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SCOPING REPORT

THE PROSPECTING RIGHT APPLICATION COMBINED WITH A WASTE LICENCE APPLICATION OF AAA MINING CC FOR THE PROSPECTING OF DIAMONDS ALLUVIAL (DA), DIAMONDS IN KIMBERLITE (DK), DIAMONDS GENERAL (D) & DIAMONDS (DIA) ON THE REMAINING EXTENT OF THE FARM KAMEELDRIFT 285, REGISTRATION DIVISION: HOPETOWN; NORTHERN CAPE PROVINCE.

NAME OF APPLICANT	**AAA Mining CC**
PREPARED BY	**Milnex CC Environmental Consultants**
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REFERENCE NUMBER:	**(NC30/5/1/1/2/12646PR)**

PROJECT INFORMATION

Project Name:	Prospecting Right Application combined with a Waste Licence Application of AAA Mining CC for the Prospecting of Diamonds Alluvial (DA), Diamonds in Kimberlite (DK), Diamonds General (D) & Diamonds (DIA) on the remaining extent of the farm Kameeldrift 285, Registration Division: Hopetown; Northern Cape Province.
Report Title:	Scoping Report
Prepared By:	Milnex CC
Date:	January 2020

QUALITY CONTROL:

	Report Author:	**Report Reviewer:**
Name:	Christiaan Baron	Ms. Percy Sehaole Pr. Sci. Nat. EAPASA (2019/959)
Signature:		Sehaole.

DISCLAIMER:

The DEA screening tool was used in compiling this document

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 permit are submitted in the exact format of, and provide all the information required in terms of, this template. Furthermore please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorisation being refused.

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

OBJECTIVE OF THE SCOPING PROCESS

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

(a) identify the relevant policies and legislation relevant to the activity;

(b) motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;

(c) identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process;

(d) identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment;

(e) identify the key issues to be addressed in the assessment phase;

(f) agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and

(g) identify suitable measures to avoid, manage, or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.

SCOPING REPORT

2) Contact Person and correspondence address

a) DETAILS OF:

i) The EAP who prepared the report

ii) Expertise of the EAP

Name of Practitioner	Qualifications	Contact details
Ms. Percy Sehaole Pr. Sci. Nat. EAPASA (2019/959)	Master's Degree in Environmental Science (refer to **Appendix 1**)	Tel No.: (018) 011 1925 Fax No. : (053) 963 2009 e-mail address: percy@milnex-sa.co.za
Ms. Lizanne Esterhuizen	Honours Degree in Environmental Science (refer to **Appendix 1**)	Tel No.: (018) 011 1925 Fax No. : (053) 963 2009 e-mail address: lizanne@milnex-sa.co.za
Mr. Christiaan Baron	Honours Degree in Environmental Science (refer to **Appendix 1**)	Tel No.: (018) 011 1925 Fax No. : (053) 963 2009 e-mail address: christiaan@milnex-sa.co.za

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

Milnex CC was contracted by **AAA Mining CC** as the independent environmental consultant to undertake the Scoping and EIA process for a Diamonds Alluvial (DA), Diamonds in Kimberlite (DK), Diamonds General (D) & Diamonds (DIA) Prospecting Right Application, combined with a Waste Licence Application, with associated infrastructure, structures and earthworks on the remaining extent of the farm Kameeldrift 285, Registration Division: Hopetown; Northern Cape Province. The property is located approximately 30km from Douglas, towards Hopetown in the Northern Cape Province. The Orange River is flowing north and east of the area.

Milnex CC is a specialist environmental consultancy with extensive experience in the mining industry which provides a holistic environmental management service, including environmental assessment and planning to ensure compliance with relevant environmental legislation. Milnex CC benefits from the pooled resources, diverse skills and experience in the environmental and mining field held by its team that has been actively involved in undertaking environmental studies for a wide variety of mining related projects throughout South Africa. The Milnex CC team has considerable experience in environmental impact assessment and environmental management, especially in the mining industry.

Percy Sehaole, Lizanne Esterhuizen & Christiaan Baron have extensive consulting experience in the environmental field. Their key focus is on environmental assessment, advice and management and ensuring compliance to legislation and guidelines. They are

currently involved in undertaking EIAs for several projects across the country (refer to **Appendix 2** for CV).

b) **THE LOCATION OF THE ACTIVITY:**

Farm Name:	Remaining Extent of the farm Kameeldrrift 285
Application area (Ha)	3749.6090 ha is the total extent of the site
Magisterial district:	Pixley ka Seme District Municipality
Registration Division	Hopetown RD
Distance and direction from nearest town	The property is located approximately 30km from Douglas, towards Hopetown in the Northern Cape Province. The Orange River is flowing north and east of the area.
21 digit Surveyor General Code for each farm portion	C03300000000028500000
Minerals applied for	1. Diamonds Alluvial (DA), 2. Diamonds in Kimberlite (DK) 3. Diamonds General (D) & 4. Diamonds (DIA)

iii. Farms Co-ordinates:

Farm		Longitude	Latitude
Remaining Extent of the farm Kameeldrrift 285	0	23° 52' 54.148" E	29° 18' 1.599" S
	1	23° 53' 1.291" E	29° 18' 17.018" S
	2	23° 53' 7.771" E	29° 18' 33.023" S
	3	23° 52' 58.187" E	29° 19' 24.601" S
	4	23° 53' 11.743" E	29° 19' 58.465" S
	5	23° 53' 26.148" E	29° 20' 22.818" S
	6	23° 51' 14.676" E	29° 22' 46.195" S
	7	23° 50' 40.594" E	29° 22' 37.428" S
	8	23° 49' 18.776" E	29° 24' 13.063" S
	9	23° 48' 3.097" E	29° 22' 42.919" S
	10	23° 47' 36.723" E	29° 22' 29.747" S
	11	23° 51' 51.058" E	29° 18' 28.522" S

c) **LOCALITY MAP** (show nearest town, scale not smaller than 1:250000 attached as **Appendix 3).**

A Locality map is attached in **Appendix 3** and on figure 1 below.

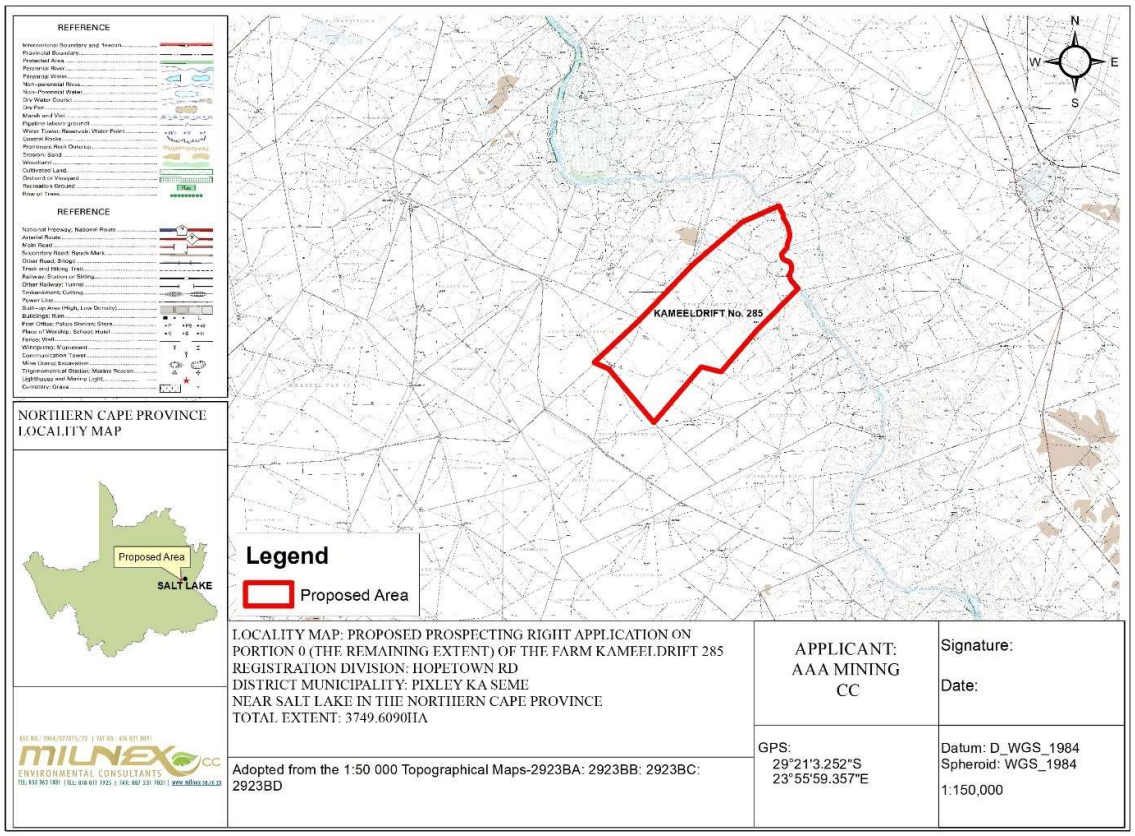

Figure 1: Locality Map

Refer to Site Plan included within **Appendix 4**.

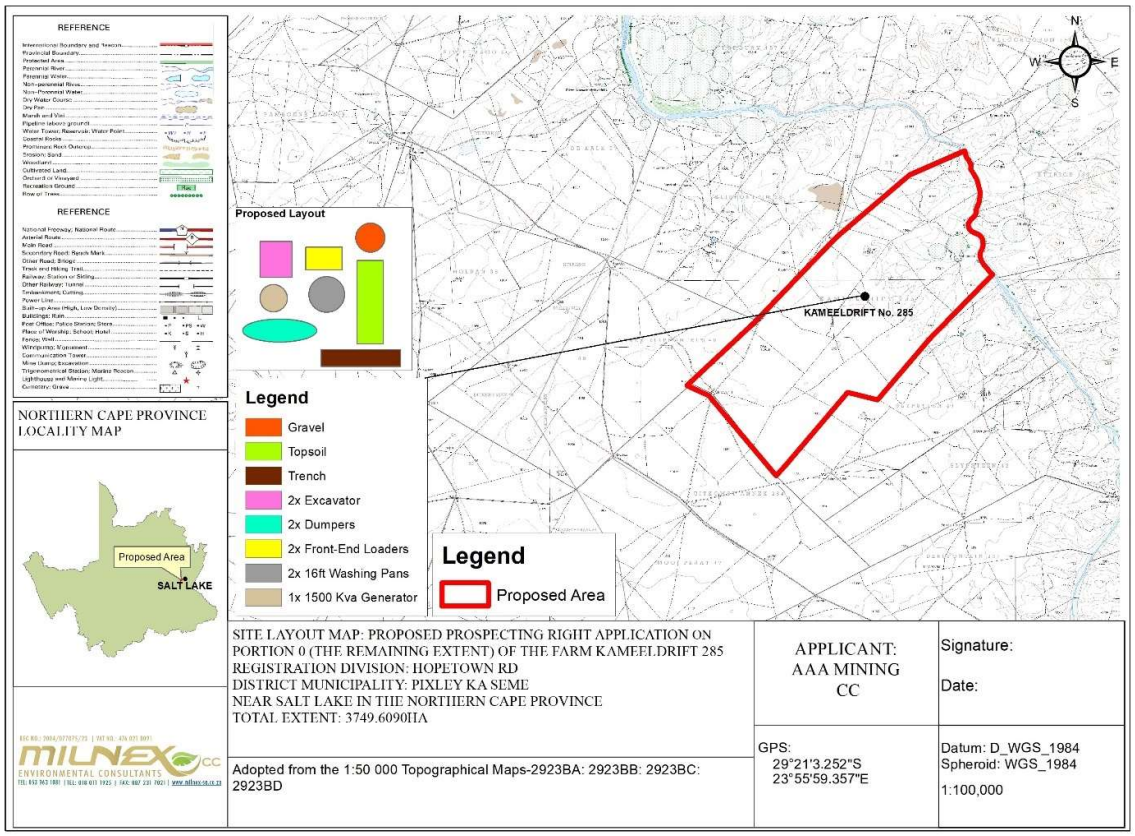

Figure 2: Site Plan

d) **DESCRIPTION OF THE SCOPE OF THE PROPOSED OVERALL ACTIVITY.**

i) Listed and specified activities

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

Listing Notices: 2017 Regulations

Description of the overall activity. (Indicate Mining Right, Mining Permit, Prospecting right, Bulk Sampling, Production Right, Exploration Right, Reconnaissance permit, Technical co-operation permit, Additional listed activity)	**1) Listing notice 1 GNR327: Activity 9:** *"The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water— (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more;"* **2) Listing notice 1 GNR 327: Activity 10:** "*The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes – (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more;"* **3) Listing Notice 1: GNR 327, Activity 19:** *The infilling or depositing of any material of more than 10 cubic metres into,*

or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from:
(i) a watercourse;

4) **Listing Notice 1, GNR 327, Activity 20:** *"Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including— (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource; or [including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)] (b) the primary processing of a petroleum resource including winning, extraction, classifying, concentrating or water removal; –*

5) **Listing Notice 2, GNR 325, Activity 15:** *"The clearance of an area of 20 hectares or more, of indigenous vegetation."*

6) **Listing Notice 2, GNR 325, Activity 19**: *"The removal and disposal of minerals contemplated in terms of section 20 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including— (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource or (b) [including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)] the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing;*

7) **Listing Notice 3: GNR 324, Activity 12 (g):** *Northern Cape; The clearance of an area of 300 square metres or more of indigenous vegetation;* ***ii.*** *Within critical biodiversity areas identified in bioregional plans*

8) **NEM:WA 59 of 2008: Residue stockpiles or residue deposits, Category A: (15)** *The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a prospecting right or mining permit, in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).*

Prospecting right with bulk samples for the prospecting of **Diamond Alluvial, Diamond in Kimberlite, Diamonds (General) and Diamonds** including associated infrastructure, structure and earthworks.

