. Areas or sites of special scientific interest.
17. Areas or sites of special social, cultural or historical interest.
18. Declared national heritage sites.
19. Mountain catchment areas.

20. Areas with eco-tourism potential.

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

(b) Description of the Current Land Use

Mining activity on Blaauwbosch was discontinued in 1967, so it is difficult to determine with certainty the pre-mining land capability of the mine. It can however be stated, given consideration of the surrounding un-mined areas that the land would have been suitable for grazing.

The claims area is mostly disturbed as a result of the aforementioned mining activities.

(1) Land Use before Mining:

The area had been mined since the 1909, before mining the site was most likely used for grazing.

Historical agricultural production

Much of the adjacent land is presently used for grazing and the production of crops. The nature of the grazing is sweet due to the clay substrates, but production of sweet grass is limited nowadays due to the condition of the pastures. This, mainly as a result of overgrazing, has resulted in sub-optimal grazing.

(2) Evidence of Disturbance:

In addition to the disturbance caused by past mining activities, which were left un-rehabilitated, the general condition of the site and surrounds is degraded. Overgrazing on the sensitive Valsrivier soils is reflected in the dominance of sub-climax grasses. Outside the property next to the road reserve where the area is protected against grazers, red grass (*Themeda triandra*) dominates.

(3) Existing Structures:

Remnant structures from past mining operations still exist on the site, most of which will be used in the new mining operation. Those that will not be used will be demolished during the initial site cleanup.

(c) Description of Specific Environmental Features and Infrastructure on Site

The infrastructure on site comprehensively discussed in section d(ii) as part of the mining methodology discussion, as well as in section g as part of the mine footprint description. Furthermore, a comprehensive description of the environment was presented in section (i) as part of the baseline report.

- (d) **Environmental and current land use map**
(Show all environmental, and current land use features)

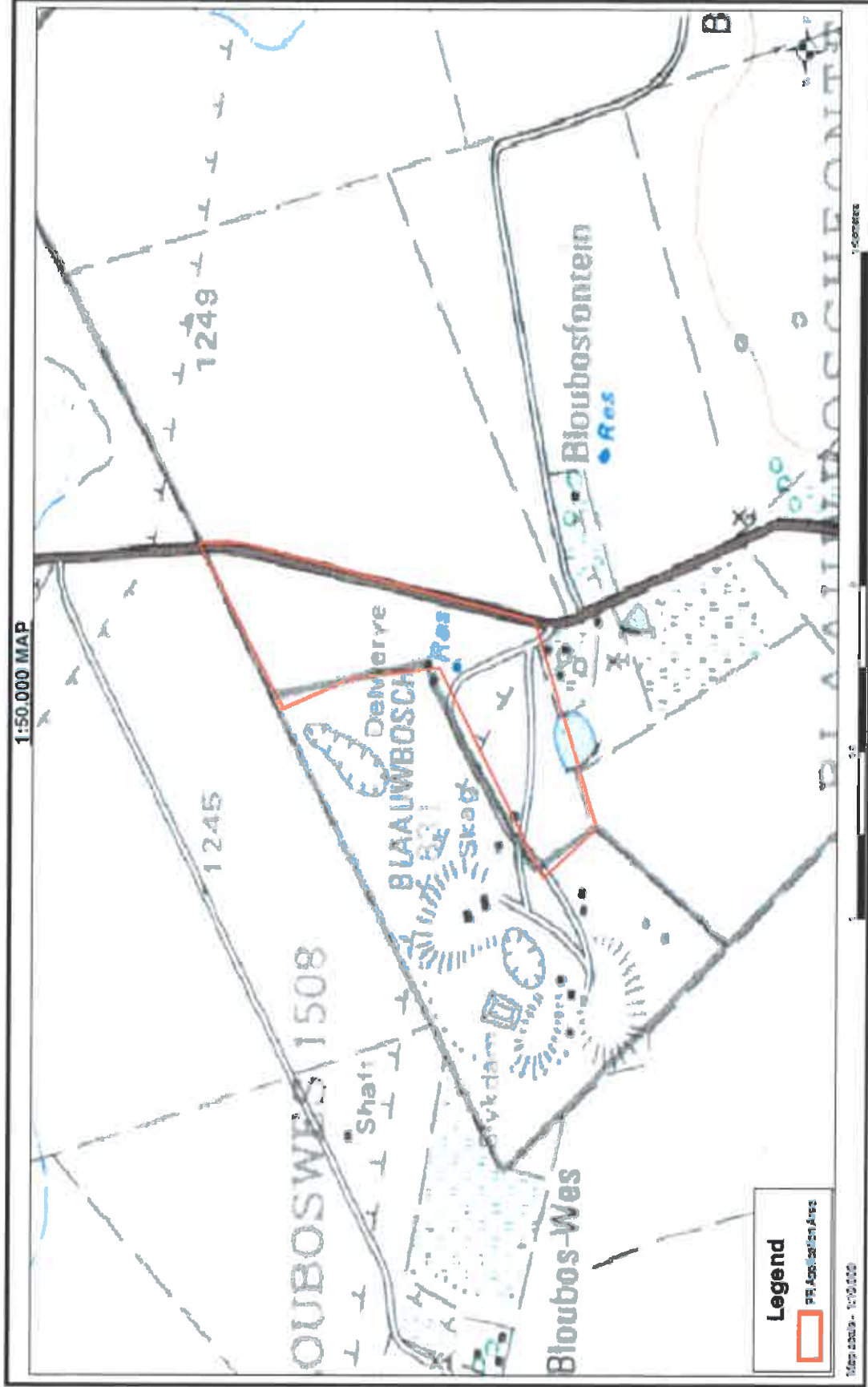


Figure 7. Environmental and current land use map

[SCOPING REPORT – KOPHIA DIAMONDS]

v) **Impacts Identified**

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

ACTIVITY	ASPECT	IMPACT	SIGNIFICANCE	CERTAINTY	DURATION	MAGNITUDE
Mining (Geology) Mining (Topography)	Structural changes	Subsidence	Moderate	Possible	Long Term	Site
	Permanent structures: Slimes Dams, Tailings dumps, Blast Hole	Visual	Moderate	Definite	Long term	Local
Mining (Soils)	Temporary Structures	Alteration to drainage	Moderate	Probable	Long term	Site
	Drainage canals, storage dam, spoil dumps, stockpiles					
	Infrastructure	Pollution	Moderate	Probable	Medium term	Site
	Vehicle	Compaction	Moderate	Definite	Medium term	Site
Mining (Land capability and use)	Spoil dumps	Sterilization	Moderate-Low	Possible	Medium term	Site
	Plant and shaft	Erosion	Moderate-High	Definite	Long term	Site
	Slimes dams	Habitat loss	Low	Definite	Site	Site
	Tailings dumps	Land capability	Moderate	Probable	Local	Local
	Compound	Invasive species	Moderate Low	Probable	Long term	Site
	Plant & shaft	Habitat loss	Low	Definite	Medium term	Long
Mining (Surface water)	Slimes dams	Land capability	Moderate	Probable	Medium	Local
	Tailings dumps	Poaching	Moderate	Probable	Medium	Local
	Compound				Long term	Local
Mining (Ground water)	No impact no surface water on site					
	Plant and shaft	Water quantity	Low	Definite	Medium term	Local
	Infrastructure	Water quality	Moderate	Possible	Medium	Local
	Slimes dams				Long term	Local
Mining (Air quality)	Tailings dumps					
	Plant	Dust	Low	Definite	Medium long term	Local
	Roads					
Mining (Noise)	Slimes dams					
	Tailings dumps					
	Plant	Noise	Low	Definite	Medium long term	Site
Mining (Heritage and Cultural)	Blasting	Loss of artefacts	Medium	Possible	Long term	Site
	Shafts					
Mining (Sensitive landscapes)	Infrastructure	Erosion	Moderate High	Probable	Medium-Long term	Site
	Staff and Labour					

vi) Methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks

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

The limits were defined in relation to the Mining Characteristics. Those for probability, significance and duration are subjective, based on rule of thumb and experience. The significance of the impacts is defined as follows:

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

Nature of impact

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

Extent

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

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

Duration

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

- **Short term**
The impact will either disappear with mitigation or will be mitigated through natural process in a short time period.
- **Medium term**
The impact will last up to the end of the mining period, where after it will be entirely negated.
- **Long term (Residual)**
The impact will continue or last for the entire operational life of the mine, but will be mitigated by direct human action or by natural processes thereafter.
- **Permanent**
The only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.

Intensity

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

- **Low**

This alters the affected environment in such a way that the natural processes or functions are not affected.

- **Medium**
The affected environment is altered, but function and process continue, albeit in a modified way.
- **High**
Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

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

Probability

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

- **Improbable**
The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
- **Probable**
There is a possibility that the impact will occur to the extent that provisions must be made therefore.
- **Highly probable**
It is most likely that the impacts will occur at some or other stage of the development.
- **Definite**
The impact will take place regardless of any preventative plans, and mitigation measures or contingency plans will have to be implemented to contain the impact.

