



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

SCOPING REPORT

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

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

NAME OF APPLICANT: **Bitflow Investments 20 (Pty) Ltd.**

TEL NO: **079 547 8481**

FAX NO: -

POSTAL ADDRESS: **PO Box 12672, De Boord, 7613**

PHYSICAL ADDRESS:-

FILE REFERENCE NUMBER SAMRAD: **NW 30/5/1/1/2/ 13614 PR**

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 prospecting right if among others the prospecting "will not result in unacceptable pollution, ecological degradation or damage to the environment".

Unless an Environmental Authorization 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 authorization 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 Authorization 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.

CONTENT OF THE SCOPING REPORT

2. Contact Person and correspondence address

a) Details of:

i) The EAP who prepared the report

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(a)(i)

Name of the Practitioner: DERA Environmental Consultants (Pty) Ltd.

Ms HM (Esna) Erasmus

Tel No.: 018-468 5355

Fax No. : 018-011 3760

E-mail address: dera.office@dera.co.za

ii) Expertise of the EAP

(1) The qualifications of the EAP

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1) (a)(ii)

The EAP, Ms HM (Esna) Erasmus has a National Diploma in Agriculture Resource Utilization and a Baccalaureus Technologiae degree in Agricultural Management. She also completed the subjects for her Master Degree in Environmental Analysis & Management at NWU. See Figure 1 & 2 for copies of his qualifications and CV. She is further registered at the International Association for Impact Assessment South Africa (IAIAsa), *membership No: 6502* and is registered at Environmental Assessment Practitioners Association of South Africa (EAPASA), *registration No: 2020/2909*.



Figure 1: Copy of Qualification

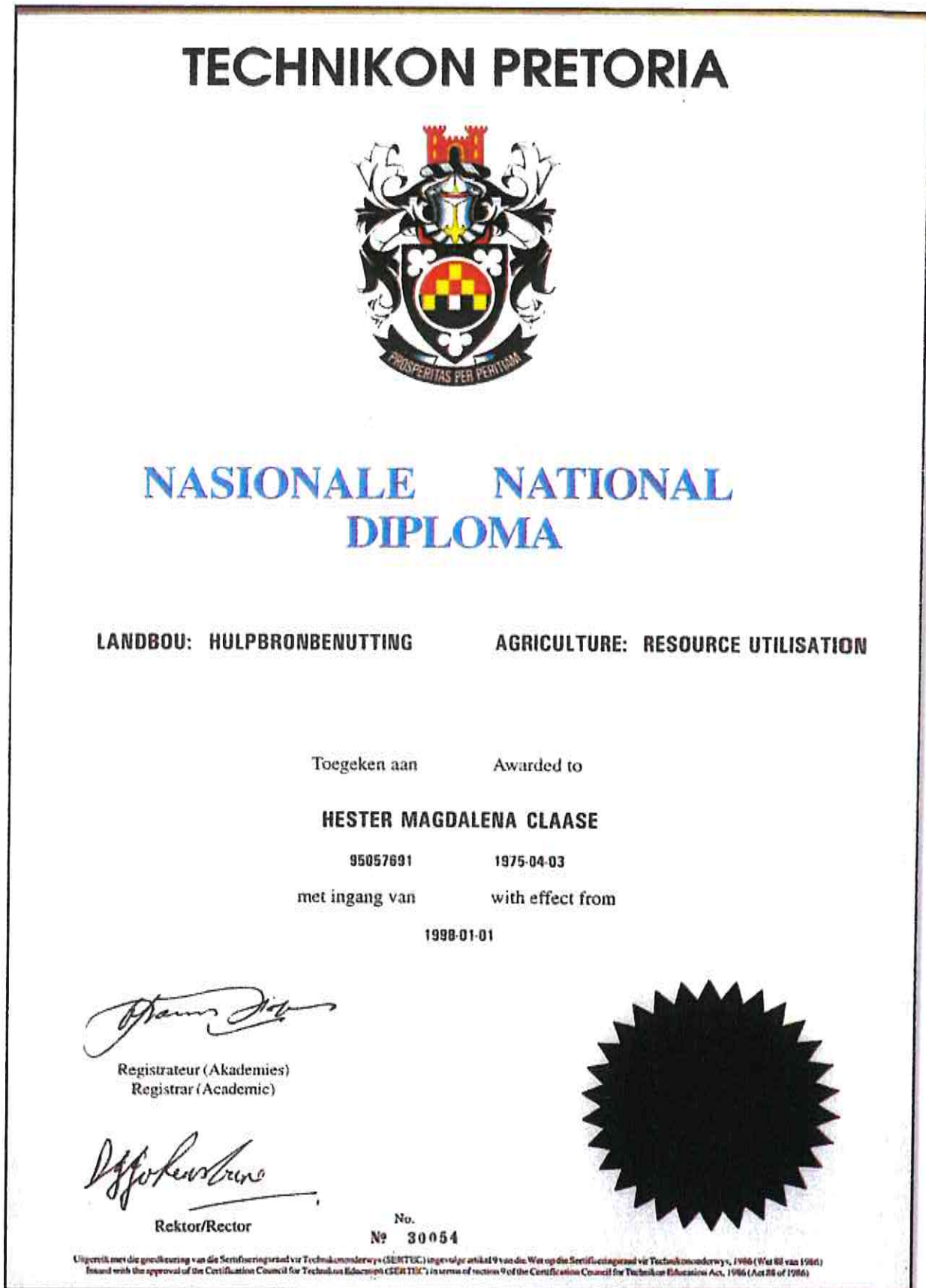
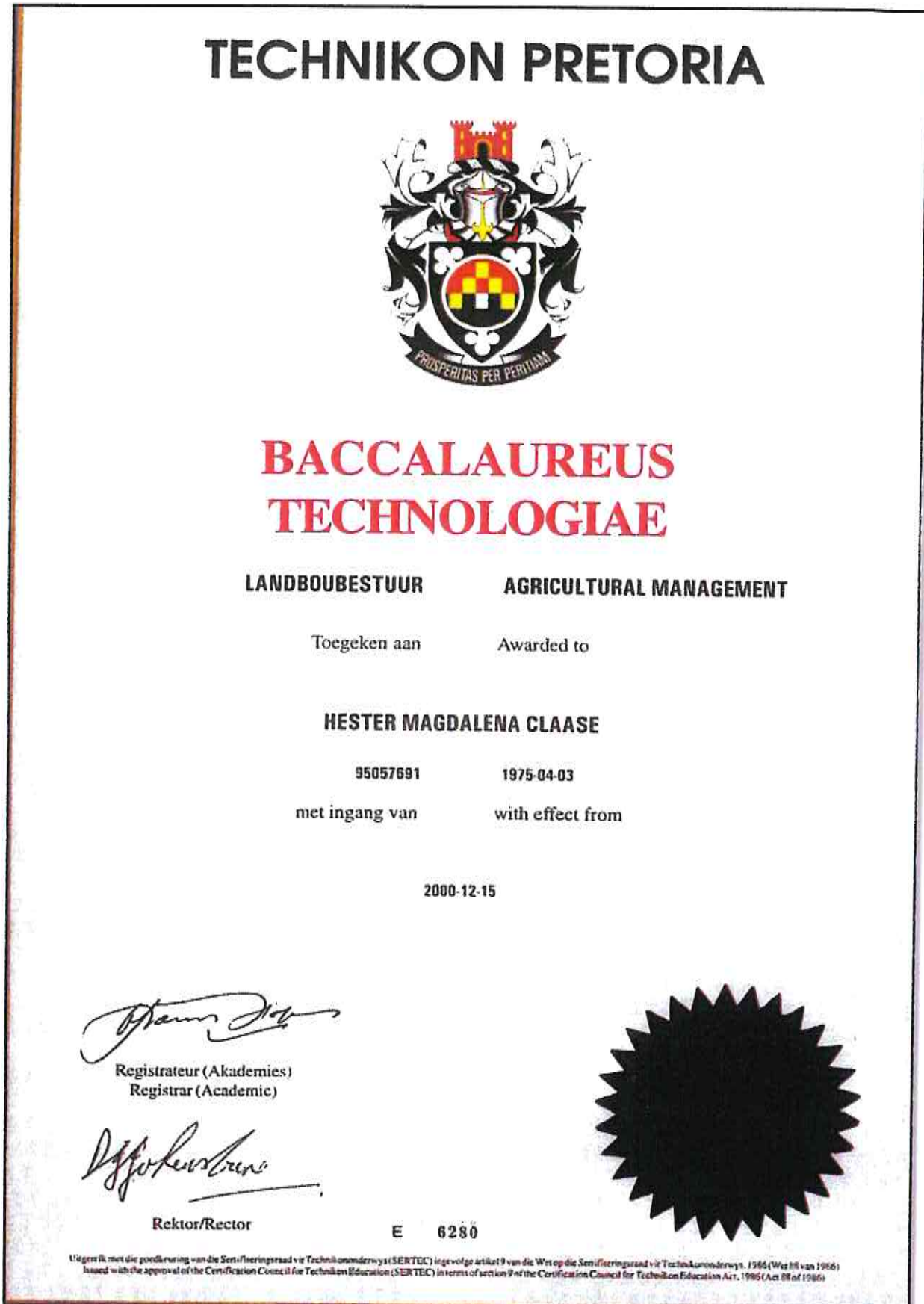