NAME OF ACTIVITY **(E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc** **E.g. for mining**,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**Aerial extent of the Activity** **Ha or m²**	**LISTED ACTIVITY** (Mark with an **X** where applicable or affected).	**APPLICABLE LISTING NOTICE** ***(GNR 324, GNR 325 or GNR 326)***	**WASTE MANAGEMENT AUTHORISATION** (Indicate whether an authorisation is required in terms of the Waste Management Act) **(Mark with an X)**
Bulk transportation of water or storm water: **<u>BULK SAMPLING:</u>** 3749.6090 Ha – 5m x 5m x5m (100 pits), 60m x 50m x 5m (50 trenches) **Listing notice 1 GNR327: Activity 9:** The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water— (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more;	Random indigenous vegetation clearance of over a 3749.6090 hectares area.	X	Listing notice 1 GNR327: Activity 9	-
Bulk transportation of sewage, effluent, process water, wastewater, return water, industrial discharge or slimes: **<u>BULK SAMPLING:</u>** 3749.6090 Ha – 5m x 5m x5m (100 pits), 60m x 50m x 5m (50 trenches)	Random indigenous vegetation clearance of over a 3749.6090 hectares area.	X	Listing notice 1 GNR 327: Activity 10	-

Listing notice 1 GNR 327: Activity 10: The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes – (i) with an internal diameter of 0,36 metres or more; or (ii) with a peak throughput of 120 litres per second or more;				
Prospecting Right: **BULK SAMPLING:** 3749.6090 Ha – 5m x 5m x5m (100 pits), 60m x 50m x 5m (50 trenches) **Listing Notice 1: GNR 327, Activity 19:** *The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from:* *(i) a watercourse;*	3749.6090 Ha - Total hectares to be disturbed Concurrent backfilling will take place in order to rehabilitate.	X	Listing Notice 1: GNR 327, Activity 19	-
Prospecting Right: **BULK SAMPLING:** 3749.6090 Ha – 5m x 5m x5m (100 pits), 60m x 50m x 5m (50 trenches) **2 x 16 feet washing pan** with 660 000 tons to be washed, conveyors, screens, etc **Listing Notice 1, GNR 325, Activity 20:** "Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including— (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource; or [including	3749.6090 Ha - Total hectares to be disturbed	X	Listing Notice 1, GNR 327, Activity 20:	-

activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)] (b) the primary processing of a petroleum resource including winning, extraction, classifying, concentrating or water removal				
Clearance of indigenous vegetation: **BULK SAMPLING:** 3749.6090 Ha – 5m x 5m x5m (100 pits), 60m x 50m x 5m (50 trenches) **Listing Notice GNR 325, Activity 15:** "The clearance of an area of 20 hectares or more, of indigenous vegetation." – Random indigenous vegetation clearance of over a 3749.6090 hectares area.	3749.6090 Ha - Total hectares to be disturbed Concurrent backfilling will take place in order to rehabilitate.	X	Listing Notice 2, GNR 325, Activity 15	-
Prospecting: **BULK SAMPLING:** 3749.6090 Ha – 5m x 5m x5m (100 pits), 60m x 50m x 5m (50 trenches) **Listing Notice GNR 325, Activity 19**: "The removal and disposal of minerals contemplated in terms of section 20 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including— (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource [,]; or (b) [including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)] the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing	3749.6090 Ha Total hectares to be disturbed	X	Listing Notice 2, GNR 325, Activity 19:	-

Clearance of indigenous vegetation: **<u>BULK SAMPLING:</u>** 3749.6090 Ha – 5m x 5m x5m (100 pits), 60m x 50m x 5m (50 trenches) **Listing Notice 3: GNR 324, Activity 12 (g):** Northern Cape; The clearance of an area of 300 square metres or more of indigenous vegetation; ii) Within critical biodiversity areas identified in bioregional plans	Random indigenous vegetation clearance of over a 3749.6090 hectares area.	X	Listing Notice 3: GNR 324, Activity 12 (g):	-
Residue stockpiles or residue deposits: The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a prospecting right or mining permit, in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).		X	NEM:WA 59 of 2008 Category A: (15)	-

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

Pitting

A trial pit / test pit or inspection pit investigation is a highly effective way of obtaining data on the sub surface soil and rock conditions which underlie a prospecting sight. It allows for the various soils and rock types to be locked, the soil to be sampled and a preliminary assessment to be made.

Pits will be dug, locked, sampled and backfilled. To dig the pits the applicant will make use of the systems of Pierre de Jager, the appointed project geologist.

The applicant will at the end of the pitting process have locked the pits with the following information:

- A description of the soil and rock types from ground level to the base of the pits;
- Record of rock head depth and refusal depth, a list of where the samples will be taken, a record of where ground water seepage will be recorded;
- A general note of the geology and conditions in the vicinity of the test pits
- Pitting will be done within the period of 24 months once the prospecting right has been granted.

It is planned that **100 pits** will be dug (it may be less depending on the results) at an extent of **5m (length) x 5m (breath) x 5m (depth).**

- **(100 pits / 24 months) x 12 months = 50 pits dug per year**
- **Total area to be disturbed per year = 50 pits x (5 m x 5 m) / 10 000 = 0.125 Ha disturbed per year**

- **Total area disturbed for 24 months = 100 pits x (5 m x 5 m) / 10 000 = 0.25 Ha disturbed for 24 months**

Trenches

Due to nature of the alluvial diamond deposit, samples are not taken for assay as would be normal practice to evaluate hard rock precious or base-metal prospects. The diamond distribution pattern grade of alluvial diamonds is also of such a nature that there is no repeatability of sample results, even from adjacent samples.

Bulk samples will have to be taken to determine the average sample grade. By taking of the bulk samples, the applicant foresees to determine the grade of the diamond deposits as the number of carats contained in 100 tons (cpht) of gravel and to determine the average diamond sizes.

During these activities the applicant will then find out the size and value distribution of trenches. Diamond distribution patterns of alluvial deposits varies to such a nature that there is no repeatability of sample results even from adjacent samples.

Alluvial diamond deposits can only be sampled through bulk sampling comprising thousands of cubic meters of gravel. Given the extent of the area and the grades expected to be very low, the applicant will have to process bulk samples of approximately 660 000 tonnes.

The appointed geologist will advise where the samples will be taken. Bulk samples will not be taken along a systematic grid as in the case of drilling. As the anticipated mining plan for the properties will be based on high volumes (low grades), the bulk samples will have to address average recovery.

As indicated, the bulk sampling exercise has to be conducted to determine the grades (cpht), the diamond size distribution and thereafter to sell the diamonds to determine the diamond values.

The plant/ bulk sampling technique will be that of a typical South African alluvial diamond mining operation. The method is a strip mining process with oversize material and tailings recovered from the plant will be used as backfill material prior to final rehabilitation. Gravels are excavated, loaded and transported to the treatment facility using dump trucks.

The bulk sampling operation will be conducted using a fleet of conventional open pit mining equipment compromising of dump trucks supported by appropriate excavators and front-end- loaders. All equipment is planned to be diesel driven.

Before excavation commences vegetation will be cleared from the proposed bulk sampling block. These will be done as per environmental regulations. Top soil will then be removed and stored separately for later used for rehabilitation.

The bulk samples will be made in the form of box cuts the dimensions of these individual box cuts will on average be 60m long x 50m wide.
It is estimated that the bulk samples will be 5 m in depth.

Gravel will be removed by excavators and will be loaded directly into dump trucks. Ore will be hauled to the screening plant. The material will be screened where after the screened material will be moved to the processing plant where the gravel will be processed. Concentrate will be moved to the sorting plant were the concentrate will be sorted.
It is estimated that pitting and trenching will take approximately 48 months.

- **(50 trenches / 24 months) x 12 months = 25 trenches dug per year**
- **Total area to be disturbed per year = 25 trenches x (60 m x 50 m) / 10 000 = 7.5 Ha disturbed per year**

- **Total area to be disturbed for 24 months = 50 trenches x (60 m x 50 m) / 10 000 = 15 Ha disturbed for 24 months**

Rehabilitation:

Since **100 pits & 50 Trenches** are anticipated to be made over the period of 48 Months, concurrent rehabilitation needs to take place.

Consolidation and interpretation of results data

The prospecting activities will be conducted to determine an inferred diamond resource and an indicated diamond resource. An inferred diamond resource has a lower level of confidence then that applying to an indicated diamond resource. The inferred resource indication will be where the geological and or grade continuity could not be confidently interpreted. It cannot be assumed that an inferred resource will necessarily be upgraded to an indicated resource. Such a resource is normally also not sufficient to enable an evaluation of economic viability.

To obtain an indicated resource the confidence level of information obtained from the prospecting will have to be sufficient for the information to be applied to mine design, mine planning to enable an evaluation of economic viability.

The project geologist, Pierre de Jager, will monitor the program and consolidate and process the data and amend the program depending on the results received after each phase of prospecting. The DMR will be updated of any amendments made. This will be a continuous process throughout the prospecting work program.

Each physical phase of prospecting will be followed by desktop studies involving interpretation and modeling of all data gathered. These studies will determine the manner in which the work programme is to be proceeded with in terms of the activity, quantity, resources, expenditure and duration.

A GIS data base will be constructed capturing all the exploration data. All data will be consolidated and processed to determine the diamond bearing resource on the property

Water uses:

Water uses under section 21 a-k of the NWA may be triggered, thus a Water Use Licence Application (WULA) will needed in cases there will be encroachment. When needed WULA will be lodged with the department of Water & Sanitation (DWS).

Table 1: Water Use Pan Size specifications for Alluvial Diamond Mining (DWS NC & FS, 2001).

Pan size	Water/hour (m^3)	Water/day(m^3)	Gravel/hour (tons)	Gravel/day (ton)
16	17	170	60	600

Since 2 x 16 feet washing pans will be used, the amount of water for the pans will be 34 000 L/hour from which 30% is re-used.

Ablution

Chemical toilets shall be used, no french drains and pits shall be permitted.

Storage of dangerous goods

During the prospecting activities, limited quantities of diesel and fuel, oil and lubricants will be stored on site. These goods should be placed in a bunded area one and a half times the volume of the total amount of goods to be stored. It is anticipated that no more that 80m^3 of fuel will be stored on site during any time of the prospecting operation.

Prospecting activities and phases

Please find the Prospecting Work Programme attached as **Appendix 8**.

e) **POLICY AND LEGISLATIVE CONTEXT**

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act No. 107 of 1998 as amended.	Department of Environmental Affairs	27 November 1998
Constitution of South Africa Act 108 of 1996	National	18 December 1996
The National Heritage Resources Act (Act No. 25 of 1999)	SAHRA	1999
Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)	Department of Mineral Resources & Energy (DMRE)	2002
National Infrastructure Plan	National	
National Environmental Management: Biodiversity Act No. 10 of 2004	Department of Environmental Affairs	7 June 2004
National Environmental Management Waste Act, 2008 (Act No. 59 of 2008)	National & Provincial	1 July 2009

EIA regulations under NEMA	Department of Environmental Affairs	14 December 2014
Conservation of Agricultural Resources Act,1983 (Act No. 43 of 1983)	Department of Agriculture Forestry and Fisheries	1 June 1984
National Environmental Management Air Quality Act, 2004 (Act No. 39 of 2004).	National and Provincial	11 September 2004
National Water Act, 1998 (Act No. 36 of 1998).	National	20 August 1998
Pixley Ka Seme District Municipality (IDP)	Municipal	Term 2017-2022
Thembelihle Local Municipality (IDP)	Municipal	Term 2016/2017
National Forest Act (Act 84 of 1998) (NFA)	National	30 October 1998
National Veld & Forest Fires Act (Act 101 of 1998)	National	27 November 1998

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).