Determination of significance

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

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

vii) The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternatives will have on the environment and the community that may be affected

(Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties)

During construction and operation of the mine, there is a possibility of sterilisation of the mineral reserves and resources due to improper placement of infrastructure. The infrastructure and slimes dam will alter the topography by adding features to the landscape. Topsoil removal and Tailings reclamation will unearth the natural topography. The construction of infrastructure and various facilities in the mining area can also result in loss of soil due to erosion. Vegetation where present will be stripped in preparation for placement of infrastructure and loading, and therefore the areas will be bare and susceptible to erosion. The topsoil that is stripped and piled on surrounding areas can be eroded by wind and rain. The soil will be carried away during runoff. The declared areas will be rehabilitated, but full restoration of soil might only occur over a number of years, subsequent to the re-establishment of vegetation. Furthermore, improper stockpiling and soil compaction can result in soil sterilisation. Leaching can also occur, resulting in the loss of nutrients.

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

The loss of land capability and land use can occur in two ways. Firstly, through topsoil removal, disturbances and loss of soil fertility; and secondly through the improper placement of infrastructure. The site has a land capability for limited grazing or housing if the tailings have been removed, but grazing activities can still be performed in areas not earmarked for mining, and with proper rehabilitation the land capabilities and land use potential can be restored.

If oil and fuel spillages occur, then it will seep into the underlying aquifers and contaminate ground water. Improper handling of hazardous material will cause contamination of nearby surface water resources during runoff episodes. Lack of storm control structures will lead to erosion of stockpiles during heavy rains and runoff will carry suspended solids into the downstream environment. This might cause high silt load and affect stream flow.

Construction and mining activities on site will reduce the natural habitat for ecological systems to continue their operation. It is not expected that the areas of high ecological function will rehabilitate following disturbance events. Vehicle traffic

generates lots of dust which can reduce the growth success and seed dispersal of many small plant species. It is expected that protected species will be destroyed during the mining operation.

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

The transformation of natural habitats to mining and associated infrastructure will result in the loss of habitat affected individual species, and ecological processes. In turn this will result in the displacement of faunal species dependent upon such habitat. Increased noise and vibration due to mining activities will disturb and possibly displace birds and other wildlife. Fast moving vehicles take a heavy toll in the form of road kills of small mammals, birds, reptiles, amphibians and a large number of invertebrates. The construction of the mine and associated infrastructure will result in the loss of connectivity and fragmentation of natural habitat. Fragmentation of habitat will lead to the loss of migration corridors, in turn resulting in degeneration of the affected population's genetic make-up. This results in a subsequent loss of genetic variability between meta-populations occurring within the site. Pockets of fragmental natural habitats hinder the growth and development of populations.

During the mining operation the abovementioned activities have potential for dust generation. It is anticipated that the extent of dust emissions would vary substantially from day to day depending on the level of activity and the specific operations. The mine will add a certain amount of noise to the existing noise in the area. However, levels of noise generated by mining activities are low.

The impact of site generated trips on the traffic of the existing roads is experienced to be low. Nevertheless, if road safety is not administered it can have a high impact on the safety of fellow road users.

The mining operation, especially during construction, will create a number of new employment opportunities. The magnitude of this impact will depend on the number of people that will be employed and the number of contractors sourced. An influx of people into the area will possibly impact on safety and security of local residents. During the decommissioning and at closure of the mine, staff will most likely be retrenched. This can potentially flood the job market, resulting in people being unable to find new employment for a long period of time. It is normally more difficult for people with highly specialised skills to find employment immediately. Those with fewer skills have more flexibility in the job market.

Economic slump of the local towns after mine closure is an associated potential impact, although small due to the small scale of the operation. Income streams from wage bills as well as goods and services contracts (at all geographical levels) will come to an end, reducing the monetary income of individuals and mine-related businesses. People who have derived income directly or indirectly from the project may be inclined to leave the region in search of employment or business opportunities. This could result in further decline of the economy of the region as well as the abandonment of infrastructure. The loss of the mine workforce income will also impact upon non-mine related industries within the local and regional areas, particularly the rental property market and retail and service industries who would have received income during the life of mine from the salaried workforce.

It is likely, however that there will be residual positive economic impacts that are not fully reversed with the closure of the mine, and that the economy will not decline to its original level prior to the development of this project. This is because the mine will generate substantial income for the regional and local economy, both directly and indirectly, during its life.

It is difficult to predict the actual impact of the mine closure in advance, but it is acceptable to assume that the mine closure will have a negative impact on the local and regional economy with a high probability of occurrence, a high severity and a high significance.

Positive impacts include employment and training opportunities for people in the local community and local contractors; social upliftment and community development programmes; economic benefits.

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

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

Geology and Mineral Resource

Level of risk: Medium

Mitigation measures

- ❖ Ensure that optimal use is made of the available mineral resource through proper planning.
- ❖ The tallings should be delineated first and all infrastructure positions should be selected with the main aim of avoiding sterilization of future resources.
- ❖ No dumping of materials prior to approval by the mine manager.

Topography**Level of risk:** Medium**Mitigation measures**

- ❖ Pick up all tailings material up to natural ground level.
- ❖ Do controlled dumping at the new tailings dump facility.
- ❖ Employ effective rehabilitation strategies to restore surface topography of tailings dumps and plant site.
- ❖ Stabilise the mine residue deposits.
- ❖ Stabilise underground workings
- ❖ All temporary infrastructures will be demolished during closure.

Soil Erosion**Level of risk:** Medium-High**Mitigation measures**

- ❖ At no point may plant cover be removed within the no-development zones.
- ❖ All attempts must be made to avoid exposure of dispersive soils.
- ❖ Re-establishment of plant cover on disturbed areas must take place as soon as possible, once activities in the area have ceased.
- ❖ Ground exposure should be minimised in terms of the surface area and duration, wherever possible.
- ❖ The mining operation must co-ordinate different activities in order to optimise the utilisation of the tailings reclamation operations and thereby prevent repeated and unnecessary dumping.
- ❖ The run-off from the exposed ground should be controlled with the careful placement of flow retarding barriers.
- ❖ The soil that is excavated during construction should be stock-piled in layers and protected by berms to prevent erosion.
- ❖ All stockpiles must be kept as small as possible, with gentle slopes (18 degrees) in order to avoid excessive erosional induced losses.
- ❖ Excavated and stockpiled soil material are to be stored and bermed on the higher laying areas of the footprint area and not in any storm water run-off channels or any other areas where it is likely to cause erosion, or where water would naturally accumulate.
- ❖ Stockpiles susceptible to wind erosion are to be covered during windy periods.
- ❖ Audits must be carried out at regular intervals to identify areas where erosion is occurring.
- ❖ Appropriate remedial action, including the rehabilitation of the eroded areas, must occur.
- ❖ Rehabilitation of the erosion channels and gullies.
- ❖ The mining operation should avoid steep slopes.

- ❖ Dust suppression must take place, without compromising the water balance of the area.
- ❖ 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.

Soil Pollution

Level of risk: Medium

Mitigation measures

- ❖ 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.

Land Capability and Land Use

Level of risk: Medium-Low

Mitigation measures

- ❖ Ensure that optimal use is made of the available land through consultation with land owner and proper planning of mining activities.
- ❖ Surface agreement to be signed with land owners.
- ❖ Employ effective rehabilitation strategies to restore land capability and land use potential of the farm.
- ❖ All activities to be restricted within the demarcated areas.
- ❖ Ensure that land which is not used during construction is made available for grazing.

Groundwater

Level of risk: Medium-Low

Mitigation measures

- ❖ 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.

Surface Water

Level of risk: Very low

Mitigation measures

- ❖ Sufficient care must be taken when handling hazardous materials to prevent pollution.
- ❖ Under no circumstances may ablutions occur outside the provided facilities.
- ❖ If servicing and washing of the vehicles occur on site, there must be specific areas constructed for these activities, which must have concrete foundations, bunding as well as oil traps to contain any spillages.
- ❖ A walled concrete platform, dedicated store with adequate flooring or bermed area and ventilation must be used to accommodate chemicals such as fuels, oils, paints, herbicide and insecticides.
- ❖ Oil residue shall be treated with oil absorbent and this material removed to an approved waste site.
- ❖ Spill kits must be easily accessible and workers must undergo induction regarding the use thereof.
- ❖ At all times care should be taken not to contaminate surface water resources.
- ❖ Store all litter carefully to prevent it from washing away or blown into any of the drainage channels or Kamfersdam within the area.
- ❖ Provide bins for staff at appropriate locations, particularly where food is consumed.
- ❖ The mining site should be cleared daily and litter removed.
- ❖ Conduct ongoing staff awareness programmes in order to reinforce the need to avoid littering, which contributes to surface water pollution.