Figure 2



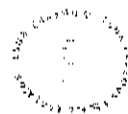
(2) Summary of the EAP's past experience.

HM (Esna) Erasmus is an environmental practitioner with 24 years' experience in Agricultural and Prospecting Management and Science. Experience in the field of inspection and evaluation of Environmental Impact Assessment in North West. Since 1998 involvement in prospecting activities with Department of Minerals and Energy in the North West Province as representative for National Department of Agriculture Dir. LRM in the following: Evaluation of Environmental Management Reports Inspection and evaluation of all different prospecting entities in North West Province. A member of the Slimes Dam Core Committee of North West Province. Involved in the compiling of a strategy for rehabilitation of Gold slime Dams in NW. Give inputs and comments on the revision of EMPR for small scale diamond prospecting. Involve in setting a strategy to encounter the impact of small scale prospecting on the environment in North West. See **Figure 3** below Curriculum Vitae of H.M. Erasmus.


Figure 3


ESNA ERASMUS


ENVIRONMENTAL PRACTITIONER




CONTACTS

 esnae@dera.co.za

 +27 83 4525917

 **LinkedIn**
<http://za.linkedin.com/in/esna-erasmus-1881aba5/>

 Klerksdorp, North-west Province, South Africa

ABOUT ME

Environmental practitioner with 22 years' experience in Agricultural and Mining Management and Science.
 Experience in the field of inspection and evaluation of Environmental Impact Assessment in North West.
 Since 1998 involvement in mining activities with Department of Minerals and Energy in the North West Province as representative for National Department of Agriculture Dir. LRM in the following:
 Evaluation of Environmental Management Reports
 Inspection and evaluation of all different mining entities in North West Province.
 A member of the Slimes Dam Core Committee of North West Province.
 Involved in the compiling of a strategy for rehabilitation of Gold slime Dams in NW.
 Give inputs and comments on the revision of EMPR for small scale diamond mining.
 Involve in setting a strategy to encounter the impact of small scale mining on the environment in North West.

SKILLS

- Report writing
- Conduct auditing
- Bilingual (English/Afrikaans)
- Computer Proficient
- Report generation and analysis
- Verbal and written communication
- Computer literate
- Project Management
- Results-orientated
- Conduct risk assessments

WORK EXPERIENCE

<p><u>JAN 1998</u> JUN 2002</p>	<p>SENIOR RESOURCE CONSERVATION INSPECTOR <i>National Department of Agriculture – Potchefstroom, SA</i></p> <p>Manage Administration of Act 43 of 1983, Agricultural Resource Conservation act in North West Province. Management of personnel and personnel related matters. Management of budget for Potchefstroom office of Directorate Land Resource Management.</p>
<p><u>JUL 2002</u> FEB 2004</p>	<p>SENIOR ENVIRONMENTAL OFFICER <i>Department of Minerals and Energy – Klerksdorp, SA</i></p> <p>Administration of Act 50 of 1991, the Minerals Act in the North West province. Evaluation of EMPR's and EIA's. Audit and compliance inspections of mining operations.</p>
<p><u>MAR 2004</u> PRESENT</p>	<p>ENVIRONMENTAL PRACTITIONER <i>DERA Environmental Consultants – Klerksdorp, SA</i></p> <p>Compiling and submission of mining related applications; manage and compile legal environmental documents. Monitoring work to evaluated compliance to environmental legislation; evaluating outstanding rehabilitation liabilities for mining companies. Risk assessment and applications for closure certificates. Compile EMPR/EIA for Mining Rights and compilation of EMPfan's for Prospecting and Mining Right applications. Compile BAR & EMPR's in support of applications for listed activities under NEMA such as Chicken Broilers, Feed lots, Fuel Storage, ect. Manages consultation between Departments and applicants.</p>

EDUCATION



- 1993 **HIGH SCHOOL DIPLOMA**
Middelburg High School – Middelburg, Mpumalanga, SA
 English Afrikaans
 Biology History
 Geography Accounting
- 1998 **NATIONAL DIPLOMA: AGRICULTURE: RESOURCE UTILISATION**
Tshwane University of Technology – Pretoria, Tshwane, SA
 Animal Production I Computer Application I
 Pasture Science I Physical Science I
 Agricultural Marketing II I, II and III
 Poultry Production II Crop Production I, II
 Agricultural Soil Science I Agricultural Mechanization I
 Agricultural Production Management III
 Agricultural Extension II Large Stock Production II
 Horticulture III Agricultural Anatomy & Physiology I
 Farm Planning I Soil Conservation II
- 2000 **BACCALAUREUS TECHNOLOGIAE: AGRICULTURAL MANAGEMENT**
Tshwane University of Technology – Pretoria, Tshwane, SA
 Financial Management IV Strategic Management IV
 Plant Production IV Leadership Development II
- 2004 **MATERS OF ENVIRONMENTAL SCIENCES IN ENVIRONMENTAL SCIENCES AND MANAGEMENT- uncompleted**
North-West University – Potchefstroom, North West
 Introduction to environmental management
 Applied Environmental Management
 Environmental Management
 Theoretical Hydrology
 Urban Ecology
 Introduction to GIS
 Applied GIS
 Applied Hydrology
 Environmental Analysis
 Research Proposal – uncompleted
 Final dissertation - uncompleted

SHORT COURSES



- Computer training Obase IV
- Seminar in public speaking
- Veld assessment course
- Resource Identification and utilization course – September 1998
- Introduction to GIS – June 2001
- Persuasion skills
- Wetlands identification
- Wetlands Rehabilitation – August 2001
- Management skills
- Environmental Risk Assessment and Management – August 2005
- Mining and the Environment – October 2003

EIA- EXPERIENCE

The following list of EIA's was just some that was done by me:

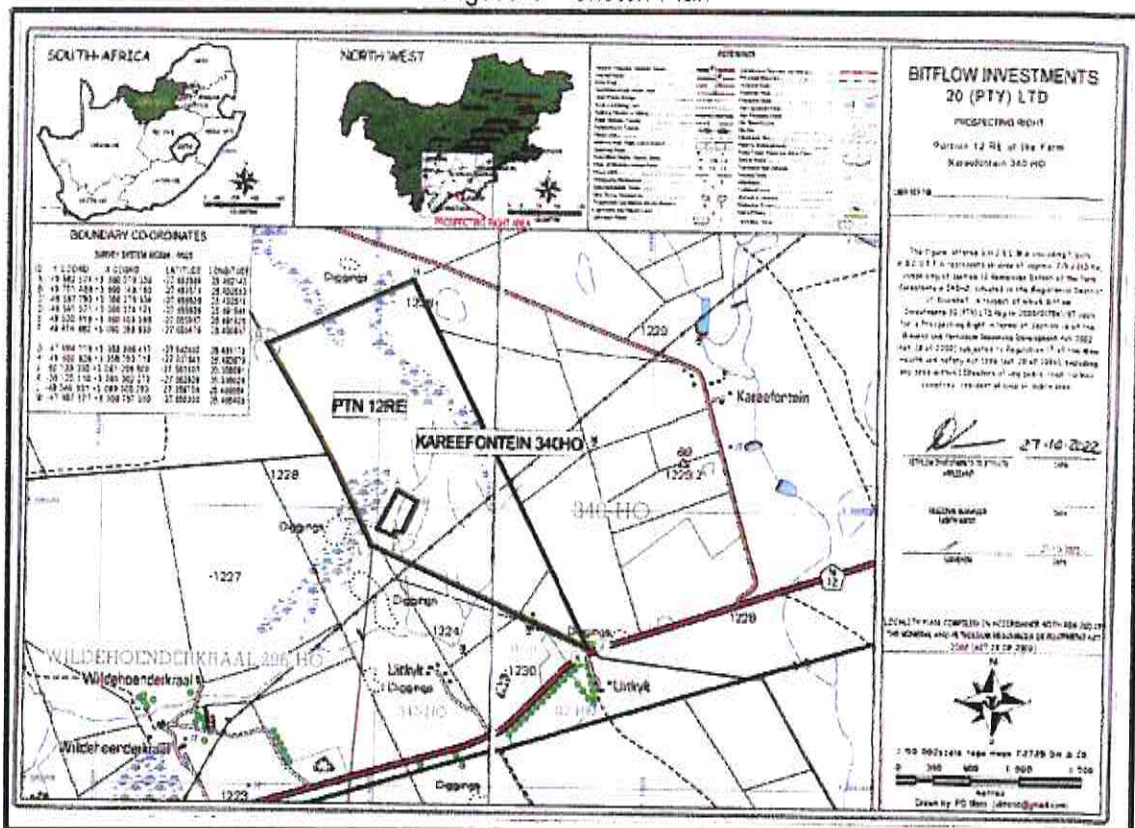
- FJ de Beer (Doornfontein) – was done as part of a Prospecting Right Application with Bulk Sampling, my role entailed: site visit, impact assessment and evaluation and compilation of report and handling of application process.
- Hartzer & Steyn Beleggers (Zwartplaat) - was done as part of Mining Right Application with Bulk Sampling, my role entailed: site visit, impact assessment and evaluation and compilation of report and handling of application process.
- Bethlehem Sand en Klip CC (Killarney) - was done as part of Mining Right Application, my role entailed: site visit, impact assessment and evaluation and compilation of report and handling of application process.
- KMF Agro Processing (Pty) Ltd (Rietfontein) - was done as part of an Environmental Authorization for a listed activity, for the construction of Chicken slaughter facility, my role entailed: site visit, impact assessment and evaluation and compilation of report and handling of application process.
- Summit Ridge (Graslaagte) - was done as part of an Environmental Authorization for a listed activity for feed mill for chicken feed, my role entailed: site visit, impact assessment and evaluation and compilation of report and handling of application process.

b) LOCATION OF THE ACTIVITY

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(b)(i),(ii),(iii)

(i) 21 digit Surveyor General Code for each farm	T0H000000000034000012																																								
(ii) Farm Name:	KAREEFONTEIN 340 HO ➤ the Remaining portion of Portion 12																																								
(iii) Coordinates - Co-ordinates List WG 27°	<table border="1"> <thead> <tr> <th colspan="5">SURVEY SYSTEM WGS84 / WGS2</th> </tr> <tr> <th>ID</th> <th>Y COORD</th> <th>X COORD</th> <th>LATITUDE</th> <th>LONGITUDE</th> </tr> </thead> <tbody> <tr> <td>A:</td> <td>-48 562.574</td> <td>+3 060 070.336</td> <td>-27.652986</td> <td>25.492142</td> </tr> <tr> <td>B:</td> <td>-48 701.480</td> <td>+3 060 149.180</td> <td>-27.653573</td> <td>25.493553</td> </tr> <tr> <td>C:</td> <td>-48 597.793</td> <td>+3 060 376.534</td> <td>-27.655628</td> <td>25.492511</td> </tr> <tr> <td>D:</td> <td>-48 541.571</td> <td>+3 060 374.121</td> <td>-27.655608</td> <td>25.491941</td> </tr> <tr> <td>E:</td> <td>-48 530.319</td> <td>+3 060 405.088</td> <td>-27.655897</td> <td>25.491828</td> </tr> <tr> <td>F:</td> <td>-48 414.382</td> <td>+3 060 358.938</td> <td>-27.655476</td> <td>25.490657</td> </tr> </tbody> </table>	SURVEY SYSTEM WGS84 / WGS2					ID	Y COORD	X COORD	LATITUDE	LONGITUDE	A:	-48 562.574	+3 060 070.336	-27.652986	25.492142	B:	-48 701.480	+3 060 149.180	-27.653573	25.493553	C:	-48 597.793	+3 060 376.534	-27.655628	25.492511	D:	-48 541.571	+3 060 374.121	-27.655608	25.491941	E:	-48 530.319	+3 060 405.088	-27.655897	25.491828	F:	-48 414.382	+3 060 358.938	-27.655476	25.490657
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Application area (Ha)	315.2013 ha																																								
Magisterial district:	The area is situated 10 km west of Bloemhof within the district of Bloemhof which is a maize, peanut, cattle farming town situated on the N12 towards Bloemhof in the North West Province of South Africa. The town lies in an important alluvial diamond-prospecting area and it is the main town of the Lekwa-Teemane Local Municipality, which further falls under the Dr Ruth Segomotsi Mompati District Municipality.																																								
Distance and direction from nearest town	± 10 km west of Bloemhof.																																								
Minerals applied for	Diamonds Alluvial (DA) & Diamonds in Kimberlite																																								

Figure 4 – Sketch Plan



c) LOCALITY MAP

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(c)(i)(ii)

(i) & (ii) The area is situated within the district of Bloemhof is a maize-farming, cattle, peanuts town situated on the N12 from Bloemhof in the North West Province of South Africa. The town lies in an important alluvial diamond-prospecting area and it is the main town of the Lekwa Teemane Local Municipality which further falls under the Dr Ruth Segomotsi Mompati District Municipality (Course: https://en.wikipedia.org/wiki/Lekwa_Teemane). See Figure 5, as well as Appendix 1(a) - Locality Map indication where the applied area is situated within the district of Bloemhof, North West Province.