Prospecting rights and mining permits have been applied for all around the Oranjerivier, especially within the Northern Cape province. Due to the locality of the proposed site the possibility is there of encountering further diamond deposits.

The Northern Cape is an important supplier of rough diamonds to the international market and is a large corner stone of the South African economy.

g) **PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED.**

The environmental authorisation is required for a minimum 4 years & maximum period of 5 years.

h) **DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED PREFERRED SITE.**

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

Each of the phases are dependent on the results of the preceding phase. The location and extent of soil sampling, and possible diamond bulk sampling can therefore not be determined at this stage. Mapping of the prospecting activities could thus not be undertaken. For the purposes of this report, the overall prospecting area is presented in **Appendix 3**.

i) Details of all alternatives considered.

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

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

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

As discussed in the previous section, based on the project locality and other diamond mines in the area, the possibility to encounter high volumes of Prospecting Right of Diamonds Alluvial (DA), Diamonds in Kimberlite (DK), Diamonds General (D) & Diamonds (DIA) on the remaining extent of the farm Kameeldrift 285, Registration Division: Hopetown; Northern Cape Province is anticipated.

(b) The type of activity to be undertaken

In terms of the technologies proposed, these have been chosen based on long term success in terms of their prospecting history. The prospecting activities proposed in the Prospecting Work Programme is dependent on the preceding phase, therefore no alternatives are indicated, but rather a phased approach of trusted prospecting techniques.

(c) The design or layout of the activity

The location of the activities will be determined based on the location of the prospecting activities, which will only be determined during phase 1 of the Prospecting Work Programme (see **Appendix 8** for the Programme).

The proposed area consists of agricultural fields, low schrubland, grassland some open bushes & seasonal streams. Where applicable a Water Use License Application will be launched for conducting mining operations. All infrastructure will be temporary and/or mobile.

(d) The technology to be used in the activity

In terms of the technologies proposed, these have been chosen based on the long term success of their prospecting history. The prospecting activities proposed in the Prospecting Works Programme (**Appendix 8**) is dependent on the preceding phase as previously discussed, therefore no alternatives are indicated, but rather a phased approach of trusted prospecting techniques.

The preferred technology for the proposed mining activity, will be to remove the diamond bearing gravel with an excavator, depositing it in the 10 – 18 feet rotary pan(s) to be washed and sorted. Please find the Prospecting Work Programme attached as **Appendix 8**.

Pros & Cons of the alternative **Dense Media Separation (DMS)**

Advantages	**Disadvantages**
DMS plants is used mostly for kimberlite deposits	10 times more expensive than Rotary pan
	Water consumption is high
	Operating costs are expensive

In a Dense Media Separation (DMS) plant, powdered ferrosilicon (an alloy of iron and silicone) is suspended in water to form a fluid near the density of diamond (3.52 g/cm3), to which the diamond bearing material is added to begin the separation process of the heavier minerals from the lighter material. Additional separation of the denser material occurs by centrifuge in "cyclones" that swirl the mixture at low and high speeds, forcing the diamonds and other dense minerals to the walls and then out the bottom of the cyclone. Wastewater rises at the center of the cyclones and is sucked out and screened to remove waste particles. The DMS process results in a concentrate that generally weighs less than one percent of the original material fed into the plant at the beginning of the process.

Pros & Cons of the alternative **Rotary Pan Plants**

Advantages	**Disadvantages**
More cost effective	The industry perception that Rotary Pan Plants yield poorer diamond recoveries
Readily available	
Generate more work opportunities	
Consume less water	
Rotary Pan Plants are most often used when mining alluvial deposits	

In a Rotary Pan plant, crushed ore, when mining kimberlite, or alluvial gravel and soil is mixed with water to create a liquid slurry called "puddle" which has a density in the 1.3 to 1.5 g/cm3 range. The mix is stirred in the pan by angled rotating "teeth". The heavier minerals, or "concentrate", settle to the bottom and are pushed toward an extraction point, while lighter waste remains suspended and overflows out of the centre of the pan as a separate stream of material. The concentrate, representing just a small percentage of the original kimberlite ore or alluvial gravels, is drawn off for final recovery of the diamonds.

Both methods are in actual fact used for bulk material reduction and require a further process for the final diamond recovery however, for this project the Rotary Pan will be used.

(e) The operational aspects of the activity

Due to the nature of the prospecting activities, no permanent services in terms of water supply, electricity, or sewerage services are required.

The activities will commence with a site investigation and desktop studies, which will comprise of non-invasive techniques. This manner of survey will ensure that the applicant can clearly delineate areas which are suitable for further investigation and no unnecessary surface disturbance will be undertaken.

Based on the outcome of the desktop studies and site investigation, pits will be dug by an excavator for the purpouse of soil sampling. If gravel is found, the applicant wil determine the the composition and quality of the gravel.
The applicant will proceed with this way of prospecting by means of the open cast/trenching method, simultaneously or after pitting depending on the information obtained from the earlier work done. The trenches will be dug to remove and wash the gravel. It will be washed by 2 x 16 feet washing pan to determine diamond proceeds per 100 tons of gravel.

All data will be consolidated and processed to determine the diamond bearing resources on the property. This will be a continuous process throughout the prospecting work programme.

No feasible alternatives to the pitting and trenching method currently exists. Impacts associated with the prospecting operations will be managed through the implementation of a management plan, developed as part of the application for authorisation.

(f) The option of not implementing the activity

The option of not approving the activities will result in a significat loss of valuable information regarding the mineral status (in terms of diamonds) present on these properties. In addition to this, should economical reserves be present and the applicant does not have the opportunity to prospect, the opportunity to utalize these reserves for future phases will be lost.

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.

1. **Advertisement and Notices**

Newspaper advertisement

An advertisement was placed in English in the local newspaper (**NoordkaapBulletin**) on the **14th of January 2021** advertisement (see **Appendix 6**) notifying the public of the EIA process and requesting Interested and Affected Parties (I&APs) to register with, and submit their comments to Milnex CC. I&APs were given the opportunity to raise comments within 30 days of the advertisement.

Site notices

Site notices were placed (as anticipated on the coordinates below) on site in English to inform surrounding communities and immediately adjacent landowners of the proposed development. I&APs will be given the opportunity to raise comments. Photographic evidence of the site notices will be included in **Appendix 6**.

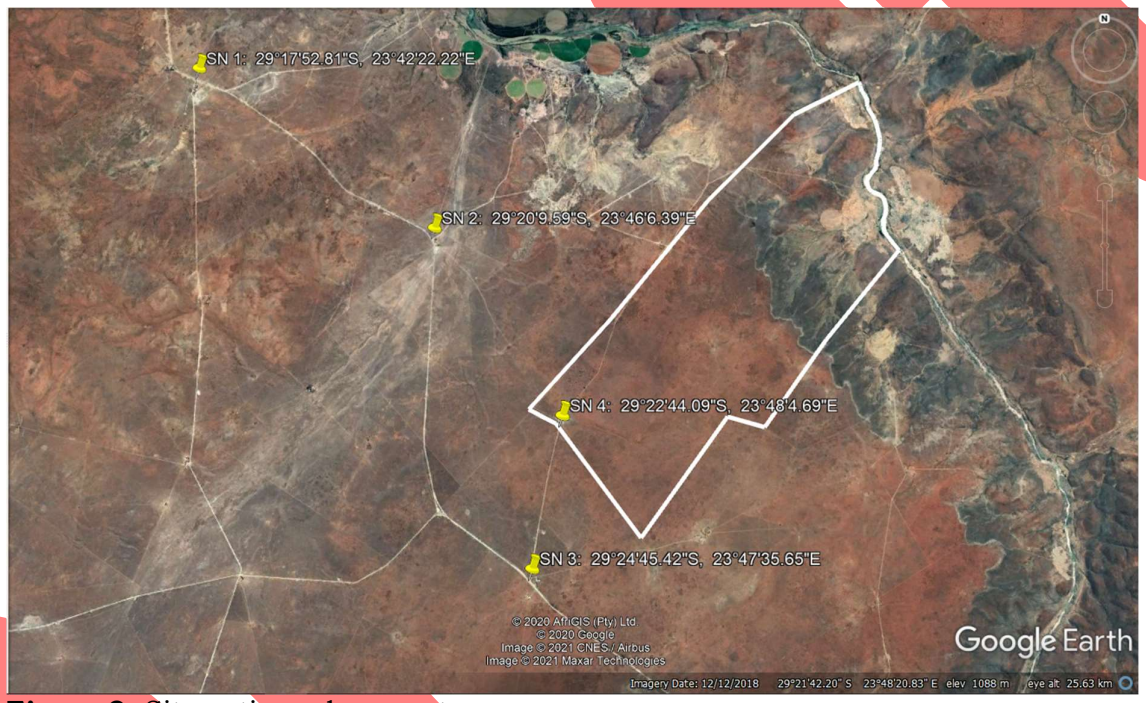

Figure 3: Site notices placement

Direct notification and circulation of Scoping Report to identified I&APs, surrounding land owners and occupiers

Identified I&APs, including key stakeholders representing various sectors, are directly informed of the proposed development and the availability of the Scoping Report via registered post on **10 December 2020** and were requested to submit comments by **31 January 2021.** A copy of the report is also available at the Milnex offices in Schweizer-Reneke, 4 Botha Street, Schweizer-Reneke and Potchefstroom (Waterberry Street, Waterberry Square, 1st floor, Office 5B, Potchefstroom), between 7:30AM and 5PM, Monday to Thursday & between 7:30AM and 4PM on a Friday. For a complete list of stakeholder details and for proof of registered post see **Appendix 6**. The consultees included:

Table 1: List of Stakeholders, Landowners, & surrounding land owners

Stakeholders	Land owners	Surrounding Land owner
Northern Cape Department of Environmental Affairs and Nature Conservation (DENC)	J D Familie Trust (Kameeldrift 285)	Klipfontein Trust
DMR Department of Mineral Resources and Energy, Northern Cape. (DMRE)		Hendrik Van Der Merwe Le Roux
Department of Water & Sanitation (DHSWS) Upper Orange Water management Area		Maria Magdeline Coetzee
NC Department of Agriculture, Forestry and Fisheries (DAFF)		Wynand Lodewikus Nel
Northern Cape Department of Agriculture, Land Reform & Rural Development (DALRRD)		Leopold Ignatius Ferreira
Department of Roads and Public Works (DRPW)		
Department of Economic Development and Tourism		
Department of Cooperative Governance, Human Settlements and Traditional Affairs		
Pixley Ka Seme District Municipality		
Thembelihle Local Municipality		
Thembelihle Local Municipality WARD 2 councillor		
WESSA (National Office)		

Meetings:

NB: The interested and affected parties were given an opportunity to register by circulating, emails, registered letters, press advert and letters.

A note was included that due to COVID-19, any meetings will be conducted virtually via Zoom or Microsoft Teams upon request by the I&APs.