Indigenous Flora

Level of risk: Low

Mitigation measures

- ❖ Minimise the footprint of transformation.
- ❖ Encourage proper rehabilitation of mined areas.
- ❖ Encourage the growth of natural plant species.
- ❖ Ensure measures for the adherence to the speed limit.
- ❖ Footprint areas of the mining activities must be scanned for Red Listed and protected plant species prior to mining.
- ❖ It is recommended that these plants are identified and marked prior to mining.

- ❖ These plants should, where possible, be incorporated into the design layout and left in situ.
- ❖ However, if threatened of destruction by mining, these plants should be removed (with the relevant permits from DAFF and DENC) and relocated if possible.
- ❖ A management plan should be implemented to ensure proper establishment of ex situ individuals, and should include a monitoring programme for at least two years after re-establishment in order to ensure successful translocation.
- ❖ All those working on site must be educated about the conservation importance of the fauna and flora occurring on site.

All Invasive Plants

Level of risk: Low

Mitigation measures

- ❖ Minimise the footprint of transformation.
- ❖ Encourage proper rehabilitation of mined areas.
- ❖ Encourage the growth of natural plant species.
- ❖ Mechanical methods (hand-pulling) of control to be implemented extensively.
- ❖ Annual follow-up operations to be implemented.

Fauna

Level of risk: Medium-Low

Mitigation measures

- ❖ 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 appointment of a full-time ECO must render guidance to the staff and contractors with respect to suitable areas for all related disturbance.
- ❖ The extent of the mine should be demarcated on site layout plans, and no construction personnel or vehicles may leave the demarcated area except those authorised 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.
- ❖ All those working on site must be educated about the conservation importance of the fauna and flora occurring on site.
- ❖ The ECO must ensure that all contractors and workers undergo Environmental induction prior to commencing with work 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.

Habitat

Level of risk: Medium-Low

Mitigation measures

- ❖ 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 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 authorised to do so.

Air Quality

Level of risk: Low

Mitigation measures

- ❖ Vegetation must be removed when soil stripping is required only. These areas should be limited to include those areas required for mining only, hereby reducing the surface area exposed to wind erosion. Adequate demarcation of these areas should be undertaken.
- ❖ Control options pertaining to topsoil removal, loading and dumping are generally limited to wet suppression.
- ❖ Where it is logistically possible, control methods for gravel roads should be utilised to reduce the re-suspension of particulates. Feasible methods include wet suppression, avoidance of unnecessary traffic, speed control and avoidance of track-on of material onto paved and treated roads.
- ❖ The length of time where tailing reclamation areas are exposed should be restricted. Mining should not be delayed after vegetation has been cleared and topsoil removed where possible.
- ❖ Dust suppression methods should, where logistically possible, must be implemented at all areas that may/are exposed for long periods of time.
- ❖ For all mining activities management should undertake to implement health measures in terms of personal dust exposure, for all its employees.

Noise and Vibration

Level of risk: Low

Mitigation measures

- ❖ Restrict mining activities to daytime unless agreements obtained to do 24hr operations.

- ❖ Systematic maintenance of all forms of equipment, training of personnel to adhere to operational procedures that reduce the occurrence and magnitude of individual noisy events.
- ❖ Where possible material stockpiles should be placed so as to protect the boundaries from noise to individual operations.
- ❖ Standardised noise measurements should be carried out on individual equipment at the delivery to site to construct a reference data-base and regular checks carried out to ensure that equipment is not deteriorating and to detect increases which could lead to increase in the noise impact over time and increased complaints.
- ❖ Environmental noise monitoring should be carried out at regularly to detect deviations from predicted noise levels and enable corrective measures to be taken where warranted.

Visual Impacts

Level of risk: Low

Mitigation measures

- ❖ Infrastructure should be placed to optimise the natural screening capacity of the vegetation.
- ❖ Where practical, protect existing vegetation clumps during in order to facilitate screening during the mining operation.
- ❖ Remove rubble and other building rubbish off site as soon as possible or place it in a container in order to keep the mining site free from additional unsightly elements.
- ❖ Dust suppression procedures should be implemented especially on windy days during earth works.
- ❖ Rehabilitation should aim to establish a diverse and self-sustaining surface cover that is visually and ecologically representative of naturally occurring vegetation species.
- ❖ Implement a management plan for the post-mining site in order to control the invasion of alien vegetation and to manage erosion, until the site is fully rehabilitated.

Traffic and Road Safety

Level of risk: Low

Mitigation measures

- ❖ Implement measures that ensure the adherence to traffic rules.

Heritage Resources

Level of risk: Medium

Mitigation measures

- ❖ The heritage if any is encountered and cultural resources (e.g. graveyards, ruins, historic structures, etc.) must be protected and preserved by the delineation of no go zones.
- ❖ Stone tools should be avoided where possible and fresh exposure should be recorded before destruction. All stone tool artefacts should be recorded, mapped and collected before destruction.
- ❖ Should development necessitate impact on any building structures, the developer should apply for a SAHRA Site Destruction Permit prior to commencement of construction.

Socio-Economic

Level of risk: Low

Mitigation measures

- ❖ The mine must ensure that false expectations are not created regarding job creation.
- ❖ Jobs must be allocated as advertised and in so far as is possible to local inhabitants.
- ❖ Contractors and employees should not be permitted to wander outside the mining area.
- ❖ Uncontrolled settlement of contractors and workers outside of the site will be prevented.
- ❖ The expectations of what benefits can accrue to the community must be managed from the initiation of the project.
- ❖ Commitments as set out in the SLP must be attained.

Interested and Affected Parties

Level of risk: Low

Mitigation measures

- ❖ Maintain active communications with IAPs.
- ❖ Ensure transparent communication with IAPs at all times.
- ❖ IAPs must be kept up to date on any changes in the mining operation.
- ❖ A complaints management system should be maintained by the mine to ensure that all issues raised by community members are followed up and addressed appropriately.

ix) The outcome of the site selection Matrix. Final Site Layout Plan

(Provide a final site layout plan as informed by the process of consultation with interested and affected parties)