Appendix 1(a) – Locality Map

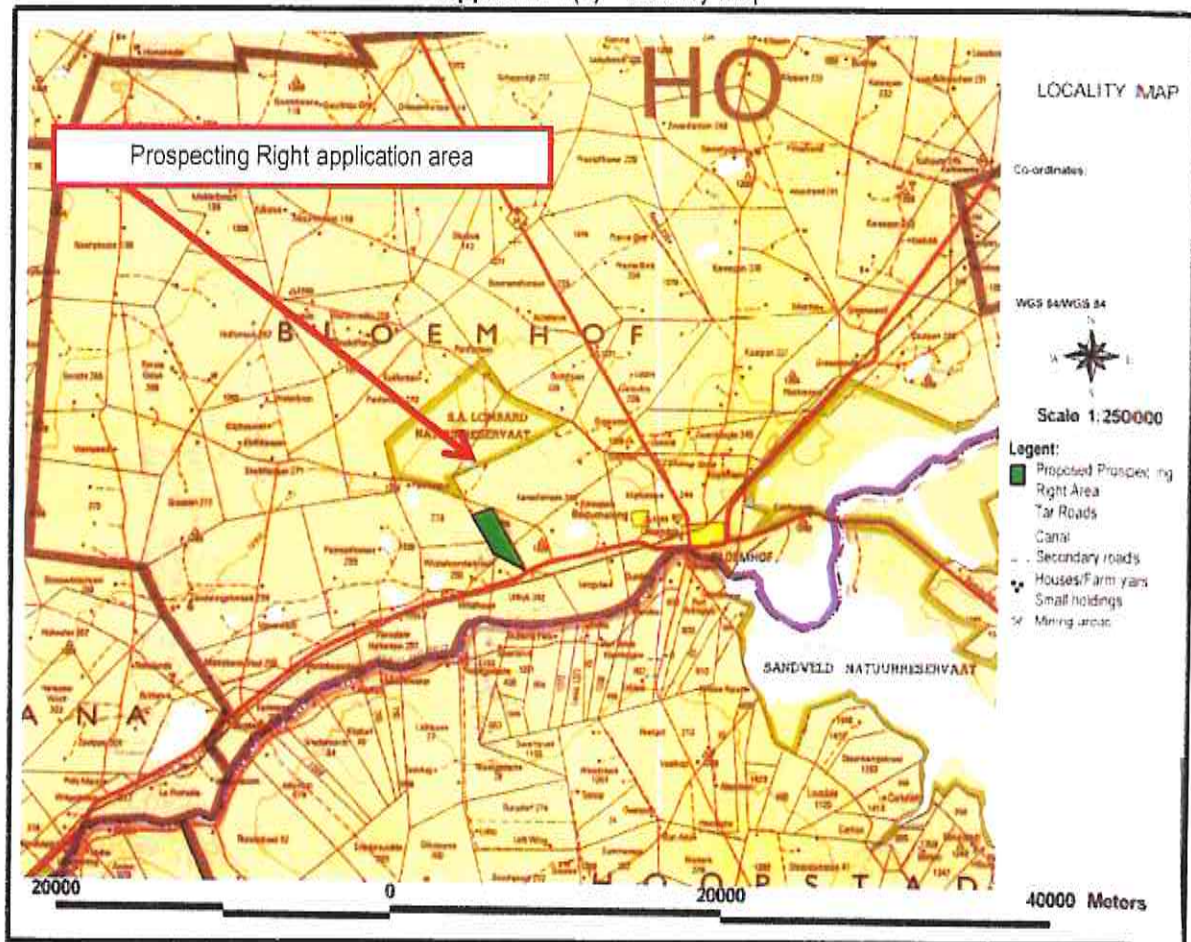


Figure 5: Locality of application area



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

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(d)(i)(ii)

The applicant applied for a Prospecting Right over; Kareefontein 340 HO (Remaining Extent of Portion 12).

The application area is situated over a rural part of the Bloemhof district. The prospecting right application area is characterized by natural vegetation (grazing for cattle).

There is a farmstead on the site itself, 2 entrances from a farm gravel road via the N12.

All of the above infrastructure can be seen on the Infrastructure Plan - **Appendix 1(b1) & 1(b2)**. **The surrounding farms are mostly utilized as cultivated field for cash crops (maize) and natural grazing and prospecting activities.** Access to the prospecting right application area will be from the N12 running between Bloemhof and Christiana and Britten gravel road. Also see **Appendix 1(b1) & 1(b2)** for Infrastructure Plan and Google satellite image of the application area.

The scope of the prospecting activities: The extent of the prospecting area is **315.2013 hectares**.

Phase 1: Geological desktop studies and surveys in order to try and identify the gravel run. Various geological maps and instruments will be used to identify if alluvial gravel deposits might be present on the application area. **6 months** needed for phase 1.

Phase 2: concentrate on **Test pits** which will be made on a grid of 100 x 100 meters and 50 x 50 m. It is envisaged that **100 test pits** will be excavated. The applicant will assess the samples taken during phase 1 and will **Trenching (15)** be made during **Phase 3** in order to determine the grade of the Alluvial Diamonds that was found and if it is economical viable. In order to determine if the gravel does have diamonds the gravel needs to be taken out and tested, by putting it through the washing process.

See **Appendix 1(b)** – Infrastructure Map for detail of what the site looks like pre-prospecting. Only a small portion of the land will be impacted upon at any given time and land use on the rest of the area can proceed normally (**Phase 2 (100 test pits (surface area: 3m x 2m = 6m² x 100 pits = total of 600m² or 0,06 ha)** will be done over a period of 6 Months); (**Phase 3: 15 Trenches (surface area will be 10m x 60m x 3,5m deep trenches = 0.9 ha total)** will be done over 30 months. **The grand total is 0.96 ha over 36 months.**

The prospecting focus area will be clearly demarcated after Phase 1 is completed, but will probably be over the whole of the application area. It is foreseen that the main prospecting area will most probably be over the already disturbed areas as indicated below in **Figure 5**. The area applied for is over the prospecting right application area of the entire **315.2013 hectares**. It is envisaged that all impacts on the environment can be properly managed and mitigated and no high negative long-term impacts will take place.

i) Listed and specified activities

Table 1: Listed Activities

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(d)(i)

NAME OF ACTIVITY	Aerial extent of the Activity (Ha or m ²)	LISTED ACTIVITY	APPLICABLE LISTING
<p>Listing 1 – 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, as well as any other applicable activity as contained in this Listing Notice or in Listing Notice 3 of 2004, required to exercise the prospecting right —</p> <p>(a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource; or</p> <p>(b) 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 Listing Notice 2 applies.</p>	315.2013 ha	X	327
<p>Listing 1 – Activity 27: The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>	Total = 0.96 ha	X	327
<p>Listing 2 – Activity 19: The removal and disposal of minerals, which requires a permission in terms of section 20 of the Mineral and Petroleum Resources Development Act, as well as any other applicable activity as contained in this Listing Notice, in Listing Notice 1 of 2004 or Listing Notice 3 of 2004, required to exercise the permission, including—</p> <p>(a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource; or</p> <p>(b) 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.</p>	Total = 0.96 ha	X	325

ii) Description of the activities to be undertaken

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(d)(ii)

Table 2: Description of Activities to be followed

Activities	Description of phases	Associated structures and infrastructures
Phase 1	Geological desktop studies and surveys in order to try and identify the gravel run. Various geological maps and instruments will be used to identify if alluvial gravel deposits might be present on the application area. 6 months needed for phase 1.	
Phase 2	The testing pits will concentrate on the areas where the outcrops anticipated gravel potential. A 30 ton excavator will be used to make test pits on a grid of 100 x 100m and where necessary 50 x 50m grid. The pits will be (3m x 2m x ± 2.5m deep) in order to determine the depth and boundaries of the gravel. These boundaries will be surveyed and mapped in order to determine where the bulk samples will be taken. Each test pit will be examined and closed immediately before moving to the next one. It is envisage that 100 test pits will be done. 6 months are needed for phase 2. (Phase 2 (100 test pits (surface area: 3m x 2m= 6m ² x 100 pits = total of 600m ² or 0.06 ha) will be done over a period of 6 Months).	The topsoil and grass will be cleaned on the small area of 3m x 2m where the test pits will be excavated. After evaluation of the gravel the test pit will be closed. Rehabilitation of the test pits back to original land capability/use with topsoil and proper leveling.
Phase 3	In order to determine if the gravel does have diamonds the gravel needs to be taken out and tested, by putting it through the washing process. Trenching will be used to open the gravel in order to get a representative sample for testing. The trenches (15) will be 10 x 60 x ± 3.5 m (deep). In one trench ± 2'100m ³ (2'400 ton) gravel will be exposed and tested with 14 feet rotary pan and washing plant at a rate of 6m ³ (10 tons) an hour. The total prospecting area is 315.2013 hectares, thus it is anticipated that a total of 32'000 m³ (±36'000 tons)(bulk sample in total) will be tested by making trenches on different locations over the whole prospecting area, where the possibility of diamond bearing gravel were identified with the test pits. Taken at an 8 hour working day, 5 days a week and 20 days a month, the applicant will be able to process 960m³ a month. The processing of 32'000m³ will take about 30 months for Phase 3. (Phase3: 15 Trenches (surface area will be 10m x 60m x 15 trenches = 0.96 ha total) will be done over 30 months.	After evaluation of the gravel the test pit will be closed. Rehabilitation of the test pits back to original land capability/use with topsoil and proper leveling. Envisages equipment required: <ul style="list-style-type: none"> ➤ 1 x excavator ➤ 2 x front-end loader ➤ 1 x 14 feet pan ➤ 1x Power plant ➤ Pipes and water pumps

e) POLICY AND LEGISLATIVE CONTEXT

[In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(e)]