Issues Raised by Interested and Affected Parties

Comments received during this period are attached as comment & response report as well as populated in the table of summary of issues raised.

i. Summary of issues raised by I&APs
(Complete the table summarising comments and issues raised, and reaction to those responses)

INTERESTED AND AFFECTED PARTIES LIST THE NAMES OF PERSONS CONSULTED IN THIS COLUMN, AND MARK WITH AN X WHERE THOSE WHO MUST BE CONSULTED WERE IN FACT CONSULTED.		ISSUES RAISED	EAPS RESPONSE TO ISSUES AS MANDATED BY THE APPLICANT	SECTION AND PARAGRAPH REFERENCE IN THIS REPORT WHERE THE ISSUE AND OR RESPONSE WHERE INCORPORATED
ORGANISATION	**CONTACT PERSON**			
LAND OWNER				
KAMEELDRIFT 285	Leopold Ignatius Ferreira	No Comments Received Yet		
SURROUNDING LAND OWNERS				
KLIPFONTEIN TRUST (KLIPFONTEIN RE/38 & ANNEX KLIPFONTEIN RE/48)	KLIPFONTEIN TRUST Wilna Du Raan	No Comments Received Yet		
UITKOMST ANNEX RE/284 and SLYPSTEEN 3/41 & 4/41	Hendrik Van Der Merwe Le Roux	No Comments Received Yet		
SLYPSTEEN RE/41	Maria Magdeline Coetzee	No Comments Received Yet		
ETTRICK RE/182 & 1/182	Wynand Lodewikus Nel	No Comments Received Yet		
LOT 271 RE/39	J D FERREIRA FAMILIE TRUST Leopold Ignatius Ferreire	No Comments Received yet		
THE MUNICIPALITY IN WHICH JURISDICTION THE DEVELOPMENT IS LOCATED				
THEMBELIHLE LOCAL MUNICIPALITY	Municipal Manager: To Whom It May Concern	No comments received yet		

MUNICIPAL COUNCILOR OF THE WARD IN WHICH THE SITE IS LOCATED				
THEMBELIHLE LOCAL MUNICIPALITY	Ward 2 Councillor	No comments received yet		
ORGANS OF STATE HAVING JURISDICTION				
NORTHERN CAPE DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND NATURE CONSERVATION (DENC)	Head of Department: Mr M Ndzilili	No comments received yet		
DMR DEPARTMENT OF MINERAL RESOURCES AND ENERGY, NORTHERN CAPE. (DMRE)	DDG- Mineral Regulation: Adv Mmadikeledi Malebe	No Comments receive yet		
DEPARTMENT OF WATER AND SANITATION (DHSWS) UPPER ORANGE WATER MANAGEMENT AREA	To Whom It May Concern	No comments received yet		
NC DEPARTMENT OF AGRICULUTRE, FORESTRY ABD FISHERIES (DAFF)	Admin Clerk National Office: T Buthelezi	No comments received yet		
NORTHERN CAPE DEPARTMENT OF AGRICULTURE, LNAD REFORM & RURAL DEVELOPMENT (DALRRD)	Head of Department Mr. V Mothibi	No comments received yet		
DEPARTMENT OF ROADS AND PUBLIC WORKS	Head of Department: Mr. Kholelike Nogwili	No comments received yet		
DEPARTMENT OF ECONOMIC DEVELOPMENT AND TOURISM	Head of Department: Mr. G Mabilo	No comments received yet		
DEPARTMENT OF COOPERATIVE GOVERNANCE, HUMAN SETTLEMENTS AND TRADITIONAL AFFAIRS	Head of Department: Mr B. Lenkoe	No comments received yet		
	Mr Andile Mbolekwa	Email received on 22/01/2021 states the following: I am unable to open the report on dropbox and therefore am unable to make meaningful comments on the report. However it is advisable that you should take	Email sent on 25/01/2021 states the following: Thank you for your comments. When preparing the draft EIR & EMPr, all will be taken into consideration. I have attached the draft scoping	

		all planning documents, provisions of the municipality into consideration when dealing with your application • Planning requirements and land use requirements in the SDF, IDP	report for your perusal. You have been registered as an I&AP and will receive the draft documents going forward.	
OTHER–				
PIXLEY KA SEME DISTRICT MUNICIPALITY	Municipal Manager: Mr Rodney Pieterse	No comments received yet		
WESSA (NATIONAL OFFICE)	Graham Avery	No comments received yet		

ii. The Environmental attributes associated with the sites

(1) Baseline Environment

The baseline environment is described with specific reference to geotechnical conditions, ecological habitat and landscape features, Soil, land capability and agricultural potential, climate and the visual landscape.

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

Geology and Soils

The farm geology of the farm Kameeldrift 285 consist mainly of a veneer of Dwyka derived rubble situated on Dwyka shale. The alluvial gravels have been deposited on bedrock of Dwyka shale. The Dwyka deposits are underlain by Ventersdorp Lava. The deposit formed as an erosion scour at the contact between Ventersdorp lava and Dwyka shale. Areas surrounding this feature is covered by Rooikoppie gravels. There are also higher elevation areas on the farm with elevations similar to alluvial terraces that are being mined on adjacent farms. These areas must be targeted during future exploration activities.
Surface drainage in the area is affected through the Orange river. Although alluvium is largely restricted to the river, the river has resulted in the creation of a large floodplain immediately to the west, which comprises alluvium that is largely covered by windblown sand. Of additional interest in this area are the presence of alluvial gravels some of which are covered by alluvium and windblown sand. Patches of these gravels outcrop immediately adjacent to the Orange river, however, they are also found as higher level terrace deposits, previously deposited by the Paleo-Orange river.

According to the DEA screening tool, there are wind & solar developments with an approved EA within 30km

No	EIA Ref number	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2682	Solar PV	Approved	11.8
2	12/12/20/2512	Solar PV	Approved	24.4
3	14/12/16/3/3/2/283	Solar PV	Approved	25.3
4	14/12/16/3/3/1/825	Solar PV	Approved	29

Results of the environmental sensitivity of the proposed area (Screening tool)

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification.

Agriculture Theme Sensitivity

According to the screening tool, the application area falls within a medium agricultural sensitive area. Figure 4 below show that the area comprises of low & medium sensitivity.

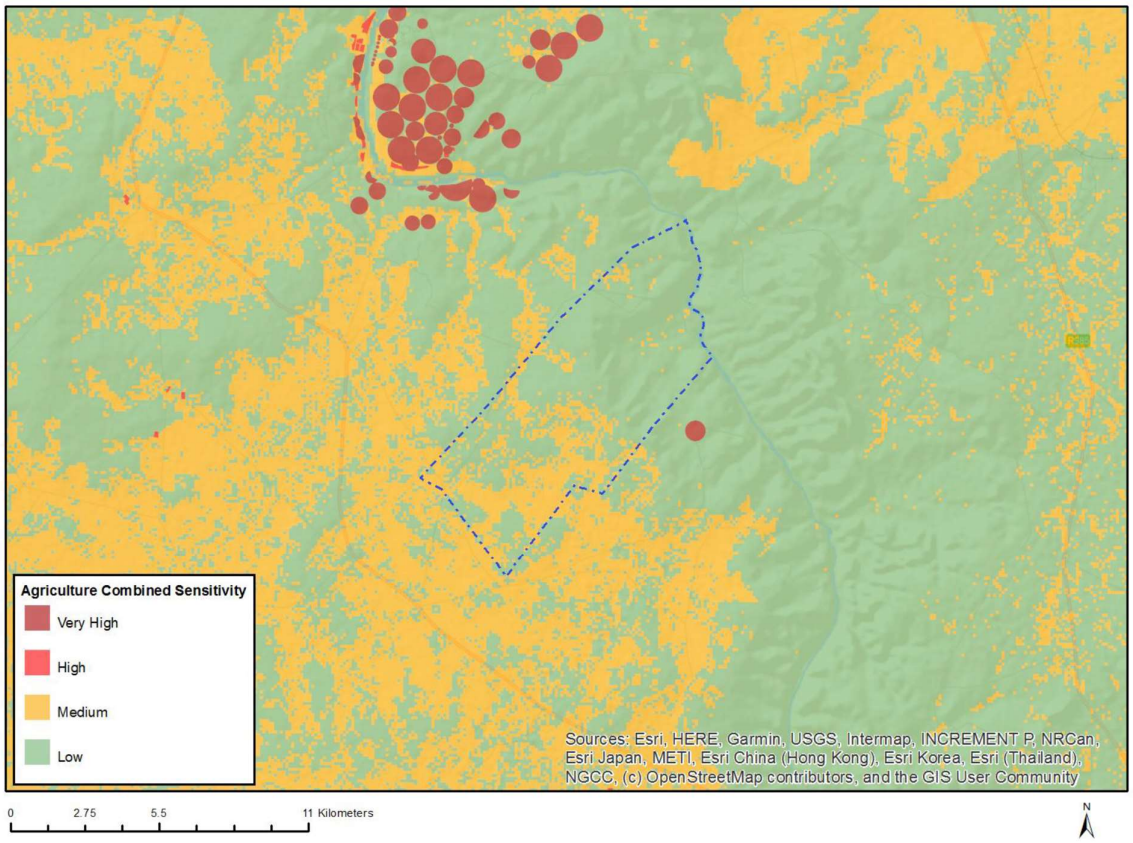

Figure 4: Agricultural sensitivity map

Agricultural / land capability

Land capability is the combination of soil suitability and climate factors. The site and surrounds has a land capability classification, on the 8 category scale, of Class 7 (refer to Land capability map attached as Appendix 5.

Refer to Land capability map attached as **Appendix 5 & figure 5 below.**

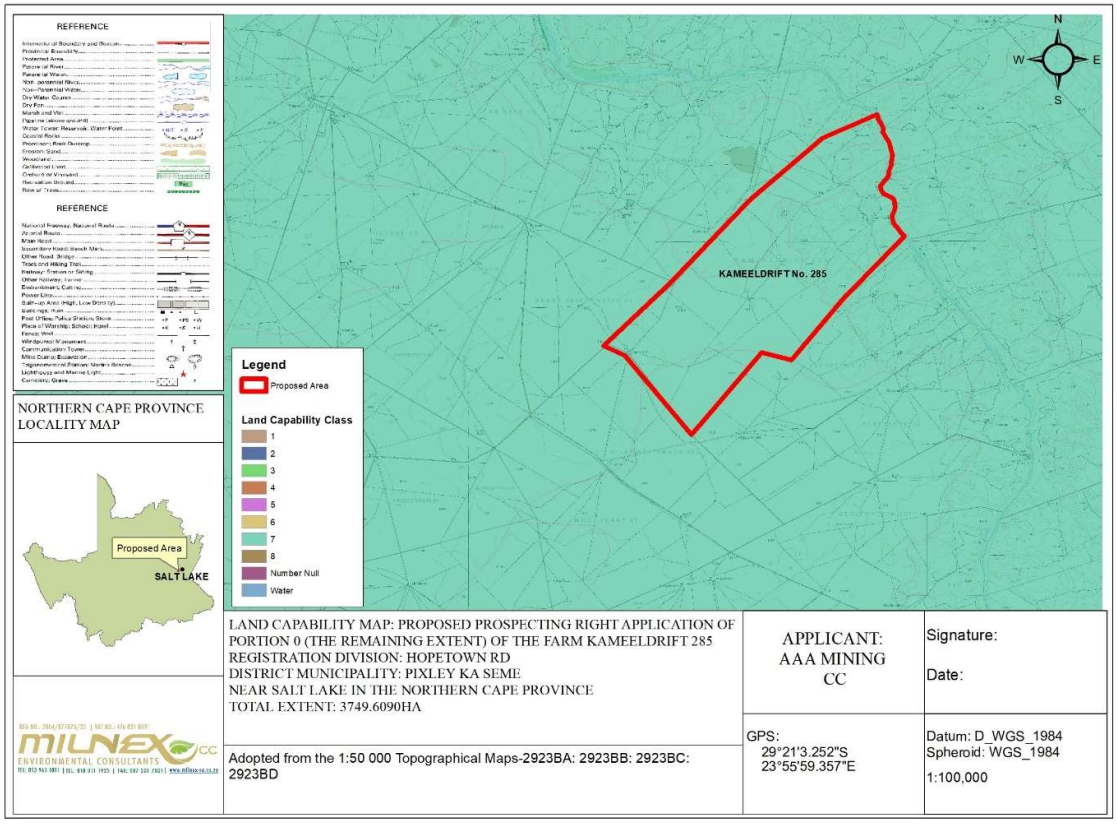

Figure 5: Land capability

Aquatic Biodiversity Theme Sensitivity

The Aquatic Biodiversity Theme Sensitivity of the area is mostly of low significance and some small parts of the application area have a very high Aquatic Biodiversity Sensitivity and depicted on Figure 6 below