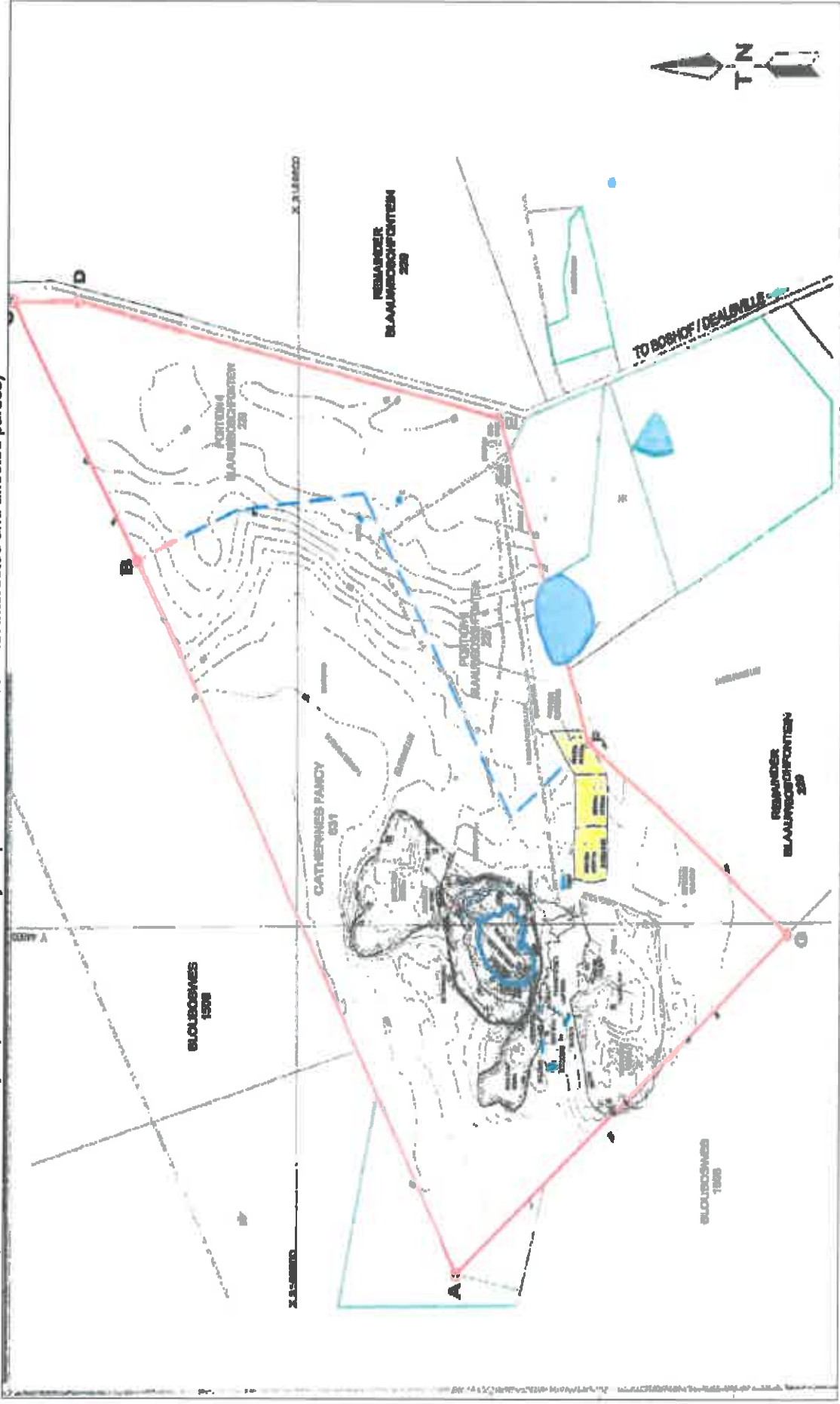


Figure 8. Final site layout plan

x) Motivation where no alternative sites were considered

No alternative location for the proposed mining operation was considered, as the mining and tailings resources has been deposited in this area due to historical mining activities since the 1909's. There is therefore no other alternative with regard to the overall operation footprint.

xi) Statement motivating the preferred site.

(Provide a statement motivating the final site layout that is proposed)

Not applicable. There is no alternative development location for the site as this is the area with the mineable resource.

i) Plan of study for the Environmental Impact Assessment Process**i) Description of alternatives to be considered including the option of not going ahead with the activity**

- Land use development alternatives:
The site layout may vary, depending on the operational requirements. However the final design and layout of the infrastructure have been planned and decided upon by the engineering company appointed by the mine and in consultation with the Mining Right Holder on the grounds of reserves, and placement of infrastructure based on hauling distance, environmental features such as wind direction, heritage findings, protected species, and stormwater management on the mine.
- No-go option:
The following positive impacts will be lost if the proposed mining project is not developed:
 - o TAX and VAT obligations to SARS as well as Royalties;
 - o CAPEX spent locally and regionally;
 - o Employment opportunities;
 - o Payroll income;
 - o Operating expenditure and maintenance (OPEX);
 - o Revenue.

Mining activities are believed to be the most economically beneficial option for the area.

If the operation does not continue it would hold back any potential employment for the region and the families who are likely to benefit from the positive employment opportunities. Simultaneously, it may have a stagnant effect on the economy of South Africa and the diamond industry as a whole. Substantial tax benefits to the State and Local Government will also be inhibited.

Mining forms an integrated part of the social and economical growth of South Africa.

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

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

1. The clearing of vegetation for:
 - Access roads and haul roads
 - Surface Infrastructure
 - Product Stockpile area
 - Waste disposal site (domestic and industrial waste)
2. The stripping and stockpiling of topsoil.
3. Load and Haul Operation for the reclamation of Kimberlite Tailings and underground mining.
 - Loading, hauling.
4. The development of temporary stockpiles:
 - Topsoil storage area;
 - Tailings Dump;
 - Mine Residue Stockpile for tailing slime.
5. The rehabilitation of footprint areas where the tailings have been loaded.
6. The construction of Processing plant.
7. Loading, hauling and transporting of ROM, product and material
8. Water holding facilities, pipeline and stormwater control:
 - Clean & Dirty water system: Stormwaterdam / Water storage facility;
 - A Run-off water canal;
 - Water distribution Pipeline;
 - Water tank.
9. Fuel storage and refuelling bays;
 - Fuel Storage facility (Diesel tanks);
 - Concrete bund walls and diesel depots.
10. Supporting Infrastructure:
 - Offices;
 - Office Parking Bay;
 - Shafts
 - Temporary Workshop and Wash bay;
 - Salvage yard (Storage and laydown area);
 - Ablution facilities/ Sewage facilities;

- Generators;
- Security Gate and guard house at access control point;
- Pipelines transporting water;

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

The necessary ground water studies, ecological studies (that will include soil, fauna, flora and wetland delineation) studies will be done.

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

The receiving environment will be determined using a combination of on-site observations, spatial information, project description, site layout and previous studies currently available to the EAP. Based on the EAPs knowledge and experience, the receiving environment will include geological features, topography, land use, archaeological and historical sites, surface water, groundwater, terrestrial ecology, air quality, noise, etc.

The identification of potential impacts of the mining activity will be based on the legal requirements; the nature of the proposed activity; the nature of the receiving environment; and issues raised during the public participation process. Considering the factors listed above and based on the EAPs knowledge and experience, environmental impacts that could potentially result from the mining activities include impacts on air quality, noise, fauna, flora, ground water, terrestrial ecology, heritage resources, socio-economy, aquatic environments, visuals, storm water and erosion.

The consideration of alternatives is a critical component of the EIA process, where an appropriate range of alternatives require consideration whilst achieving the desired objective of the proposed project. In order to ensure that the proposed project enables sustainable mining, a number of feasible options will be explored. The various alternatives in terms of land use, project infrastructure, mining method and proceeding without the mining operation will be assessed in terms of logistical practicality, environmental acceptability and economic feasibility. Alternatives for the locality of the mining operation will however not form part of this consideration, as the location of the mining site is determined by the geological location of the mineral resource.

(iv) The proposed method of assessing duration significance:

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

Weight	Duration of Impact	Explanation of Duration
1	Very Short	Less than 1 year
2	Short	1 to 5 years
3	Medium	6 to 15 years
4	Long term (Life of project)	16 to 50 years
5	Very Long term	Longer than 50 years
6	Permanent	Permanent

- **Short term**
The Impact will either disappear with mitigation or will be mitigated through natural process in a short time period.
- **Medium term**
The Impact will last up to the end of the mining period, where after it will be entirely negated.
- **Long term**
The Impact will continue or last for the entire operational life of the mine, but will be mitigated by direct human action or by natural processes thereafter.
- **Permanent**
The only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.

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

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

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

1. Steps to be taken to notify interested and affected parties:

(These steps must include the steps that will be taken to ensure consultation with the affected parties identified in (h)(ii) herein.)

The consultation process as described by NEMA for Environmental Authorisation was followed and is still in process. The following steps were already taken:

- Notification letters were sent to all interested and/or affected parties on the 04 December 2018. Attached to each of these letters was a Background Information Document (BID), containing information relating to proposed project and a concerns and comments form for registration and to submit concerns and comments.
- A newspaper advert was placed in the Volksblad local newspaper on the 12th December 2018.
- A site notice was placed at the entrance to the site.
- The Scoping Report was sent per registered post to all parties on the 14 December 2018 with a concerns and comments form for comments or concerns.
- The Scoping Report was also placed at the public library in Boshof as well as site notices were placed to inform the general public.

Proof of notification and consultation is attached as Appendix 3. The consultation process is still ongoing.

2. Details of the engagement process to be followed:

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

The following procedures will be followed:

- Notification letters were sent to all interested and/or affected parties on the 04 December 2018. Attached to each of these letters was a Background Information Document (BID), containing information relating to proposed project and a concerns and comments form for registration and to submit concerns and comments.
- A newspaper advert was placed in the Volksblad local newspaper on the 12th December 2018.
- A site notices was placed at the entrance to the site.
- The Scoping Report was send per registered post to all parties on the 14 December 2018 with a comments and concerns form for comments or concerns.
- The Scoping Report was also placed at the public Library in Boshof as well as site notices were placed to inform the general public.

Proof of notification and consultation is attached as Appendix 3. The consultation process is still ongoing.

- Public meetings will be held with registered IAPs at suitable venues and on appropriate dates, depending on the feedback received during the consultation process.
- An IAP register will be compiled and regular and ongoing follow-up sessions will be held with the IAPs to monitor those issues raised during the IAP process and that are deemed to be affected by the mining operation.
- BID documents will be sent to all registered IAPs and other documentation (Scoping, EMP and EMPR) will be made available in public libraries.
- Records will be kept of the complaints and the mitigation measures implemented.

3. Description of the information to be provided to Interested and Affected Parties:

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

The following information will be provided to IAPs:

- The site plan;
- List of activities to be authorised;
- Scale and extent of activities to be authorised;
- Typical impacts of activities to be authorised;
- The duration of the activity.

The following information will be requested from the IAPs:

- To provide information on how they consider that the proposed activities will impact on them or their socio-economic conditions;
- To provide written responses stating their suggestions to mitigate the anticipated impacts of each activity;
- To provide information on current land uses and their location within the area under consideration;
- To provide information on the location of environmental features on site to make proposals as to how and to what standard the impacts on site can be remedied. They will be requested to make written proposals;
- To mitigate the potential impacts on their socio economic conditions to make proposals as to how the potential impacts on their infrastructure can be managed, avoided or remedied).