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE POLICY AND LEGISLATIVE CONTEXT
National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) Submitted for Environmental Authorizations in terms of the National Environmental Management Act, 1998 and the National Environmental Management Waste Act, 2008 in respect of Listed Activities that has been triggered by applications in terms of the Minerals and Petroleum Resources Development Act, 2002 (As mentioned).	Activity 20, Listing 1, Activity 27, Listing 1, Activity 19, Listing 2.	Prospecting Right application submitted and EA application with DMR
National Environmental Management Act, 1998 (Act 107 of 1998): Environmental Impact Assessment Regulations, 2014 (G38282 – R982-985) EA Authorization and EIA/EMP. Submit documents that will describe the impacts and sustainable mitigation thereof.	Regulation 21 Section 23	Scoping Report in process following by EIA/EMP
Compliance to Act and Regulations during course of activities. Show impacts and mitigation thereof.		
National Water Act, 1998 (Act 36 of 1998) Application for Water abstraction for prospecting use	Section 21 (a)	Application for water use license with DWS will follow.
South African National Heritage Resources Act (Act 25 of 1999) (SAHRA) Compliance to Act and Regulations during course of activities. Ensure that no graves or heritage site will be disturbed.	Section 38	SAHRA was notified process will be followed. Compilation of HIA over the application area in order to identify possible archaeological and paleontological sites or occurrences.
Conservation of Agricultural Resources Act No 43 of 1983 (CARA) Compliance to Act and Regulations during course of activities. Stabilization of soil after rehab to be sustainable with no erosion. Eradication of declared weeds	Section 29	Regulation will be applicable during construction and operational phases of prospecting.
National Forest Act, Act No. 84 of 1998 (NFA) & GN 1935 in Government Gazette No. 46094 of 25 March 2022. Application of Permit or License if protected species may be affected.	Section 15 (1)	No person may cut, disturb, damage or destroy any protected tree; or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, or any forest product derived from a protected tree, except under a licence granted by the Minister; or in terms of an exemption published by the Minister.
National Veld and Forest Fire Act, Act 101 of 1998 (NVFFA)	Section 12	Duty on owners to prepare and maintain firebreaks as it may be required in consultation with adjoining owners and fire protection association.
Provincial Northern Cape Nature Conservation Act, Act 9 of 2009 (NCNCA) Application of Permit or License if protected species may be affected.	Section 3	Restricted activities involving specially protected animals. No person may, without a permit - hunt, import, export; transport; keep; possess; breed; or trade in, a specimen of a specially protected animal.
National Environmental Management Laws Amendment Act (Act 2 of 2022)	Section 49	Restricted activities involving specially protected plants: (1) No person may, without a permit - pick; import; export; transport; possess; cultivate; or trade in, a specimen of a specially protected plant.

[Bitflow Investments 20 (Pty) Ltd. – KAREEFONTEIN 340 HO – NW 30/5/1/1/2/ 13614 PR]

<p>NEMA Financial Provision Regulation</p>		<p>The purpose of GNR 1147 is to regulate the determination of financial provision as contemplated in NEMA for the specific costs related to undertaking the management, rehabilitation and remediation of environmental impacts. This is applicable from the commencement of exploration activities, through the lifespan of prospecting and prospecting operations.</p>
<p>National Environmental Management Air Quality Act (Act 39 of 2004)</p>		
<p>National Dust Control Regulations (GN. 827 of 1 November 2013)</p>		
<p>National Environmental Management Biodiversity Act (Act 10 of 2004): Threatened or Protected Species Regulations</p>		

f) NEED AND DESIRABILITY OF THE PROPOSED ACTIVITIES

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(f)

The applicant believes that the applied area has prospects for: Alluvial Diamonds (DA) and Diamonds in Kimberlite (DK) as applied for. The possible employee positions that could emerge could also be a great opportunity for revenue generation in this rural area. The desirability of this project can be motivated as the application area is amongst other prospecting and prospecting activities, indicating the potential for alluvial diamonds being also present and the fact that there have been previously worked over the application area. It is however anticipated that the impacts that will be caused by the activities can be mitigated and rehabilitated. The specific activities as listed will be on this **315.2013 hectares application area** specific according to the sketch plan. The duration of the activities will be **36 months**.

g) PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORIZATION IS REQUIRED
4 years.

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

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(h)

The prospecting area was identified through aerial photographs. **The extent of the prospecting area will be 315.2013 hectares.** Information from available Geological information will be used in order to determine where the test pits will take place. This will in turn help to determine the boundaries of the proposed prospecting area for more detailed surveying.

PHASE 1:

Geological desktop studies and surveys in order to try and identify the gravel run. Various geological maps and instruments will be used to identify if alluvial gravel deposits might be present on the application area. **6 months needed for phase 1.**

PHASE 2:

The testing pits will concentrate on the areas where the outcrops anticipated gravel potential. A 30 ton excavator will be used to make test pits on a grid of 100 x 100m and where necessary 50 x 50m grid. The pits will be **(3m x 2m x ± 2.5 m deep)** in order to determine the depth and boundaries of the gravel. These boundaries will be surveyed and mapped in order to determine where the bulk samples will be taken. Each test pit will be examined and closed immediately before moving to the next one. **It is envisage that 100 test pits will be done. 6 Months are needed for Phase 2.**

PHASE 3:

In order to determine if the gravel does have diamonds the gravel needs to be taken out and tested, by putting it through the washing process. Trenching will be used to open the gravel in order to get a representative sample for testing. **The 15 trenches will be 10 x 60 x ± 3.5m (deep).** In one trench ± 2'100m³ (2'400 ton) gravel will be exposed and tested with 14 feet washing pan at a rate of 10m³(16 tons) a hour. **The total prospecting area is 315.2013 hectares**, thus it is anticipated that a total of 32'000 m³ (±36'000 tons)(bulk sample in total) will be tested by making trenches on different locations over the whole prospecting area, where the possibility of diamond bearing gravel were identified with the test pits. Taken at an 8 hour working day, 5 days a week and 20 days a month, the applicant will be able to process 960m³ a month. **The processing of 32'000m³ will take about 30 months for Phase 3.**

i) DETAILS OF ALL ALTERNATIVES CONSIDERED

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)[(h)] (g)(i)

Alternative is not applicable. The **current land use is agriculture with grazing for cattle** (cultivated grassland and natural vegetation) and rehabilitated prospecting areas (grazing for cattle) on the prospecting right application area. Thus the option to prospect the area will be an alternative land use over some of the areas. The applicant, **BITFLOW INVESTMENTS (PTY) LTD**, is not interested in any other alternative land use over this land aside for the prospecting for Alluvial Diamonds (DA) and Diamonds in Kimberlite (DK), or continuing with his agricultural activities as is, or method use other than prospecting in the conventional way, which is the most cost effective.