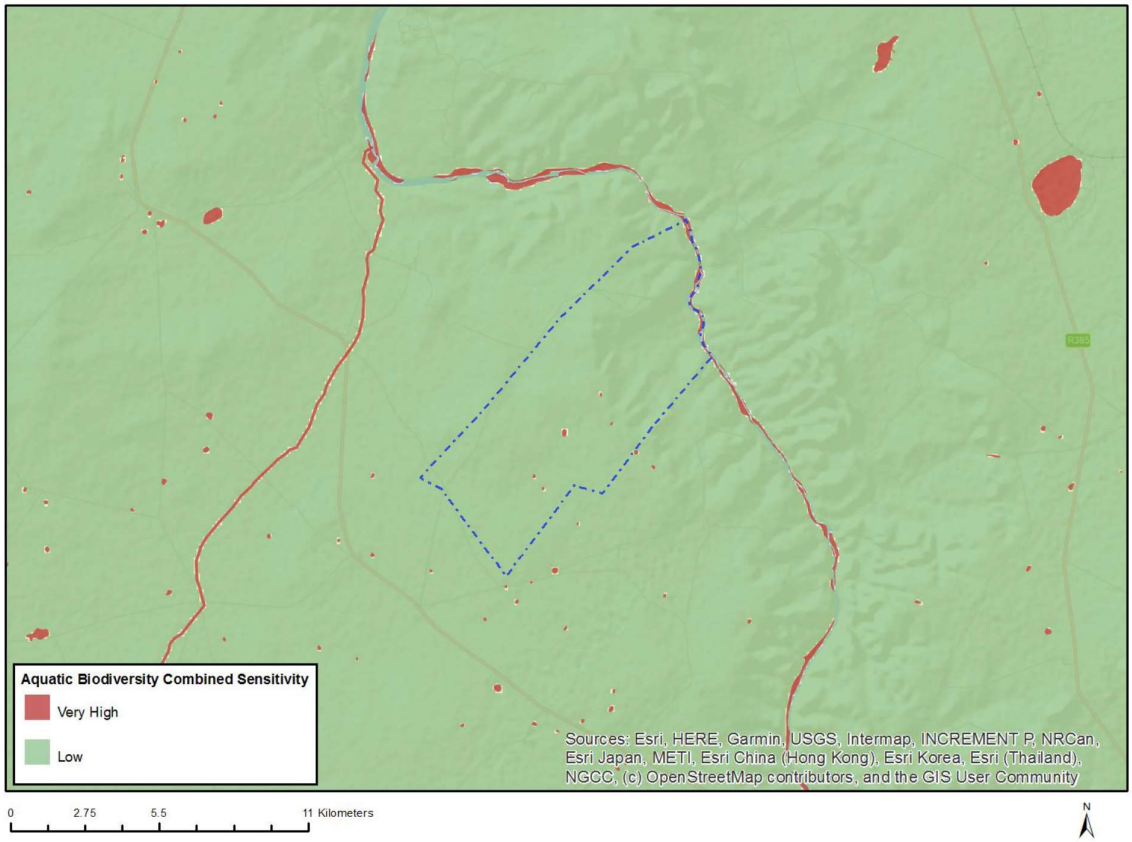

Figure 6: Aquatic Biodiversity Theme Sensitivity

Terrestrial Biodiversity Theme Sensitivity

According to the screening tool as implemented by DEA and attached as appendix 10, the application area is within a high Terrestrial Biodiversity Theme Sensitivity (See Figure 7). From the ArcGIS map, some of the areas are classified as CBA 1 & 2 areas together with an ESA.

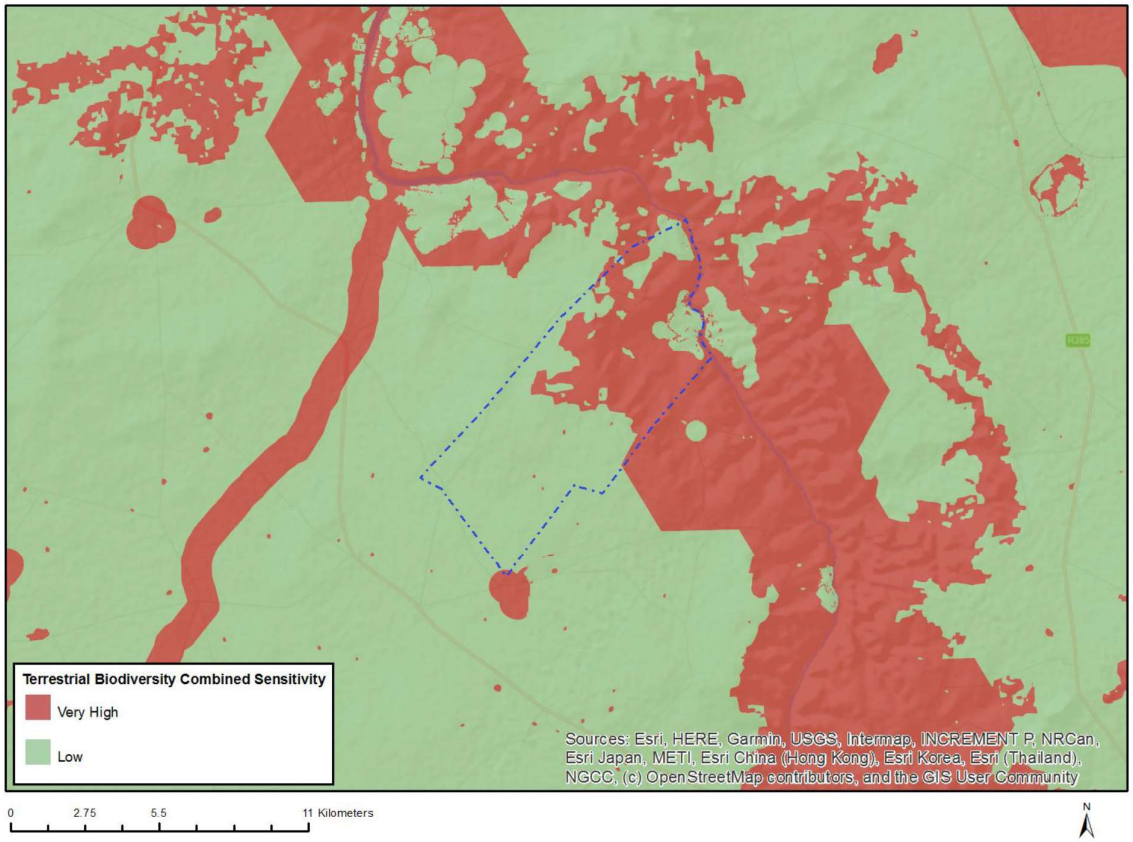

Figure 7: Terrestrial Biodiversity Theme Sensitivity

Description of the socio-economic environment

- Socio-economic conditions

Geography, History & Economy

Thembelihle Local Municipality is part of Pixley Ka Seme District Municipality.

Cat B: NC076

Description: The Thembelihle Local Municipality is a Category B municipality situated in the heart of the Karoo in the Pixley Ka Seme District of the Northern Cape Province. It is one of the smaller municipalities of the eight that make up the district, accounting for only 8% of its geographical area.
This mostly agricultural landscape is rich in natural resources. The first diamond was discovered in Hopetown and a great part of the Anglo-Boer War was fought in these parts.

Area: 8 023km²

Cities/Towns: Hopetown, Strydenburg

Main Economic Sectors: Agriculture, alluvial mining

- Cultural and heritage aspects

Special attention will be given to the identification of possible cultural or heritage resources on site since the screening tool anticipated that the area may have some high to medium archaeological & cultural sensitivity as depicted by figure 8 below.

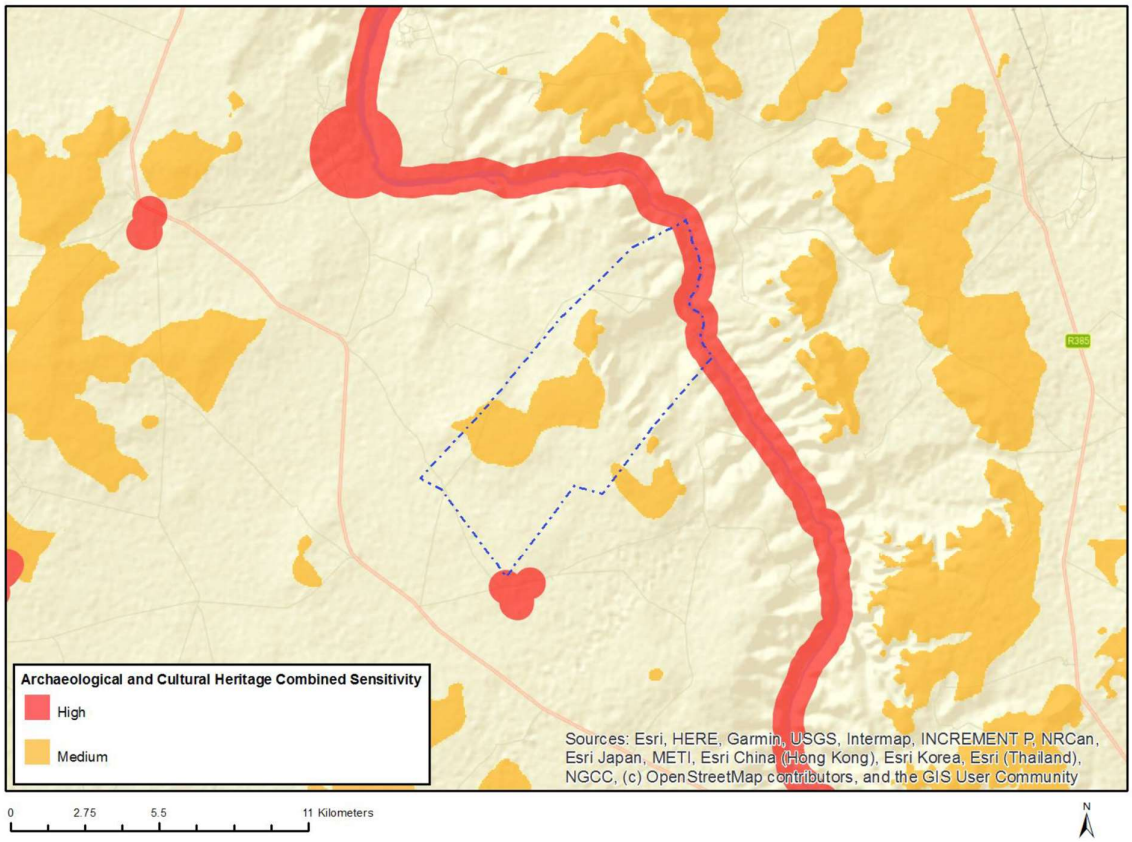

Figure 8: Cultural and heritage aspects

It should be noted that heritage resources including archaeological and paleontological sites over 100 years old, graves older than 60 years, structure older than 60 years are protected by the National Heritage Resources Act no 25 of 1999. Therefore if such resources are found during the prospecting or development activities, they shall not be disturbed without a permit from the relevant heritage resource Authority, which means that before such sites are disturbed by development it is incumbent on the developer to ensure that a heritage impact assessment is done and the Provincial Heritage Resources Authority and SAHRA must be contacted immediately and work will stop.

For Palaeontology aspects, the area was indicated as being high & medium by the DEA screening tool

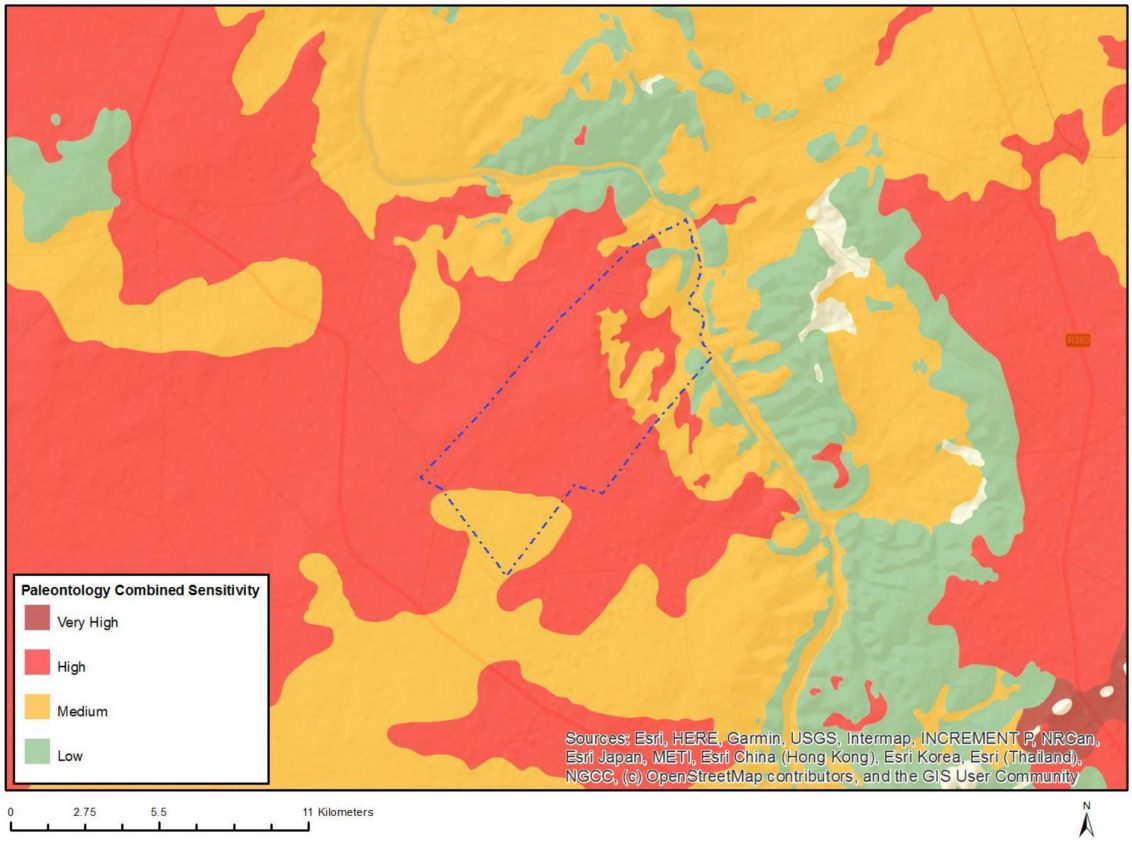

Figure 9: Palaeontology aspects

(b) Description of the current land uses.