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

Determining environmental attributes

The receiving environment will be determined using a combination of on-site observations, spatial information, project description, site layout and previous studies currently available to the EAP. Based on the EAPs knowledge and experience, the receiving environment will include geological features, topography, land use, archaeological and historical sites, surface water, groundwater, terrestrial ecology, air quality, noise, etc.

Identification of Impacts and risks

The identification of potential impacts of the mining activity will be based on the legal requirements; the nature of the proposed activity; the nature of the receiving environment; and issues raised during the public participation process.

Considering the factors listed above and based on the EAPs knowledge and experience, environmental impacts that could potentially result from the mining activities include impacts on air quality, noise, fauna, flora, ground water, surface water, terrestrial ecology, heritage resources, socio-economy, stormwater and erosion.

Consideration of alternatives

The consideration of alternatives is a critical component of the EIA process, where an appropriate range of alternatives require consideration whilst achieving the desired objective of the mining project. In order to ensure that the proposed project enables sustainable mining, a number of feasible options will be explored. The various alternatives in terms of land use, project infrastructure, mining method and proceeding without the mining operation will be assessed in terms of logistical practicality, environmental acceptability and economic feasibility.

Alternatives for the locality of the mining operation will however not form part of this consideration, as the location of the mining site is determined by the geological location of the mineral resource.

Process to assess and rank impacts

Before any assessment can be made the following evaluation criteria need to be described

Table 4: Explanation of PROBABILITY of impact occurrence

Weight	Probability of Impact Occurrence	Explanation of Probability
1	Very Low	<20% sure of particular fact or likelihood of impact occurring
2	Low	20 – 39% sure of particular fact or likelihood of impact occurring
3	Moderate	40 – 59% sure of particular fact or likelihood of impact occurring
4	High	60 – 79% sure of particular fact or likelihood of impact occurring
5	Very High	80 – 99% sure of particular fact or likelihood of impact occurring
6	Definite	100% sure of particular fact or likelihood of impact occurring

Table 5: Explanation of EXTENT of Impact

Weight	Extent of Impact	Explanation of Extent
1	Site Specific	Direct and Indirect Impacts limited to site of Impact only
2	Surrounding Area	Direct and Indirect Impacts affecting environmental elements within 2 km of site
3	Local Municipality	Direct and Indirect Impacts affecting environmental elements within the Boshof area (Tokologo Municipality)
4	Regional/District	Direct and Indirect Impacts affecting environmental elements within District (Lejwelephutswa District Municipality)
5	Provincial	Direct and Indirect impacts affecting environmental elements in the Free State Province

Table 6: Explanation of DURATION of Impact

Weight	Duration of Impact	Explanation of Duration
1	Very Short	Less than 1 year
2	Short	1 to 5 years
3	Medium	6 to 15 years
4	Long term (Life of project)	16 to 50 years
5	Very Long term	Longer than 50 years
6	Permanent	Permanent

Table 7: Explanation of SEVERITY of the impact

Weight	Impact Severity	Explanation of Severity
1	No Impact	There will be no impact at all – not even a very low impact on the system or any of its parts.
2	Very Low	Impact would be negligible. In the case of negative impacts, almost no mitigation and/or remedial activity would be needed, and any minor steps which might be needed would be easy, cheap and simple. In the case of positive impacts alternative means would almost all likely to be better, if one or a number of ways, then this means of achieving the benefit.
3	Low	Impact would be of a low order and with little real effect. In the case of negative impacts, mitigation and/or remedial activity would be either easily achieved or little would be required or both. In the case of positive impacts alternative means for achieving this benefit would be easier, cheaper, more effective, less time-consuming, or some combination of these.
4	Moderately Severe	Impact would be real but not substantial within the bounds of those which could occur. In the case of negative impacts, mitigation and/or remedial activity would be both feasible and fairly easily possible. In the case of positive impacts other means other means of covering these benefits would be about equal in cost and effort.
5	High Severance	Impacts of substantial order. In the case of negative impacts, mitigation and/or remedial activity would be feasible but difficult, expensive, time consuming or some combination of these. In the case of positive impacts other means of achieving this benefit would be feasible, but these would be more difficult, expensive, time-consuming or some combination of these.
6	Very High Severity	Of the highest order possible within the bounds of impacts which

		could occur, in the case of negative impacts, there would be no possible mitigation and/or remedial activity to offset the impact at the spatial or time scale for which was predicted. In the case of positive impacts there is no real alternative to achieving the benefit.
--	--	--

Methodology used in determining and ranking the nature, severity, consequences, extent, duration and probability of potential environmental impacts and risks

The criteria used to assess the significance of the impacts are shown in the table below. The limits were defined in relation to mining characteristics. Those for probability, intensity/severity and significance are subjective, based on rule-of-thumb and experience. Natural and existing mitigation measures were considered. These natural mitigation measures were defined as natural conditions, conditions inherent in the project design and existing management measures, which alleviate impacts. The significance of the impacts was calculated by using the following formula:

$$(\text{Severity} + \text{Extent} + \text{Duration}) \times \text{Probability weighting}$$

For the Impact assessment, the different project activities and associated infrastructure were identified and considered in order to identify and analyse the various possible impacts.

Table 8

SIGNIFICANCE				
Colour Code	Significance rating	Rating	Negative Impact	Positive Impact
	Very low	3 -16	Acceptable/Not serious	Marginally Positive
	Low	17 - 22	Acceptable/Not serious	Marginally Positive
	Medium-Low	23 -33	Acceptable/Not desirable	Moderately Positive
	Medium	34 - 48	Generally undesirable	Beneficial
	Medium-High	49 - 56	Generally unacceptable	Important
	High	57 - 70	Not Acceptable	Important
	Very High	90 - 102	Totally unacceptable	Critically Important

Significance of Impacts is defined as follows:

Very Low - impact would be negligible. Almost no mitigation and/or remedial activity would be needed, and any minor steps which might be needed would be easy, cheap and simple.

Low - impact would have little real effect. Mitigation and/or remedial activity would be either easily achieved or little would be required or both.

Medium Low- impact would be real but not substantial within the bounds of those which could occur. Mitigation and/or remedial activity would be both feasible and fairly easily possible.

Medium - impact would be real but not substantial within the bounds of those which could occur. Mitigation and/or remedial activity would be feasible and possible.

Medium High- impact would be real but could be substantial within the bounds of those which could occur. Mitigation and/or remedial activity would be both feasible and possible but may be difficult and or costly.

High - Impacts of substantial order. Mitigation and/or remedial activity would be feasible but difficult, expensive, time consuming or some combination of these.

Very High - Of the highest order possible within the bounds of impacts which could occur. There would be no possible mitigation and/or remedial activity to offset the impact at the spatial or time scale for which was predicted.

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

ACTIVITY Whether listed or not listed (e.g. excavations, blasting, stockpiles, discard dumps or dams, loading, hauling and transport, water supply dams and boreholes, accommodation, offices, abtution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc...)	POTENTIAL IMPACT (e.g. dust, noise, drainage, surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc...etc...)	MITIGATION TYPE modify, remedy, control or stop (e.g. noise control measures, stormwater control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc...etc...) (e.g. modify through alternative method. Control through management and monitoring through rehabilitation.)	POTENTIAL FOR RESIDUAL RISK
Ablution facilities Chemical toilets	<ul style="list-style-type: none"> • Soil contamination • Groundwater contamination • Odours 	<ul style="list-style-type: none"> • Maintenance of chemical toilets on regular basis. • Removal of containers upon closure. 	Very low
Clean & Dirty water system	<ul style="list-style-type: none"> • Surface disturbance • Groundwater contamination • Soil contamination • Surface water contamination 	<ul style="list-style-type: none"> • Maintenance of berms and trenches. • Oil traps used in relevant areas. • Drip trays used. • Immediately clean hydrocarbon spill. 	Low
Diesel tanks	<ul style="list-style-type: none"> • Groundwater contamination • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance 	<ul style="list-style-type: none"> • Maintenance of diesel tanks and bund walls. • Oil traps. • Groundwater quality monitoring. • Drip tray at re-fuelling point. • Immediately clean hydrocarbon spill. 	Medium
Reclamation of Kimberlite tailings and Underground Mining	<ul style="list-style-type: none"> • Dust • Possible Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance 	<ul style="list-style-type: none"> • Access control • Dust control and monitoring • Groundwater quality monitoring • Noise control and monitoring • Continuous rehabilitation • Stormwater run-off control • Immediately clean hydrocarbon spill • Drip trays • Erosion control 	Medium