- (a) the property on which or location where it is proposed to undertake the activity
There are no alternative for the property as the application is for this area only. The prospecting focus area will only be determined after Phase 1 & 2 is completed. And the whole of the application area will systematically be prospected eventually. There are no alternative sites as the whole of the application area was identified as being favourable to bear Alluvial Diamonds (DA) and Diamonds in Kimberlite (DK).
- (b) the type of activity to be undertaken
The type of activity is in line with the submitted Prospecting Work Programme (PWP). Alluvial Diamonds (DA) and Diamonds in Kimberlite (DK) prospecting normally uses the opencast prospecting method in order to access the mineral where after it is tested. Testing will be done on site by use of washing pans. There are no alternatives to the testing of the mineral as this is the conventional manner in which it is done. Better technology requires bigger volumes to be processed and this will not be possible under a prospecting right. As this is only prospecting operation it will be the basic opencast method with associated machinery.
- (c) the design or layout of the activity
The layout of the activity will and can only be on the application area as per sketch plan as submitted with the application. And the whole of the application area will systematically be prospected eventually. There are no preferred sites as the whole of the application area was identified as being favourable to be tested. This prospecting operation will also not be static operations as the whole of the application area will be tested via test pits on a grid basis in order to determine where the possible Alluvial Diamonds (DA) and Diamonds in Kimberlite (DK) run. They will perhaps have a temporary office building and the gravel to be tested will be done next to the open excavations. There will also be temporary chemical toilets on the site for ablution facilities. There will not be services to machinery done on site and in case of emergency it will be done over a PVC lining. This operation will be a basic small scale prospecting layout, with minimal temporary infrastructure and just the necessary equipment.
- (d) the technology to be used in the activity
The technology used in the activity will be as described in the PWP and the best options will be determined by the applicant, which will be test pits and bulk sampling through trenching. The technology used with regards to the testing of the Alluvial Diamonds (DA) and Diamonds in Kimberlite (DK) is putting it through a washing plant. The washing plant will be set up next to the current open excavation and will only be moved once the excavation is closed up. Phase 2 will be test pits and this will use an excavator to open pits which will only be visually inspected by the applicant, there are not much alternatives for this activity. Phase 3 will be excavation of a representative bulk sample and this will be done by conventional opencast excavations. The technology used in the activity will as described in the Prospecting Programme and the best options will be determined by the applicant. They will basically be using excavators to open the gravel and take out bulk samplings, as well as a front-end loader to move the material to be tested to the washing pan.

(e) the operational aspects of the activity, and

The operational aspect is only the prospecting for Alluvial Diamonds (DA) and Diamonds in Kimberlite (DK) on this specific area, making use of test pits and bulk sampling through trenching. Operations will be done through systematically test pits that will be made with a back-actor of the whole application area. Doing concurrent rehabilitation, meaning that as soon as the gravel in a test pit is inspected it will be placed back and the pit will be closed up and topsoil will be replaced. Where trenches were made and tests completed the excavation will be backfilling before the next excavation will be opened and the topsoil will be spread over the closed up excavation, thus creating a rollover effect. The importance will be to prospect the whole of the area not leaving any patches, but rather test the reserve systematically so that proper concurrent rehabilitation can take place.

(f) the option of not implementing the activity

This option might only be possible if the applicant decide to abandon the project. If this application is not implemented the current landowners will just continue with existing agricultural activities which is grazing and cultivation. Thus not exploiting the mineral reserve and somebody else can apply.

ii) Details of the Public Participation Process Followed

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (i)(h) (g)(ii)

The process as described by NEMA for Environmental Authorization was followed. See **Table 3** below for the identification of Interested and Affected Parties to be consulted with. The landowner (**Barry Wentzel Trust**) and the direct neighbours were consulted personally and through a letter that was given to them by hand. A **site notice** was placed at the entrance gate of the Kareefontein farm. With this site notice all passers-by are requested to submit any written comments to be forwarded to the consultant (still awaiting response). **An advertisement was placed in the Stellalander Newspaper of 7th November 2022. See proof of consultation under Appendix 2.** Notice was put up at the entrance to the application area, where all passers-by are invited to give through their comments of objections toward the proposed application. A copy of the Scoping Report was sent to all the State Departments. See proof of consultation under Appendix 2.

Appendix 2 – Proof of consultation

iii) **Summary of issues raised by I&AP's**

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(f)(ii) (g)(iii)

Table 3: Interested and affected Party Consultation

Interested and Affected Parties	Date sent and/or Comments Received	Issues raised	EAP's response to the applicant
AFFECTED PARTIES			
Landowner/s	X		
Barry Wentzel Trust (Landowner) Bloemhof, 2660 Cell: 0826320114	7 Nov 2022	No objection, see signed consultation letter	
Lawful occupier/s of the land			
Landowners or lawful occupiers on adjacent			
Mr. P.J. Roos (Neighbour) P.O. Box 77, Bloemhof, 2660 Cell: 072 626 6808	4 Nov 2022	No objection, see signed consultation letter	
C.L. Roos (Neighbour) P.O. Box 77, Bloemhof, 2660 Cell: 072 064 8418	4 Nov 2022	No objection, see signed consultation letter	
Municipal councilor			
Municipality	X		
Lekwa-Teemane Local Municipality LED Manager: Mr. Pakiso Lesego E-mail: leshagep@lekwa-teemane.co.za	5 Dec 2022	Consultation letter send to Mr. Leshage via e-mail	
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA.			
Eskom			
Communities			
N/A			
Dept. Land Affairs	X		
KeabetsweMothupi Keabetswe.mothupi@drdlr.gov.za	5 Dec 2022 9 Dec 2022	Request for verification of land claims Response received	Response letter received, no land claims
Traditional Leaders			
N/A			
Dept. Rural, Environment and Agricultural	X		

[Bitflow Investments 20 (Pty) Ltd. – KAREEFONTEIN 340 HO – NW 30/5/1/12/ 13614 PR]

OumaSkosana Agricentre Building, Cnr James Moroka & Stadium Road, Mmabatho, 2735 E-mail: oskosana@mvpp.gov.za	5 Dec 2022	BAR/EMPr send with Fastway couriers	
Dept. Water and Sanitation Lerato Mokoatlhe 28 Central Road, Beaconsfield, Kimberley, 8308 Tel: 083 655 8312, E-mail: MokoatlheL@dws.gov.za	5 Dec 2022	BAR/EMPr send with Courier Guy	X
Dept. Agriculture, Forestry and Fisheries Maurice Vukeya Louis le Grange Building, Cnr Peter Mokaba & Woimans street, 3 rd Floor, Office no 318, Potchefstroom, 2520 Tel: 018-389 5156, E-mail: MauriceV@daff.gov.za	5 Dec 2022	BAR/EMPr send with Fastway couriers	X
Other Competent Authorities South African Heritage Resources Agency (SAHRA) P.O. Box 4637, Cape Town, 8000 Tel: 021 462 4502 E-mail: info@sahra.org.za		Case ID:	X
OTHER AFFECTED PARTIES			
INTERESTED PARTIES			

Notice published in the Stellalander Newspaper of 7th November 2022.

PLACEMENT OF ADVERT AT GATE:

<p>Photo 1</p> 	<p>Photo 2</p> 
<p>GPS Location: 27°40'12.67" S</p>	
<p>25°30'0.19" E</p>	

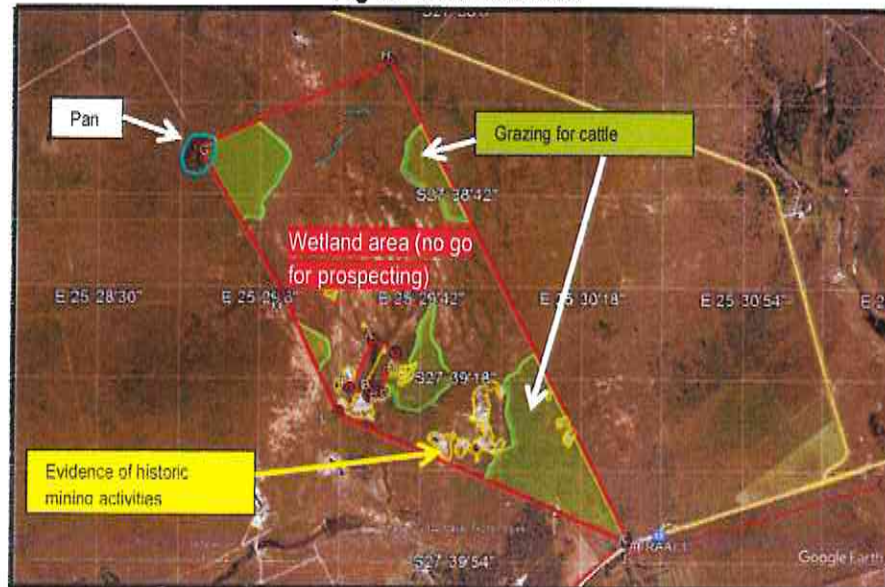
iv) The Environmental attributes associated with the sites