Below is the land cover of the farm which depicts that the area is dominated by low schrubland and some grassland. Other land cover consists of bare non vegetated areas.

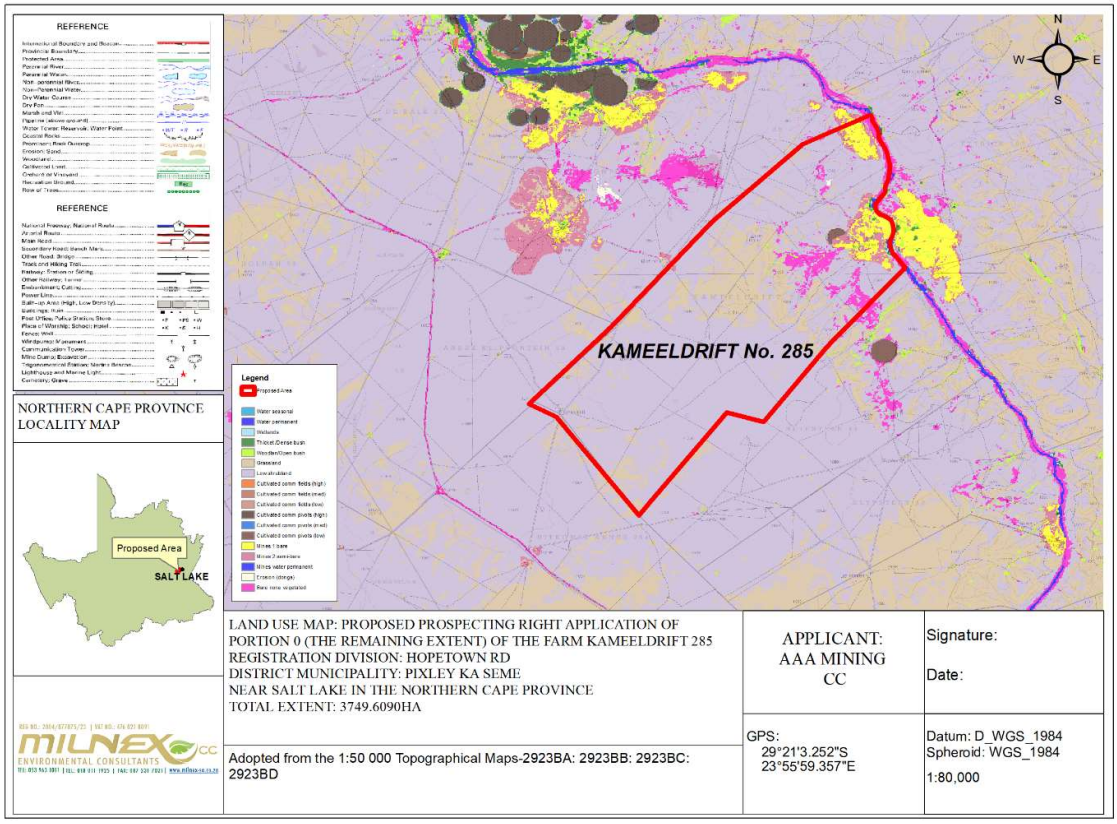

Figure 9: Land cover

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

The proposed area's boundary is next to the Orange River, and consists mainly of Low Schrubland, Grassland, open bush Agricultural fields & seasonal streams. Where applicable a Water Use License Application will be launched for conducting mining operations. All infrastructure will be temporary and/or mobile.

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

A Locality map is attached in **Appendix 3**.

iii. 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

- Impacts during construction phase:
  - Impacts on the fauna and flora
  - Impacts on the soil
  - Impacts associated with the geology of the site
  - Impacts on existing services infrastructure

- Impacts on surface water (wetlands/pans)
- Temporary employment and other economic benefits
- Impacts on heritage resources

➢ Impacts during the operational phase:
- Impacts on the soil
- Impacts associated with the geology of the site
- Impacts on surface water (wetlands/pans)
- Increase in employment and other economic benefits
- Visual impacts
- Generation of income to the Local Community
- Pressure on existing services infrastructure and water sources.

➢ Impacts during the decommissioning / mine closure phase:
- Loss of permanent employment & the creation of temporary employment

iv. Methodology used in determining the significance of environmental impacts

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

Scoping methodology

The contents and methodology of the scoping report aims to provide, as far as possible, a user-friendly analysis of information to allow for easy interpretation.

➢ Checklist: The checklist consists of a list of structured questions related to the environmental parameters and specific human actions. They assist in ordering thinking, data collection, presentation and alert against the omission of possible impacts.

➢ Matrix: The matrix analysis provides a holistic indication of the relationship and interaction between the various activities, development phases and the impact thereof on the environment. The method aims at providing a first order cause and effect relationship between the environment and the proposed activity. The matrix is designed to indicate the relationship between the different stressors and receptors which leads to specific impacts. The matrix also indicates the specialist studies, which will be submitted as part of the Environmental Impact Report in order to address the potentially most significant impacts.

Checklist analysis

The table below provides a checklist, which is designed to stimulate thought regarding possible consequences of specific actions and so assist scoping of key issues. It consists of a list of structured questions related to the environmental parameters and specific human actions. They assist in ordering thinking, data collection, presentation and alert against the omission of possible impacts. The table highlights certain issues, which are further analysed in matrix format.

Table: Environmental checklist

QUESTION	YES	NO	Un-sure	Description

1. Are any of the following located on the site earmarked for the development?				
I. A river, stream, dam or wetland	X			The proposed area is directly adjacent to the Orange Rivier and is characterized by a few streams and drainage lines
II. A conservation or open space area			X	
III. An area that is of cultural importance			X	
IV. Site of geological significance		X		
V. Areas of outstanding natural beauty		X		Land capability 7
VI. Highly productive agricultural land		X		2 cultivated lands are present on the property
VII. Floodplain	X			None
VIII. Indigenous forest			X	
IX. Grass land		X		No grassland is anticipated as the dominating vegetation units comprise of Northern Upper Karoo, Kimberley Thornveld, Vaalbos Rocky schrubland & Upper Gariep Alluvial Vegetation.
X. Bird nesting sites			X	
XI. Red data species			X	
XII. Tourist resort		X		
2. Will the project potentially result in potential?				
I. Removal of people		X		None.
II. Visual Impacts	X			The visual impact will be managed;
III. Noise pollution		X		The noise impact is unlikely to be significant.
IV. Construction of an access road			X	Should access roads be constructed is shall solely be constructed for the purpose of the project and shall be suitably rehabilitated after decommissioning of the of the prospecting activities
V. Risk to human or valuable ecosystems due to explosion/fire/ discharge of waste into water or air.		X		None.
VI. Accumulation of large workforce (>50 manual workers) into the site.		X		Approximately 15 employment opportunities will be created during the construction and operational phase of the project.

VII. Utilisation of significant volumes of local raw materials such as water, wood etc.	X			The application area will use 2 x 16 feet washing pans will be used, the amount of water for both pans will be 34 000 L/hour from which 30% is re-used.
VIII. Job creation	X			Some employment opportunities will be created during the construction and operational phase of the project.
IX. Traffic generation		X		None.
X. Soil erosion		X		Only areas earmarked for mining will be cleared. Mining will be phased and the topsoil stockpiled separately. Concurrent rehabilitation will take place. The soil also has a low erosion potential.
XI. Installation of additional bulk telecommunication transmission lines or facilities		X		None.
3. Is the proposed project located near the following?				
I. A river, stream, dam or wetland	X			Orange river
II. A conservation or open space area			X	
III. An area that is of cultural importance			X	
IV. A site of geological significance			X	
V. An area of outstanding natural beauty			X	Yes
VI. Highly productive agricultural land	X			Yes
VII. A tourist resort			X	
VIII. A formal or informal settlement		X		

5.1 Matrix analysis

The matrix describes the relevant listed activities, the aspects of the development that will apply to the specific listed activity, a description of the environmental issues and potential impacts, and the significance and magnitude of the potential impacts. The matrix also highlights areas of particular concern for more in depth assessment during the EIA process. Each cell is evaluated individually in terms of the nature of the impact, duration and its significance – should no mitigation measures be applied. This is important since many impacts would not be considered insignificant if proper mitigation measures were implemented. The matrix also provides an indication if mitigation measures are available.

In order to conceptualise the different impacts the matrix specify the following:

- **Stressor**: Indicates the aspect of the proposed activity, which initiates and cause impacts on elements of the environment.
- **Receptor**: Highlights the recipient and most important components of the environment affected by the stressor.

- **Impacts**: Indicates the net result of the cause-effect between the stressor and receptor.
- **Mitigation**: Impacts need to be mitigated to minimise the effect on the environment.

MATRIX ANALYSIS

LISTED ACTIVITY (The Stressor)	ASPECTS OF THE DEVELOPMENT /ACTIVITY	POTENTIAL IMPACTS			SIGNIFICANCE AND MAGNITUDE OF POTENTIAL IMPACTS			MITIGATION OF POTENTIAL IMPACTS	SPECIALIST STUDIES / INFORMATION
			Receptors	Impact description	Minor	Major	Duration	Possible Mitigation	
CONSTRUCTION PHASE									
Listing Notice GNR 325, Activity 15: *"The clearance of an area of 20 hectares or more, of indigenous vegetation."*	<u>Site clearing and preparation</u> Areas earmarked for prospecting will need to be cleared, topsoil will be stockpiled separately.	BIOPHYSICAL ENVIRONMENT	Fauna & Flora	• Loss or fragmentation of indigenous natural vegetation. • Loss of sensitive species. • Loss or fragmentation of habitats.		-	L	Yes	-
			Air	• Air pollution due to the increase of traffic of construction vehicles.	-		M	Yes	-
			Soil	• Soil degradation, including erosion. • Loss of topsoil. • Disturbance of soils and existing land use (soil compaction).		-	M	Yes	-
			Geology	• It is not foreseen that the removal of indigenous vegetation will impact on the geology or vice versa.	-		S	Yes	-
			Existing services infrastructure	• Generation of waste that need to be accommodated at a licensed landfill site. • Generation of sewage that need to be accommodated by the local sewage plant.		-	S	Yes	-
			Ground water	• Pollution due to construction vehicles leaking oil/diesel	-		S	Yes	-
			Surface water	• Increase in storm water run-off. • Pollution of water sources due to soil erosion. • Destruction of watercourses (pans/dams/streams).		-	S	Yes	-
		SOCIAL/ECONOMIC ENVIRONMENT	Local unemployment rate	• Job creation. • Business opportunities. • Skills development.		+	S	Yes	-
			Visual landscape	• Potential visual impact on residents of farmsteads in close proximity to proposed facility.	-		M	Yes	-
			Traffic volumes	• Increase in construction vehicles.	-		S	Yes	-
			Health & Safety	• Air/dust pollution. • Road safety. • Increased risk of veld fires.		-	S	Yes	-
			Noise levels	• The generation of noise as a result of construction vehicles, the use of machinery such as drills, excavators, rotary pans, dumper trucks and people working on the site.	-		M	Yes	-