Generators			Medium
Office – Pre-fabricated office blocks on concrete	<ul style="list-style-type: none"> • Surface water contamination • Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance 	<ul style="list-style-type: none"> • Access control • Maintenance of generator and bund walls • Noise control and monitoring • Oil traps • Groundwater quality monitoring • Immediately clean hydrocarbon spill • Immediately clean hydrocarbon spill • Rip disturbed areas to allow re-growth of vegetation cover 	Very low
Parking bay	<ul style="list-style-type: none"> • Dust • Groundwater contamination • Noise • Removal and disturbance of vegetation cover and natural habitat of fauna • Surface disturbance 	<ul style="list-style-type: none"> • Dust control and monitoring • Noise control and monitoring • Drip trays • Stormwater run-off control. • Immediately clean hydrocarbon spills • Rip disturbed areas to allow re-growth of vegetation cover 	Low
Processing plant	<ul style="list-style-type: none"> • Dust • Noise • Groundwater contamination • Removal and disturbance of vegetation cover and natural habitat of fauna • Soil contamination • Surface disturbance 	<ul style="list-style-type: none"> • Access control • Maintenance of processing plant • Dust control and monitoring • Groundwater quality and level monitoring • Noise control and monitoring • Drip trays • Stormwater run-off control. • Immediately clean hydrocarbon spills • Rip disturbed areas to allow re-growth of vegetation cover 	Medium
Water distribution Pipeline	<ul style="list-style-type: none"> • Surface disturbance • Possible Groundwater 	<ul style="list-style-type: none"> • Maintenance of pipes. 	Low

Roads	<ul style="list-style-type: none"> contamination Soil contamination Surface water contamination Dust Possible Groundwater contamination Noise Removal and disturbance of vegetation cover and natural habitat of fauna Surface disturbance 	<ul style="list-style-type: none"> Maintenance of roads Dust control and monitoring Noise control and monitoring Speed limits Stormwater run-off control. Erosion control Immediately clean hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover 	Low
Salvage yard	<ul style="list-style-type: none"> Possible Groundwater contamination Removal and disturbance of vegetation cover and natural habitat of fauna Soil contamination Surface disturbance Surface water contamination 	<ul style="list-style-type: none"> Access control Maintenance of fence. Stormwater run-off control Immediately clean hydrocarbon spill 	Low
Security Gate and guard house at access control point	<ul style="list-style-type: none"> Dust Groundwater contamination Noise Removal and disturbance of vegetation cover and natural habitat of fauna Surface disturbance 	<ul style="list-style-type: none"> Access control Maintenance of boom gates and container. Dust control and monitoring Noise control and monitoring Immediately clean hydrocarbon spill Rip disturbed areas to allow re-growth of vegetation cover 	Low
Stockpile area	<ul style="list-style-type: none"> Dust Possible Groundwater contamination Noise Removal and disturbance of 	<ul style="list-style-type: none"> Dust control and monitoring Noise control and monitoring Drip trays Stormwater run-off control. Immediately clean hydrocarbon spills 	Low

Tailings stockpile area	<ul style="list-style-type: none"> vegetation cover and natural habitat of fauna Surface disturbance Dust Noise Removal and disturbance of vegetation cover and natural habitat of fauna Surface disturbance 	<ul style="list-style-type: none"> Rip disturbed areas to allow re-growth of vegetation cover Dust control and monitoring Noise control and monitoring Drip trays Stormwater run-off control. Immediately clean hydrocarbon spills Rip disturbed areas to allow re-growth of vegetation cover 	Low
Topsoil storage area	<ul style="list-style-type: none"> Dust Removal and disturbance of vegetation cover and natural habitat of fauna Soil disturbance Surface disturbance 	<ul style="list-style-type: none"> Dust control and monitoring Stormwater run-off control. Continuous rehabilitation Rip disturbed areas to allow re-growth of vegetation cover Backfilling of topsoil during rehabilitation 	Low
Waste disposal site	<ul style="list-style-type: none"> Groundwater contamination Surface water contamination 	<ul style="list-style-type: none"> Storage of waste within receptacles Storage of hazardous waste on concrete floor with bund wall Removal of waste on regular intervals. 	Low
Mine Residue Deposit – Slimes	<ul style="list-style-type: none"> Dust Possible Groundwater contamination Noise Removal and disturbance of vegetation cover and natural habitat of fauna Surface disturbance 	<ul style="list-style-type: none"> Dust control and monitoring Groundwater quality monitoring Noise control and monitoring Stormwater run-off control. Rip disturbed areas to allow re-growth of vegetation cover 	Low
Washbay	<ul style="list-style-type: none"> Possible Groundwater contamination Removal and disturbance of vegetation cover 	<ul style="list-style-type: none"> Groundwater quality and level monitoring Concrete floor with oil/water 	Low

<p>Water tank: It is anticipated that the operation will establish 1 x 10 000 litre water tanks with purifiers for potable water.</p>	<p>and natural habitat of fauna</p> <ul style="list-style-type: none"> • Soil contamination • Municipal water and usage • Surface disturbance 	<p>separator</p> <ul style="list-style-type: none"> • Stormwater run-off control • Immediately clean hydrocarbon spills • Monitor water quality and quantity • Maintenance of tanks (check for leaks). 	<p>Low</p>
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(ix) Other Information required by the Competent Authority:**1. Compliance with the provisions of Sections 24(4)(a) and (b) read with Section 24(3)(a) and (7) of the National Environmental Management Act (Act 107 of 1998), the EIA report must include the:-****a. Impact on the socio-economic conditions of any directly affected person:**

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

The socio-economic conditions of the local community could be affected in two ways:

- Negative impacts to the welfare of the farm owners and workers through general nuisance, dust generation, damages to properties and any associated potential safety risks.
- Positive impacts through job creation and local business opportunities.
- The consultation with interested and affected parties is on-going and any issues, concerns or comments will be considered and included in the EIA report and control measures will be presented in the EMP report.

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

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

This information is taken out of the Heritage report done by PGS Heritage, Henk Steyn, 30 July 2018 on Catherines Fancy (See Report attached as Appendix 5).

Heritage resources are unique and non-renewable and as such any impact on such resources must be seen as significant. This report focuses expressly on the area affected by current mining activities, other management measures as listed and required in other HIA's conducted in the area must still be implemented for other heritage features identified in the larger mining area.

The HIA has shown that the Kophia Diamond Mine has heritage resources present on the affected properties. This has been confirmed through a field survey, archival research and evaluation of aerial photography of the sites.

During the field assessment seven heritage resources were located, not including the accidentally discovered burial ground. These include three Middle Stone Age sites (207, 208 and 212) and four historical structures (209, 210, 211 and 213).

These sites have LOW heritage significance and no further mitigation measures are required, except that a permit from SAHRA is required if the mining activity is expected to destroy the three MSA sites.

The burial ground is currently undergoing a full grave relocation process, for which a permit application is in progress, as required by various authorities. This HIA report forms part of the permit application.

It is my considered opinion that overall impact on heritage resources after the implementation of the recommended mitigation measures is acceptably low and that the project can be approved from a heritage perspective.

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

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

As mentioned before, the specific occurrence of kimberlite diamonds in the area dictates the selection of the specific mining site and there are no alternatives in terms of project location.

The mining operation will provide ±48 jobs and will also add to the increased economic activity and the area surrounding the farm.

Negative impacts on the area are expected to be temporary and can be mitigated to a large extent if the recommendations of the EMPR area adhered to e.g. rehabilitation.

(xi) Undertaking regarding correctness of information:

I, RH Oosthuizen, ID number 7004180037082, herewith undertake that the information provided in the foregoing report is correct, and that the comments and inputs from stakeholders and Interested and Affected Parties has been correctly recorded in the report.



Signature of EAP

Date: 14 December 2018

(xii) Undertaking regarding level of agreement:

I, RH Oosthuizen, ID number 7004180037082, herewith undertake that the information provided in the foregoing report is correct, and that the level of agreement with Interested and Affected Parties and stakeholders has been correctly recorded and reported herein.



Signature of EAP

Date: 14 December 2018

- END -

APPENDIX 1

DIE UNIVERSITEIT
VAN DIE ORANJE-
VRYSTAAT



THE UNIVERSITY
OF THE ORANGE
FREE STATE

HIERMEE WORD VERKLAAR DAT DIE GRAAD THIS IS TO CERTIFY THAT THE DEGREE

Magister in Omgewingsbestuur
Master in Environmental Management

TOEGEKEN IS AAN
HAS BEEN CONFERRED UPON

ROELINA HENRIËTTE OOSTHUIZEN

NADAT AAN DIE STATUTE EN REGULASIES VAN IN ACCORDANCE WITH THE STATUTES AND
DIE UNIVERSITEIT VOLDOEN IS. AS BEWYS REGULATIONS OF THE UNIVERSITY. AS
DAARVAN PLAAS ONS ONS ONDERSKEIE WITNESS OUR RESPECTIVE SIGNA-
TURE AND THE SEAL OF THE
UNIVERSITEIT HIERONDER. UNIVERSITY BELOW.