(1) Baseline Environment

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(h) (g)(iv)

Introduction: The purpose of this section is to provide information on the environment in which the proposed prospecting activities will take place, with a view to identifying sensitive issues/areas, which need to be considered when conducting the impact assessment. The application is over: **KAREEFONTEIN 340 HO (over the Remaining Extent of Portion 12)**. This area consists of natural vegetation (grazing for cattle) and historical disturbed prospecting areas (rehabilitated and disturbed). **The focus area of prospecting activities will be mainly on the grazing areas for cattle. Wetland areas and pan will not be available for prospecting (See Figure 6 below):**

Figure 6: Surface area



Magisterial District: The area is situated 10 km west of Bloemhof within the district of Bloemhof which is a maize, peanut, cattle farming town situated on the N12 between Bloemhof and Christiana in the North West Province of South Africa. The town lies in an important alluvial diamond-prospecting area and it is the main town of the Lekwa Teemane Local Municipality, which further falls under the Dr Ruth Segomotsi Mompati District Municipality. See **Figure 5**, as well as **Appendix 1(a)** - Locality Map indication where the applied area is situated within the district of Bloemhof, North West Province.

Direction from neighbouring town: The nearest town is Bloemhof, which is situated 10 km east of the application area.

Longitude (approximate centre of prospecting site): 25°29'36.81"E

Latitude (approximate centre of prospecting site): 27°39'0.58"S

Existing Surface Infrastructure: The application area is situated over a rural part of the Bloemhof district. The prospecting right application area is characterized by natural vegetation (grazing for cattle).

The infrastructure over the farm KAREEFONTEIN 340 HO (over the Remaining Extent of Portion 12), there is 2 entrance gates farm road from the N12 road.

All of the above infrastructure can be seen on the **Infrastructure Plan - Appendix 1(b1)1 (b2)**. The **surrounding farms** are mostly utilized as cultivated field for cash crops and natural grazing for cattle and prospecting/prospecting can be seen. Access to the prospecting right application area will be from the N12 running between Bloemhof and Christiana. **Also see Appendix 1(b1) & 1(b2) for Infrastructure Plan and Google satellite image of the application area.**

(a) Type of environment affected by the proposed activity.

Vegetation [Flora] and Landscape Features: This application area falls over veld type: **[SVk 4] Kimberley Thornveld**. VT 16 Kalahari Thornveld and Shrub Bushveld (50%) (Acocks 1953). LR 32 Kimberley Thorn Bushveld (74%) (Low & Rebelo 1996).

Distribution: North-West, Free State and Northern Cape Provinces: Most of the Kimberley, Hartswater, Bloemhof and Hoopstad Districts as well as substantial parts of the Warrenton, Christiana, Taung, Boshof and to some extent the Barkly West Districts. Also includes pediment areas in the Herbert and Jacobsdal Districts. Altitude 1 050–1 400 m.

Plains often slightly irregular with well-developed tree layer with *Acacia erioloba*, *A. tortilis*, *A. karroo* and *Boscia albitrunca* and well-developed shrub layer with occasional dense stands of *Tarchonanthus camphoratus* and *A. mellifera*. Grass layer open with much uncovered soil.

VEGMAP (2006) further classify this area as part of the **[SVk 4] Kimberley Thornveld** over most of the prospecting right application area of 315.2013 hectares. See Figure 7 below. **Below is a summary of the plant species that may occur over the surrounding undisturbed areas, which in turn can be a source for regrowth of natural species once prospecting, have totally ceased over this area.**

Important Taxa: Tall Tree: *Acacia erioloba* (d). Small Trees: *Acacia karroo* (d), *A. mellifera* subsp. *detinens* (d), *A. tortilis* subsp. *heteracantha* (d), *Rhus lancea*. Tall Shrubs: *Tarchonanthus camphoratus* (d), *Diospyros pallens*, *Ehretia rigida* subsp. *rigida*, *Euclea crispa* subsp. *ovata*, *Grewia flava*, *Lycium arenicola*, *L. hirsutum*, *Rhus tridactyla*. Low Shrubs: *Acacia hebeclada* subsp. *hebeclada* (d), *Anthospermum rigidum* subsp. *pumilum*, *Helichrysum zeyheri*, *Hermannia comosa*, *Lycium pilifolium*, *Melolobium microphyllum*, *Pavonia burchellii*, *Peliostomum leucorrhizum*, *Plinthus sericeus*, *Wahlenbergia nodosa*. Succulent Shrubs: *Aloe hereroensis* var. *hereroensis*, *Lycium cinereum*. Graminoids: *Eragrostis lehmanniana* (d), *Aristida canescens*, *A. congesta*, *A. mollissima* subsp. *argentea*, *Cymbopogon pospischilii*, *Digitaria argyrograpta*, *D. eriantha* subsp. *eriantha*, *Enneapogon cenchroides*, *E. scoparius*, *Eragrostis rigidior*, *Heteropogon contortus*, *Themeda triandra*. Herbs: *Barleria macrostegia*, *Dicoma schinzii*, *Harpagophytum procumbens* subsp. *procumbens*, *Helichrysum cerastioides*, *Hermbstaedia odorata*, *Hibiscus marlothianus*, *Jamesbrittenia aurantiaca*, *Lippia scaberrima*, *Osteospermum muricatum*, *Vahlia capensis* subsp. *vulgaris*. Succulent Herbs: *Aloe grandidentata*, *Piранthus decipiens*.

Figure 7: VEGMAP classification: [SVk 4] Kimberley Thornveld



Biogeographically Important Taxa: (^{GW}Griqualand West endemic, ^KKalahari endemic) Low Shrub: *Blepharis marginata*^{GW}, Succulent Shrub: *Euphorbia bergii*^{GW}, Graminoid: *Panicum kalaharensis*^K, Herbs: *Helichrysum arenicola*^K, *Neuradopsis bechuanensis*^K, Succulent Herbs: *Lithops aucampiae* subsp. *aucampiae*^{GW}, *Tridentea marientalensis* subsp. *marientalensis*^K.

Conservation: Least threatened. Target 16%. Only 2% statutorily conserved in Vaalbos National Park as well as in Sandveld, Bloemhof Dam and S.A. Lombard Nature Reserves. Some 18% already transformed, mostly by cultivation. Erosion is very low. Area is mostly used for cattle farming or game ranching. Overgrazing leads to encroachment of *Acacia mellifera* subsp. *detinens*. **References** Bezuidenhout (1994, 1995), Smit (2000).