			Tourism industry	• Since there are no tourism facilities in close proximity to the site, the construction activities will not have an impact on tourism in the area.	N/A	N/A	N/A	Yes	-
			Heritage resources	• Removal or destruction of archaeological and/or paleontological sites. • Removal or destruction of buildings, structures, places and equipment of cultural significance. • Removal or destruction of graves, cemeteries and burial grounds.	-		S	Yes	-
Listing Notice GNR 325, Activity 19: "The removal and disposal of minerals contemplated in terms of section 20 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including— **Listing Notice GNR 325, Activity 20**: "Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including—	<u>Site clearing and preparation</u> Areas earmarked for prospecting will need to be cleared, topsoil will be stockpiled separately. This will inevitably result in the removal of indigenous vegetation located on the site.	BIOPHYSICAL ENVIRONMENT	Fauna & Flora	• Loss or fragmentation of indigenous natural vegetation. • Loss of sensitive species. • Loss or fragmentation of habitats.		-	L	Yes	-
			Air quality	• Air pollution due to the increase of traffic.	-		M	Yes	-
			Soil	• Soil degradation, including erosion. • Disturbance of soils and existing land use (soil compaction). • Loss of agricultural potential (low significance relative to agricultural potential of the site).		-	M	Yes	-
			Geology	• It is not foreseen that the removal of indigenous vegetation will impact on the geology or vice versa.	N/A	N/A	N/A	N/A	-
			Existing services infrastructure	• Generation of waste that need to be accommodated at a licensed landfill site. • Generation of sewage that need to be accommodated by the local sewage plant.	-		S	Yes	-
			Ground water	• Pollution due to construction vehicles leaking oil/diesel			S	Yes	-
			Surface water	• Increase in storm water run-off. • Pollution of water sources due to soil erosion. • Destruction of watercourses (pans/dams/streams).	-		M	Yes	-
		SOCIAL/ECONOMIC ENVIRONMENT	Local unemployment rate	• Job creation. • Skills development.		+	S	N/A	-
			Visual landscape	• Potential visual impact on residents of farmsteads in close proximity to proposed facility	-		M	Yes	-
			Traffic volumes	• Increase in construction vehicles.	-		S	Yes	-
			Health & Safety	• Air/dust pollution. • Road safety.	-		S	Yes	-

			Noise levels	• The generation of noise as a result of construction vehicles, and people working on the site.	-		M	Yes	-
			Tourism industry	• Since there are no tourism facilities in close proximity to the site, the construction activities will not have an impact on tourism in the area.	N/A	N/A	N/A	N/A	-
			Heritage resources	• Removal or destruction of archaeological and/or paleontological sites. • Removal or destruction of buildings, structures, places and equipment of cultural significance. • Removal or destruction of graves, cemeteries and burial grounds.	N/A	N/A	N/A	N/A	-
OPERATIONAL PHASE									
Listing Notice GNR 325, Activity 19: "The removal and disposal of minerals contemplated in terms of section 20 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including— (a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource [,]; or (b) [including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)] the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing; 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 in this Notice applies.	The key components of the proposed project are described below: • <u>Supporting Infrastructure</u> - A control facility with basic services such as water and electricity will be constructed on the site and will have an approximate footprint 50m² or less. Other supporting infrastructure includes a site office and workshop area. • <u>Roads</u> – Access will maybe have to be constructed • <u>Fencing</u> - For health, safety and security reasons, the facility will be required to be fenced off from the surrounding farm.	BIOPHYSICAL ENVIRONMENT	Fauna & Flora	• Fragmentation of habitats. • Establishment and spread of declared weeds and alien invader plants (operations).		-	L	Yes	-
			Air quality	• Air pollution due to the mining activity, crusher plant and transport of the gravel to the designated areas.	-		S	Yes	-
			Soil	• Soil degradation, including erosion. • Disturbance of soils and existing land use (soil compaction). • Loss of agricultural potential (low significance relative to agricultural potential of the site).		-	L	Yes	-
			Geology	• Collapsible soil. • Seepage (shallow water table). • Active soil (high soil heave). • Erodible soil. • The presence of undermined ground. • Instability due to soluble rock. • Steep slopes or areas of unstable natural slopes. • Areas subject to seismic activity. • Areas subject to flooding.		-	L	Yes	-
			Existing services infrastructure	• Generation of waste that need to be accommodated at a licensed landfill site. • Generation of sewage that need to be accommodated by the municipal sewerage system and the local sewage plant. • Increased consumption of water. Approximately 17 000 L/hour per pan		-	L	Yes	-
			Ground water	• Leakage of hazardous materials. The machinery on site require oils and fuel to function. Leakage of these oils and fuels can contaminate water supplies.		-	L	Yes	-

			Surface water	• Increase in storm water runoff. The development will potentially result in an increase in storm water run-off that needs to be managed to prevent soil erosion. • Destruction of watercourses (pans/dams/streams). • Leakage of hazardous materials. The machinery on site require oils and fuel to function. Leakage of these oils and fuels can contaminate water supplies.	-		L	Yes	-
		SOCIAL/ECONOMIC ENVIRONMENT	Local unemployment rate	• Job creation. Security guards will be required for 24 hours every day of the week. • Skills development.		+	L	Yes	-
			Visual landscape	• The proposed portion is dominated by schrubland, and as it is not close to any national-, provincial roads or establishments. The visual impact will be of low significance • The prospecting activity will however impact on the current landscape		-	M	Yes	-
			Traffic volumes	• Increase in vehicles collecting gravel for distribution.	-		S	Yes	-
			Health & Safety	• Air/dust pollution. • Road safety.		-	S	Yes	-
			Noise levels	• The proposed development will result in noise pollution during the operational phase.	-	-	L	Yes	-
			Tourism industry	• Since there are no tourism facilities in close proximity to the site, the decommissioning activities will not have an impact on tourism in the area.	N/A	N/A	N/A	N/A	-
			Heritage resources	• It is not foreseen that the proposed activity will impact on heritage resources or vice versa. Should paleontological or archaeological artefacts be found, it will be reported and prospecting will come to a half	N/A	N/A	N/A	N/A	-
DECOMMISSIONING PHASE									
-	Mine closure During the mine closure the Mine and its associated infrastructure will be dismantled. Rehabilitation of biophysical environment The biophysical environment will be rehabilitated.	BIOPHYSICAL ENVIRONMENT	Fauna & Flora	• Re-vegetation of exposed soil surfaces to ensure no erosion in these areas.	+		L	Yes	-
			Air quality	• Air pollution due to the increase of traffic of construction vehicles.	-		S	Yes	-
			Soil	• Backfilling of all voids • Placing of topsoil on backfill	+		L	Yes	-
			Geology	• It is not foreseen that the decommissioning phase will impact on the geology of the site or vice versa.	N/A	N/A	N/A	N/A	-

			Existing services infrastructure	• Generation of waste that need to be accommodated at the local landfill site. • Generation of sewage that need to be accommodated by the municipal sewerage system and the local sewage plant. • Increase in construction vehicles.	-		S	Yes	-
			Ground water	• Pollution due to construction vehicles.	-		S	Yes	-
			Surface water	• Increase in storm water run-off. • Pollution of water sources due to soil erosion. • Destruction of watercourses (pans/dams/streams).	-		S	Yes	-
		SOCIAL/ECONOMIC ENVIRONMENT	Local unemployment rate	• Loss of employment.		-	L	Yes	-
			Visual landscape	• Potential visual impact on visual receptors in close proximity to proposed facility.	-		S	Yes	-
			Traffic volumes	• Increase in construction vehicles.	-		S	Yes	-
			Health & Safety	• Air/dust pollution. • Road safety. • Increased crime levels. The presence of mine workers on the site may increase security risks associated with an increase in crime levels as a result of influx of people in the rural area.		-	L	Yes	-
			Noise levels	• The generation of noise as a result of construction vehicles, the use of machinery and people working on the site.	-		S	Yes	-
			Tourism industry	• Since there are no tourism facilities in close proximity to the site, the decommissioning activities will not have an impact on tourism in the area.	N/A	N/A	N/A	N/A	-
			Heritage resources	• It is not foreseen that the decommissioning phase will impact on any heritage resources.	N/A	N/A	N/A	N/A	-

(N/A) No impact (+) Positive Impact (-) Negative Impact (S) Short Term (M) Medium Term (L) Long Term

v. 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)

- Increased ambient noise levels resulting from geophysic surveys site fly-overs and increased traffic movement during all prospecting phases.
- Potential water and soil pollution impacts resulting from hydrocarbon spills and soil erosion which may impact on environmental resources utilized by communities, landowners and other stakeholders.
- Potential water and soil pollution impacts resulting from hydrocarbon spills and soil erosion which may impact on ecosystem functioning.
- Increased vehicle activity with in the area resulting in the possible destruction and disturbance of fauna and flora.
- Poor access control to farms which may impact on cattle movement, breeding and grazing practices.
- Access control toportin which may impact on cattle movement, breeding and grazing practices of the surrounding community.
- Influx of persons (job seekers) to site as a result of increased activity and the possible resultant increase in opportunistic crime.
- Potential visual impacts caused by prospecting activities.
- Prospecting will be undertaken by specialist sub - contractors and it is not anticipated that employment opportunities for local and / or regional communities will result from the prospecting activities.
- Negative impacts on the groundwater resources.
- Longterm loss of indigenous vegetation.

vi. 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).

vii. 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)

Refer to superimposed map attached as **Appendix 5**.

viii. Motivation where no alternative sites were considered.

As discussed in the previous section, based on the project locality and other diamond mines in the area, the possibility to encounter high volumes of Prospecting Right of Diamonds Alluvial (DA), Diamonds in Kimberlite (DK), Diamonds General (D) & Diamonds (DIA) on the remaining extent of the farm Kameeldrift 285, Registration Division: Hopetown; Northern Cape Province is anticipated.

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

The site is preferred due to its possibility of having high volumes of Diamond Alluvial (DA) & Diamonds in Kimberlite, Diamonds General (D) & Diamonds (DIA) deposits.

(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.

The option of not approving the activities will result in a significat loss of valuable information regarding the mineral status (in terms of Alluvial (DA) & Diamonds in Kimberlite, Diamonds General (D) & Diamonds (DIA) present on this propery. In addition to this, should economical reserves be present and the applicant does not have the opportunity to prospect, the opportunity to utilize these reserves for future phases will be lost.

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

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

Table: Aspects to be assessed

Aspects / potential impacts	**Description of the aspect**	**Specialist studies / technical information**
Biophysical Environment		
Impacts on the fauna and flora	Refer to Matrix table	EAP assessment (using desktop studies, GIS, site visits and the book written by Mucina and Rutherford(The Vegetation of South Africa, Lesotho and Swaziland)
Impacts on the air quality	Refer to Matrix table	EAP assessment (using desktop studies, GIS using BGIS data, site visits)
Impacts on the soil	Refer to Matrix table	EAP assessment (using desktop studies, GIS using BGIS data, site visits)
Impacts associated with the geology of the site	Refer to Matrix table	EAP assessment (using desktop studies, GIS using BGIS data, site visits)
Impacts on existing services infrastructure	Refer to Matrix table	EAP assessment (using desktop studies, GIS using BGIS data, site visits)

Impacts on ground and surface water	Refer to Matrix table	EAP assessment (using desktop studies, GIS using BGIS data, site visits)
Socio / Economic Environment		
Impacts on local employment rate	Refer to Matrix table	EAP assessment (using desktop studies, IDP's and SDF's)
Impacts on visual landscape	Refer to Matrix table	EAP assessment (using desktop studies, GIS using BGIS data, site visits)
Impacts on traffic volumes	Refer to Matrix table	EAP assessment (using desktop studies, GIS using BGIS data, site visits)
Impacts on health & safety	Refer to Matrix table	EAP assessment (desktop studies, site visits)

iii. Description of aspects to be assessed by specialists

If the authority feels that specialists' studies need to be conducted, such will be corresponded to the applicant.

iv. Proposed method of assessing the environmental aspects including the proposed method of assessing alternatives

The environmental assessment aims to identify the various possible environmental impacts that could results from the proposed activity. Different impacts need to be evaluated in terms of its significance and in doing so highlight the most critical issues to be addressed.

Significance is determined through a synthesis of impact characteristics which include context and intensity of an impact. Context refers to the geographical scale i.e. site, local, national or global whereas intensity is defined by the severity of the impact e.g. the magnitude of deviation from background conditions, the size of the area affected, the duration of the impact and the overall probability of occurrence. Significance is calculated as shown in the table below.