A-J. Booitze
.....
VISEKANSIELER/VICE-CHANCELLOR

G. Nwan Hye
.....
DEKAAN/DEAN

[Signature]
.....
REGISTRATEUR/REGISTRAR

BUKMAN/CONTIN
2000 P9 16

Appendix 2**CURRICULUM VITAE – RH OOSTHUIZEN****PERSONAL DETAILS**

FULL NAMES AND SURNAME : **Roelina Henriëtte Oosthuizen**

DATE OF BIRTH : **18 April 1970**

I.D. NO : **700418 0037 08 2**

MARITAL STATUS : **Married**

CITIZENSHIP : **Republic of South Africa**

RESIDENTIAL ADDRESS : **Farm Oberon
Kimberley**

POSTAL ADDRESS : **P.O. Box 110823
Hadisonpark
Kimberley
8306**

E-MAIL ADDRESS : **roosthuizen950@gmail .com**

CEL NO : **084 208 9088**

DRIVER'S LICENCE : **EB**

LANGUAGES : **Afrikaans (home language)
English**

QUALIFICATIONS

2000 **UNIVERSITY OF THE ORANGE FREE STATE**
Qualification: Master In Environmental Management.

1991 **NORTH WEST UNIVERSITY**
Qualification: B – Comm: Industrial psychology.

1988 **BRITSHIGH SCHOOL (BRITS)**
Qualification: Matric

COURSES and Conferences ATTENDED

I have attended various mining and environmental conferences and seminars to stay abreast with the latest changes in legislation, legal compliance and policy positions in the sector.

August 1994	Junior Managers (Public Service Training Institute)
November 1994	Mineral Laws Administration (Public Service Training Institute)
October 1997	Mineral Laws Administration & Environmental Management (University of Pretoria)
July 2002	Project Management for Environmental Systems (University of the Orange Free State)
August 2004	Environmental and Sustainability in Mining Minerals and Energy Education and Training Institute (MEETI)
September 2005	Converting Old Order Rights to New Order Rights in Mining (International Quality & Productivity Centre Johannesburg)
November 2006	Mine waste disposal and Achievement of Mine Closure
February 2007	Introduction to ArcGis 1
April 2010	Mining Law Update Conference (IIR BV South Africa)
November 2010	Social Labour Plans for Mining Workshop (Melrose Training)
August 2011	Mineral Resources Compliance and Reporting (ITC)
May 2012	Enviro Mining Conference 2012 (Sustainability and Rehabilitation) (Spectacular Training Conferences)
August 2012	Mineral Resources Compliance and Reporting 4th Annual (ITC)
March 2013	1st Enviro Mining-Ensuring Environmental Compliance and reporting
March 2014	4th Annual Enviro Mining Conference
March 2015	5th Annual Enviro Mining Conference

CAREER HISTORY***Wadala Mining and Consulting (Pty) Ltd:***

ADDRESS : Farm Oberon
Kimberley
8301

PERIOD OF EMPLOYMENT : 01 August 2013 - Part time

POSITION HELD : Mineral Law Administration and Environmental
Manager

Diacor Closed Corporation:

ADDRESS : 6 Mullin Street
Hadisonpark
Kimberley
8306

PERIOD OF EMPLOYMENT : 01 October 2013 – Present and part time consultancy
work

POSITION HELD : Mineral Law Administration and Environmental
Manager

Mentor Trading and Investments 52 (Pty) Ltd:

ADDRESS : 2 Kekewich Drive
Monridge Office Park no 6
Monument Heights
Kimberley
8301

PERIOD OF EMPLOYMENT : 01 October 2012 – 01 October 2013

POSITION HELD : Mineral Law Administration and Environmental
Manager

Rockwell Diamonds Inc:

ADDRESS : PO Box 251
BARKLY-WES
8375

PERIOD OF EMPLOYMENT : 01 March 2005 – 30 September 2012

POSITION HELD**Mineral Law Administration and Environmental Manager****MAIN JOB FUNCTIONS**

- Collect analyse and interpret information regarding the measurement of impacts of mining operations on the environment, the rehabilitation of land surfaces.
- The prevention, control and combating of pollution.
- Co-ordinate, investigate, audit and resolve environmental problems in conjunction with the Department of Water and Sanitation, Department of Agriculture and the provincial Department of Tourism, Environment and Conservation.
- Address complaints and inquiries received from the public and mining industry.
- Consult with relevant authorities and interested and affected people regarding the approval of Environmental Management Programmes.
- Ensuring that rehabilitation standards are applied.
- Ensuring that the requirements stated in Environmental Management Programme Reports are adhered to.
- Evaluate Mining Rights and Prospecting Right applications and recommend site-specific conditions according to legislative requirements.
- Constant liaison with the public, the mining industry and other government authorities on Environmental matters, legislation and agreements.
- Calculate and verify financial provision for outstanding rehabilitation.

DEPT OF MINERALS & ENERGY:

ADDRESS : 43 Chapel Street
Standard Bank Building
KIMBERLEY

PERIOD OF EMPLOYMENT : 01 April 1997 to 01 March 2005

POSITION HELD : **Senior Environmentalist - Assistant Director Environment**

MAIN JOB FUNCTIONS

- :
- Collect analyse and interpret information regarding the measurement of impacts of mining operations on the environment, the rehabilitation of land surfaces.
 - The prevention, control and combating of pollution.
 - Co-ordinate and prioritise the rehabilitation of derelict and ownerless mines.

[SCOPING REPORT – KOPHIA DIAMONDS]

- Co-ordinate, investigate, audit and resolve environmental problems in conjunction with the Department of Water Affairs and Forestry, Department of Agriculture and the provincial Department of Tourism, Environment and Conservation.
- Address complaints and Inquiries received from the public and mining industry.
- Consult with relevant authorities and interested and affected people regarding the approval of Environmental Management Programmes.
- Ensuring that rehabilitation standards are applied.
- Ensuring that the requirements stated in Environmental Management Programme Reports are adhered to.
- Conduct inspections and recommendations on mines that apply for closure.
- Evaluate mining licences and prospecting applications and recommend site-specific conditions according to legislative requirements.
- Constant liaison with the public, the mining industry and other government authorities on environmental matters, legislation and agreements.
- Influence new development processes through participation in the EMPR and EIA processes and give guidance through education and awareness programmes.
- Calculate and verify financial provision for outstanding rehabilitation.

DEPT. OF MINERALS AND ENERGY:

POSITION HELD : Assistant Mineral Laws Officer – Senior Mineral Laws Officer

PERIOD OF EMPLOYMENT : 01 November 1993 – March 1997

ADVISORY COMMISSION ON LAND ALLOCATION

POSITION HELD : Assistant Administrative Officer

PERIOD OF EMPLOYMENT : 10 February 1992 – October 1993

Experience Projects Completed

I am a dedicated professional Mineral Law Administration and Environmental Manager with 23 years extensive experience in the managing and mitigating of specifically mining related impacts. I started my career in 1993 in the Department of Minerals and Energy where I have done Environmental inspections with site visits on all mines in the Northern Cape. I have done Environmental Audits on operational and closed mining sites in collaboration with other Departments. I have also specifically looked at pollution control measures on mining sites and the effectiveness of these measures. I have evaluated submitted EIA /EMP documents and have worked closely with all other Departments and stakeholders to make sure that all environmental aspects have been dealt with adequately in submitted documents. I left the Department for the Private Sector in 2005. I have since worked for a Canadian Group of Companies in the Private Sector, started a consultancy where I provide various mining companies with professional advice and guidance on Mineral Law and Environmental Issues. I have also represented the South African Diamond Producers Organisation (SADPO) on the Environmental Policy Committee (EPC) at the Chamber of Mines between 2005 and 2011.

2005

Environmental Management Plan with an application for a Prospecting Right for diamonds on Portion 9 and 14 of the farm Lanyon Vale 376, Hay in terms of Section 16(4) and Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

EMPlan was approved in August 2007 with the Prospecting Right

Client: HC van Wyk Diamonds Ltd

Environmental Management Plan with an application for a Prospecting Right for diamonds on Remainder of Portion 18 (a portion of Portion 10) of the farm Lanyon Vale 376, Hay in terms of Section 16(4) and Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

EMPlan was approved in August 2007 with the Prospecting Right

Client: HC van Wyk Diamonds Ltd

Environmental Management Plan with an application for a Prospecting Right for diamonds on Remainder of Portion 1, Portion 2 (a Portion of Portion 1), Portion 3 and Portion 5 of the farm Zweet Fontein nr 76 and Remainder of Portion 1 and portion 3 of the farm Blaaubosch Drift nr 78, Herbert in terms of Section 16(4) and Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

EMPlan was approved in August 2007 with the Prospecting Right

Client: HC van Wyk Diamonds Ltd

2006

Environmental Management Plan with an application for a Prospecting Right for Tin in Kakamas South Settlement, Kakamas in terms of Section 16(4) and Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

EMPlan was approved in June 2011 with the Prospecting Right

Client: Douglas Mining and Exploration (Pty) Ltd

2007

Environmental Management Plan with an application for a Prospecting Right for diamonds on the Remaining Extent, Portion 1 and Portion 2 of Diamond Valley 29, Hopetown in terms of Section 16(4) and Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

EMPlan was approved in April 2008 with the Prospecting Right

Client: HC van Wyk Diamonds Ltd

2008

Environmental Management Plan with an application for a Prospecting Right for diamonds on Portion 12, 13, 16, 24 & 25 Saxendrift 20 in terms of Section 16(4) and Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

EMPlan was approved in June 2008 with the Prospecting Right

Client : HC van Wyk Diamonds Ltd

Environmental Management Plan with an application for a Prospecting Right for diamonds on Erf 1 Windsorton, Barkly-Wes in terms of Section 16(4) and Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002)

EMPlan was approved in February 2009 with the Prospecting Right

Client: HC van Wyk Diamonds Ltd

2009

ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PROGRAMME SUBMITTED FOR AN APPLICATION FOR A MINING RIGHT CONVERSION IN TERMS OF SECTION 39 & OF REGULATION 50 & 51 OF THE MPRDA, 2002 (ACT NO. 28 OF 2002) for Wouterspan Mine (The Farm Lanyon Vale 376, Hay)

EIA/EMP approved on 25/01/2010

Client: HC van Wyk Diamonds Ltd

ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PROGRAMME SUBMITTED FOR AN APPLICATION FOR A MINING RIGHT CONVERSION IN TERMS OF SECTION 39 & OF REGULATION 50 & 51 OF THE MPRDA, 2002 (ACT NO. 28 OF 2002) for GW Ziegler on Remainder, Remainder of portion 1 (Amantia) and portion 2 (a portion of portion 1) of the farm Rietputs no. 15 and portion 1 (Spenceskop) of the farm Waterval no.14 in the district of Kimberley

EIA/EMP approved with conversion of the Mining Right

Client: GW Ziegler

2010

Basic Assessment Application

Application for authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and the Environmental Impact Assessment Regulations, 2006

PROPOSED EXTENTION OF A ROOF OVER AN EXCISTING DECK WITH TWO WOOD PILLARS BY MEANS OF THE EXCAVATING OF 0.5m X 0.5m X 1m X 2 (½m²) OF SOIL WITHIN 100M OF THE HIGH WATER MARK OF THE SEA

Falls within general notes under activities that requires basic assessment

Positive Record of Decision (ROD) Granted.

Client: Dr. Petrus van der Walt Vermeulen

REVISION OF ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PROGRAMME SUBMITTED FOR AN APPLICATION FOR A MINING RIGHT CONVERSIONS IN TERMS OF SECTION 39 & OF REGULATION 50 & 51 OF THE MPRDA, 2002 (ACT NO. 28 OF 2002) for HC VAN WYK DIAMONDS LTD (204 MRC) ON REMAINING EXTENT OF HOLPAN 161, BARKLY-WES AND KLIPDAM DIAMOND MINING CO (003MRC) ON REMAINING EXTENT OF KLIPDAM 157, BARKLY-WES

Client: HC van Wyk Diamonds Ltd and Klipdam Diamond Mining Company Ltd

2011

APPLICATION FOR A LICENCE REGARDING PROTECTED TREES [SECTION 15(1) OF THE NATIONAL FORESTS ACT, 1998, AS AMENDED] on PORTION 1 (PAARDE PAN) OF THE FARM ANNEX SAXES DRIFT 21, HOPETOWN, NORTHERN CAPE for 14 Shephards tree (*Boscia albitunca*)

Licence Issued on 24 September 2011

Client : Saxendrift Mine Pty Ltd

ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PROGRAMME SUBMITTED FOR AN APPLICATION FOR A MINING RIGHT CONVERSION IN TERMS OF SECTION 39 & OF REGULATION 50 & 51 OF THE MPRDA, 2002 (ACT NO. 28 OF 2002) on Portion 2 of the farm Good Hope 286, Barkly-Wes

EIA/EMP approved February 2013 by the Regional Manager

Client: Diacor CC

APPLICATION FOR CLOSURE CERTIFICATE [In terms of sections 43(3) of the Minerals and Petroleum Resources Development Act, 2002 (Act No 28 of 2002)] AND A CLOSURE PLAN FOR MINING ACTIVITIES PERFORMED BY HC VAN WYK DIAMONDS LTD ON THE REMAINING EXTENT OF PORTION 1 (WILLOWBANK), PORTION 2 (A PORTION OF PORTION 1) (WILLOWBANK), PORTION 3 (A PORTION OF PORTION 1) (WILLOWBANK) OF KHOSOPSKRAAL 227 AND PORTION 5 (ROSCOMMON) AND PORTION 2 (BORDON) OF HARRISDALE 226 AND FARM 362, BARKLY-WES CLOSURE WAS GRANTED IN JULY 2010

Client: HC VAN WYK DIAMONDS LTD

2012

APPLICATION FOR A LICENCE REGARDING PROTECTED TREES [SECTION 15(1) OF THE NATIONAL FORESTS ACT, 1998, AS AMENDED] on PORTION 1 OF THE FARM BRAKFORTEIN 276, HOPETOWN NORTHERN CAPE for 4Shephards tree (*Boscia albitunca*)

Licence NCU 2831112 Issued In November 2012

Client: Jasper Mining Pty Ltd

2013

APPLICATION FOR A LICENCE REGARDING PROTECTED TREES [SECTION 15(1) OF THE NATIONAL FORESTS ACT, 1998, AS AMENDED] ON REMAINDER OF THE FARM NIEWEJAARSKRAAL NO 40, PRIESKA, NORTHERN CAPE. 30 SHEPPHARD'S TREES

Licence NCU 4290214 Issued In February 2014

Client: Saxendrift Mine (Pty) Ltd (Niewejaarskraal Mine)

AMENDMENT OF ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PROGRAMME SUBMITTED FOR A SECTION 11 APPLICATION OF A MINING RIGHT CONVERSION IN TERMS OF SECTION 39 & OF REGULATION 50 & 51 OF THE MPRDA, 2002 (ACT NO. 28 OF 2002) on The Farm Riets Drift no. 18, district

Client: Bo-Karoo Diamond Mining (Pty) Ltd to be ceded to Bondeo 140 CC.

2014

Application for a Water Users Licence Application In terms of Section 27 of the National Water Act no 36 of 1998 on the Farm Engelde Wllgeboomfontein 22, Prieska

Application still under review

Client: Thunderflex 78 (Pty) Ltd

ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PROGRAMME SUBMITTED FOR AN APPLICATION FOR A MINING RIGHT CONVERSION IN TERMS OF SECTION 39 & OF REGULATION 50 & 51 OF THE MPRDA, 2002 (ACT NO. 28 OF 2002) on Portion 1 of the farm Brakfontein 276 district of Hopetown

EIA/EMP approved April 2015 by the Regional Manager

Client: Jasper Mining (Pty) Ltd

Environmental Management Plan with an application for a Prospecting Right for diamonds on REMAINING EXTENT OF THE FARM MARKSDRIFT 3, HOPETOWN in terms of Section 16(4) and Regulation 52 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002) EMPlan was approved In April 2015 with the Prospecting Right

Client: BONDEO 140 CC

2015

ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PROGRAMME SUBMITTED FOR AN APPLICATION FOR A PROSPECTING RIGHT IN TERMS OF SECTION 39 & OF REGULATION 50 & 51 OF THE MPRDA, 2002 (ACT NO. 28 OF 2002) on Portion 1 of the farm Speculatie 217 district of Boshof

EIA/EMP has been accepted by the Regional Manager Free State Region

Client: Thaba Thafita Diamond Prospecting CC

ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL MANAGEMENT PROGRAMME SUBMITTED FOR AN APPLICATION FOR A PROSPECTING RIGHT IN TERMS OF SECTION 39 & OF REGULATION 50 & 51 OF THE MPRDA, 2002 (ACT NO. 28 OF 2002) on a Portion of Erf 1318, Galeshewe , and a Portion of the Remainder Erf 5336, Kimberley

EIA/EMP still under review by the Regional Manager Northern Cape Region

Client: Mystic Pearl 157 (Pty) Ltd

2016

**ANNUAL REHABILITATION PLAN for Associated Manganese Mines of South Africa Ltd
Glosam Prospecting Area
February 2016**

REFERENCES

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E-mail address: betsiemilne@gmail.com

The End



APPENDIX 3 INTERESTED AND AFFECTED PARTY CONSULTATIONS

APPENDIX 4 IDP TOKOLOGO 2015

APPENDIX 5 HERITAGE SPECIALIST REPORTS 2018