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 total number of points scored for each impact indicates the level of significance of the impact.

v. The proposed method of assessing duration significance

Impact Rating System

Impact assessment must take account of the nature, scale and duration of impacts on the environment whether such impacts are positive or negative. Each impact is also assessed according to the project phases:

- planning
- construction
- operation
- decommissioning

Where necessary, the proposal for mitigation or optimisation of an impact should be detailed. A brief discussion of the impact and the rationale behind the assessment of its significance should also be included. The rating system is applied to the potential impacts on the receiving environment and includes an objective evaluation of the mitigation of the impact. In assessing the significance of each impact the following criteria is used:

Table: The rating system

NATURE		
Include a brief description of the impact of environmental parameter being assessed in the context of the project. This criterion includes a brief written statement of the environmental aspect being impacted upon by a particular action or activity.		
GEOGRAPHICAL EXTENT		
This is defined as the area over which the impact will be experienced.		
1	Site	The impact will only affect the site.
2	Local/district	Will affect the local area or district.
3	Province/region	Will affect the entire province or region.
4	International and National	Will affect the entire country.
PROBABILITY		
This describes the chance of occurrence of an impact.		
1	Unlikely	The chance of the impact occurring is extremely low (Less than a 25% chance of occurrence).
2	Possible	The impact may occur (Between a 25% to 50% chance of occurrence).
3	Probable	The impact will likely occur (Between a 50% to 75% chance of occurrence).
4	Definite	Impact will certainly occur (Greater than a 75% chance of occurrence).
DURATION		
This describes the duration of the impacts. Duration indicates the lifetime of the impact as a result of the proposed activity.		
1	Short term	The impact will either disappear with mitigation or will be mitigated through natural processes in a span shorter than the construction phase (0 – 1 years), or the impact

		will last for the period of a relatively short construction period and a limited recovery time after construction, thereafter it will be entirely negated (0 – 2 years).
2	Medium term	The impact will continue or last for some time after the construction phase but will be mitigated by direct human action or by natural processes thereafter (2 – 10 years).
3	Long term	The impact and its effects will continue or last for the entire operational life of the development, but will be mitigated by direct human action or by natural processes thereafter (10 – 30 years).
4	Permanent	The only class of impact that will be non-transitory. Mitigation either by man or natural process will not occur in such a way or such a time span that the impact can be considered indefinite.
INTENSITY/ MAGNITUDE		
Describes the severity of an impact.		
1	Low	Impact affects the quality, use and integrity of the system/component in a way that is barely perceptible.
2	Medium	Impact alters the quality, use and integrity of the system/component but system/component still continues to function in a moderately modified way and maintains general integrity (some impact on integrity).
3	High	Impact affects the continued viability of the system/ component and the quality, use, integrity and functionality of the system or component is severely impaired and may temporarily cease. High costs of rehabilitation and remediation.
4	Very high	Impact affects the continued viability of the system/component and the quality, use, integrity and functionality of the system or component permanently ceases and is irreversibly impaired. Rehabilitation and remediation often impossible. If possible rehabilitation and remediation often unfeasible due to extremely high costs of rehabilitation and remediation.
REVERSIBILITY		

This describes the degree to which an impact can be successfully reversed upon completion of the proposed activity.		
1	Completely reversible	The impact is reversible with implementation of minor mitigation measures.
2	Partly reversible	The impact is partly reversible but more intense mitigation measures are required.
3	Barely reversible	The impact is unlikely to be reversed even with intense mitigation measures.
4	Irreversible	The impact is irreversible and no mitigation measures exist.
IRREPLACEABLE LOSS OF RESOURCES		
This describes the degree to which resources will be irreplaceably lost as a result of a proposed activity.		
1	No loss of resource	The impact will not result in the loss of any resources.
2	Marginal loss of resource	The impact will result in marginal loss of resources.
3	Significant loss of resources	The impact will result in significant loss of resources.
4	Complete loss of resources	The impact is result in a complete loss of all resources.
CUMULATIVE EFFECT		
This describes the cumulative effect of the impacts. A cumulative impact is an effect which in itself may not be significant but may become significant if added to other existing or potential impacts emanating from other similar or diverse activities as a result of the project activity in question.		
1	Negligible cumulative impact	The impact would result in negligible to no cumulative effects.
2	Low cumulative impact	The impact would result in insignificant cumulative effects.
3	Medium cumulative impact	The impact would result in minor cumulative effects.
4	High cumulative impact	The impact would result in significant cumulative effects
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 calculation of the significance of an impact uses the following formula: (Extent + probability + reversibility + irreplaceability + duration + cumulative effect) x magnitude/intensity.

The summation of the different criteria will produce a non-weighted value. By multiplying this value with the magnitude/intensity, the resultant value acquires a weighted characteristic which can be measured and assigned a significance rating.

Points	Impact significance rating	Description
6 to 28	Negative low impact	The anticipated impact will have negligible negative effects and will require little to no mitigation.
6 to 28	Positive low impact	The anticipated impact will have minor positive effects.
29 to 50	Negative medium impact	The anticipated impact will have moderate negative effects and will require moderate mitigation measures.
29 to 50	Positive medium impact	The anticipated impact will have moderate positive effects.
51 to 73	Negative high impact	The anticipated impact will have significant effects and will require significant mitigation measures to achieve an acceptable level of impact.
51 to 73	Positive high impact	The anticipated impact will have significant positive effects.
74 to 96	Negative very high impact	The anticipated impact will have highly significant effects and are unlikely to be able to be mitigated adequately. These impacts could be considered "fatal flaws".
74 to 96	Positive very high impact	The anticipated impact will have highly significant positive effects.

vi. The stages at which the competent authority will be consulted

Consultation with the competent and commenting authorities will continue throughout the duration of impact assessment phase. The authorities will also comment on whether they deem it necessary to conduct any specialist studies. On-going consultation will include:

- Submission of the Scoping following a 30 day public review period (and consideration of comments received).
- Submission of the EIR following a 30 day public review period (and consideration of comments received).
- Arrangements will be made to discuss the report with the Environmental Officer responsible for the project during the review period.

- An opportunity to visit and inspect the site.

vii. 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).

All registered I&APs and relevant State Departments will be given the opportunity to review the Scoping, EIR and EMP in accordance with Regulation R326. A minimum of 30 days commenting period will be allowed and all stakeholders and I&APs will be given an opportunity to forward their written comments within that period. All issues identified during this public review period will be documented and compiled into a Comments and Response Report to be included as part of the Final EIR to be submitted to the Northern Cape Department of Mineral Resources & Energy

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 records of such consultation will be required in the EIA at a later stage).

The public participation process will be conducted strictly in accordance with Regulations 39-44. The following three categories of variables will take into account when deciding the required level of public participation:

- The scale of anticipated impacts.
- The sensitivity of the affected environment and the degree of controversy of the project.
- The characteristics of the potentially affected parties.

the following public participation mechanisms will be used:

- Newspaper advertisement in local newspaper
- Site notices
- Direct notification of surrounding land owners and occupiers
- Circulation of scoping report
- Circulation of EIR
- Public participation meeting
- Direct notification to all stakeholders of the Environmental Authorisation given

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 letter provided to I&Aps comprises of a activity, extent and location description, including a locality map of the proposed activity and a Dropbox link to the full Scoping report and Appendices. It also indicates where a hard copy of the report can be viewed or if the need arises for a copy of the report a request can be sent to the relevant EAP who will forward a CD containing all the relevan information.

viii. Description of the tasks that will be undertaken during the environmental impact assessment process

Tasks to be undertaken

The following sections describe the tasks that will be undertaken as part of the EIA process.

- Project Description

  Further technical and supporting information will be gathered to provide a more detailed project description. This will include a detailed site layout plan that will be compiled once the low – medium areas of sensitivity have been indicated.

- **Location alternatives**

This alternative asks the question, if there is not, from an environmental perspective, a more suitable location for the proposed activity. It is expected that high volumes of Diamond Alluvial (DA) & Diamonds in Kimberlite, Diamonds General (D) & Diamonds (DIA) have been deposited on this farm and therefore the applicant would like to commence with their prospecting activities.

- **Activity alternatives**

The scoping process also needs to consider if the development of a Diamond Alluvial (DA) & Diamonds in Kimberlite, Diamonds General (D) & Diamonds (DIA) mine would be the most appropriate land use for the particular site.

- **Design and layout alternatives**

Design alternatives were considered throughout the planning and design phase (i.e. where is the diamond bearing gravel located?). In this regard discussions on the design were held between the EAP and the developer. The layout follows the limitations of the site and aspects such as, roads, site offices and workshop area as well as fencing– refer **Appendix 3 & 4**.

- **Operational alternatives**

Due to the nature of the prospecting activities, no permanent services in terms of water supply, electricity, or sewerage services are required.

The activities will commence with a site investigation and desktop studies, which will comprise of non-invasive techniques. This manner of survey will ensure that the applicant can clearly delineate areas which are suitable for further investigation and no unnecessary surface disturbance will be undertaken.

Based on the outcome of the desktop studies and site investigation, pits will be dug by an excavator for the purpouse of soil sampling. If gravel is found, the applicant wil determine the the composition and quality of the gravel.

The SGS geotechnical services will assess the sampled soils for mineralogical composition in order to determine its suitability for industrial use. The appointed geologist shall advise where the samples shall be taken.

- **No-go alternative**

This alternative considers the option of 'do nothing' and maintaining the status quo. The description provided in section H of this report could be considered the baseline conditions (status quo) to persist should the no-go alternative be preferred. The site is currently zoned for agricultural land uses. Should the proposed activity not proceed, the site will remain unchanged and will continue to be used for livestock (cattle) grazing and crop production.

- **Compilation of Environmental Impact Report**

An EIR will be compiled to meet the content requirements as per Appendix 3 of GNR326 of the EIA Regulations (4 December 2014) and will also include a draft Environmental Management Programme containing the aspects contemplated in Appendix 4 of GNR326.

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

ACTIVITY whether listed or not listed. **(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, 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) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)** **E.g. Modify through alternative method. Control through noise control Control through management and monitoring through rehabilitation..**	**POTENTIAL FOR RESIDUAL RISK**
Impacts on the fauna and flora	Surface disturbance	Monitor through rehabilitation	High
Impacts on the air quality	dust	Dust Control	Medium
Impacts on the soil	Erosion	Storm water control	Medium

Impacts associated with the geology of the site	Fly rock	Blasting controls	Low
Impacts on ground and surface water	Ground and surface water contamination	Storm water control, avoidance	High
Impacts on visual landscape	dust	Dust control measures	low
Impacts on traffic volumes	dust	Dust control measures	low

J. AN UNDERTAKING UNDER OATH OR AFFIRMATION BY THE EAP

I, **Percy Sehaole (Pr. Sci. Nat)** (EAP) herewith confirms

A. the correctness of the information provided in the reports ☒

B. the inclusion of comments and inputs from stakeholders and I&APs; ☒

C. the inclusion of inputs and recommendations from the specialist reports where relevant; ☒and

D. the acceptability of the project in relation to the finding of the assessment and level of mitigation proposed; ☒

Sehaole.

Signature of the environmental assessment practitioner:

Milnex CC – Environmental Consultants

Name of company:

16 – 10 – 2019

Date:

K. UNDERTAKING REGARDING LEVEL OF AGREEMENT

I **Percy Sehaole (Pr. Sci. Nat)** 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.

Sehaole.

Signature of the EAP
DATE: 18 – 01 – 2021

L. OTHER INFORMATION REQUIRED BY THE COMPETENT AUTHORITY

i) 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:-

(1) 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 2.19.1** and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

The prospecting will not impact directly on any socio-economic aspects. Indirect socio-economic benefits are expected to be associated with the creation of employment in the Northern Cape.

2) 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 No. 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 2.19.2** and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

Special attention will be given to the identification of possible cultural or heritage resources on site. In terms of the National Heritage Resource Act no 25 of 1999. Heritage resources including archaeological and paleontological sites over 100 years old, graves older than 60 years, structure older than 60 years are protected. They may not be disturbed without a permit from the relevant heritage resource Authority, which means that before such sites are disturbed by development it is incumbent on the developer to ensure that a heritage impact assessment is done and the Provincial Heritage Resources Authority and SAHRA will be contacted immediately and work will stop.

m) 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 detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist. The EAP must attach such motivation as **Appendix 4)**.

From a local perspective on the Remaining Extent of the Farm Kameeldrift 285; Registration Division: Hopetown RD; Northern Cape Province is preferred due to the sites mineral resources. The specific site has been chosen for its mineral resources thus making an alternative site selection null and void. No prospecting should commence without the necessary permits and the impacts on the surrounding area & agricultural land should be kept to the minimum.

-END-