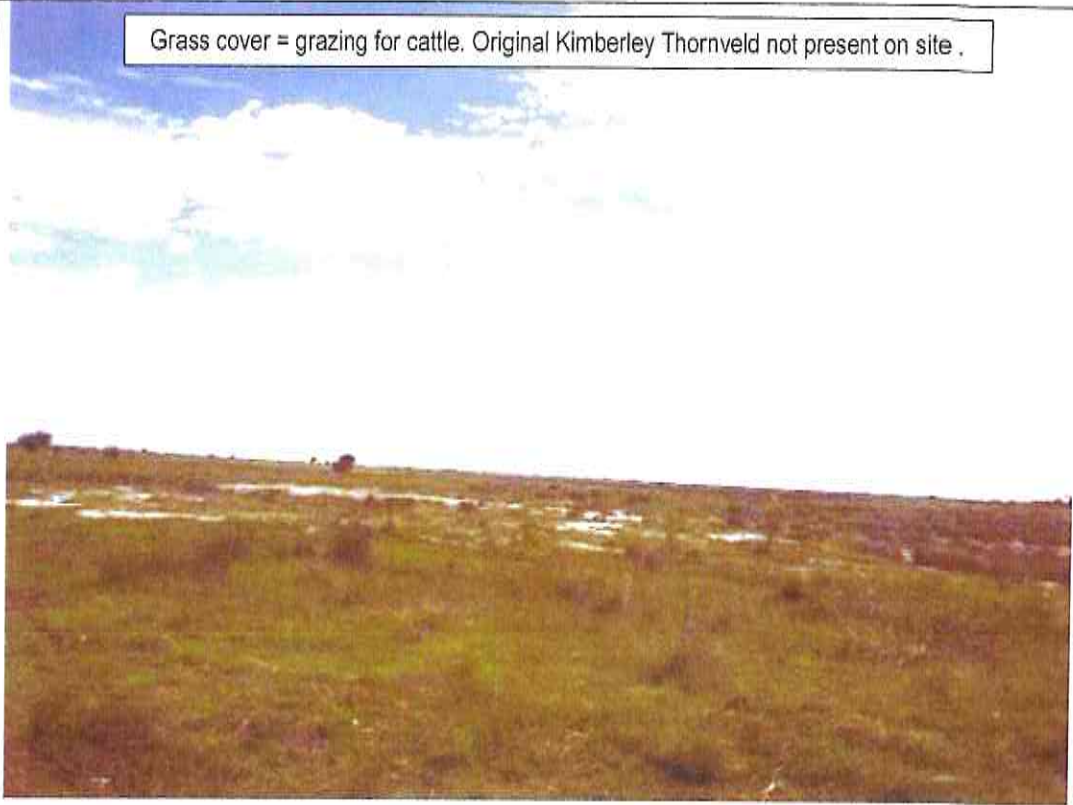
Some indication of the **original vegetation type** could be found on the 315.2013 ha. Though the years the site have been disturbed by agricultural activities (grazing for cattle) and historic prospecting activities. This is a "brownfields site".

See photo table (next pages):

PHOTO

1

Grass cover = grazing for cattle. Original Kimberley Thornveld not present on site .

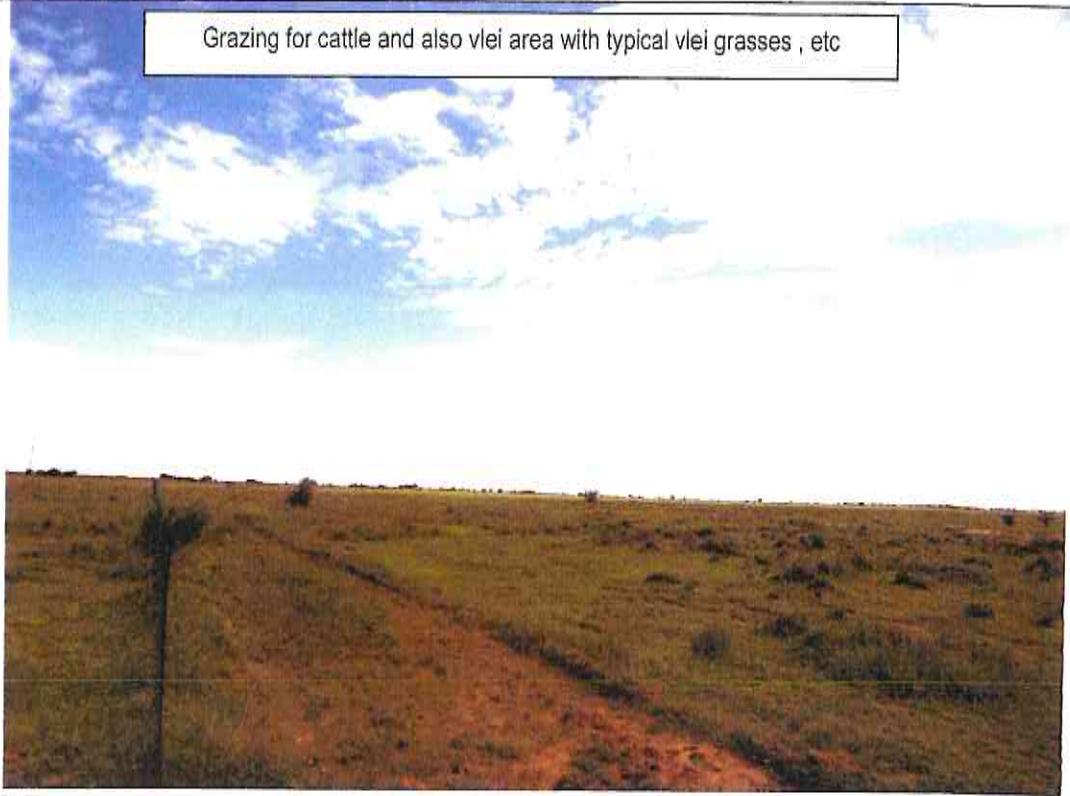


3

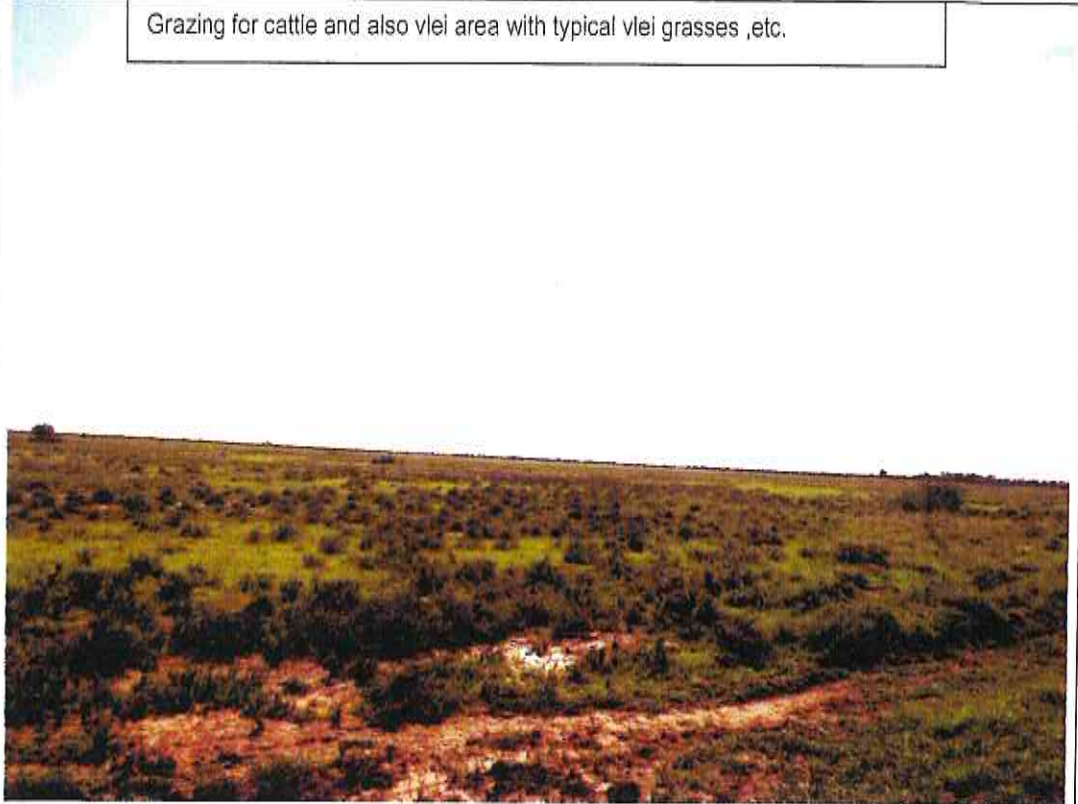
Standing water in old opencast excavation



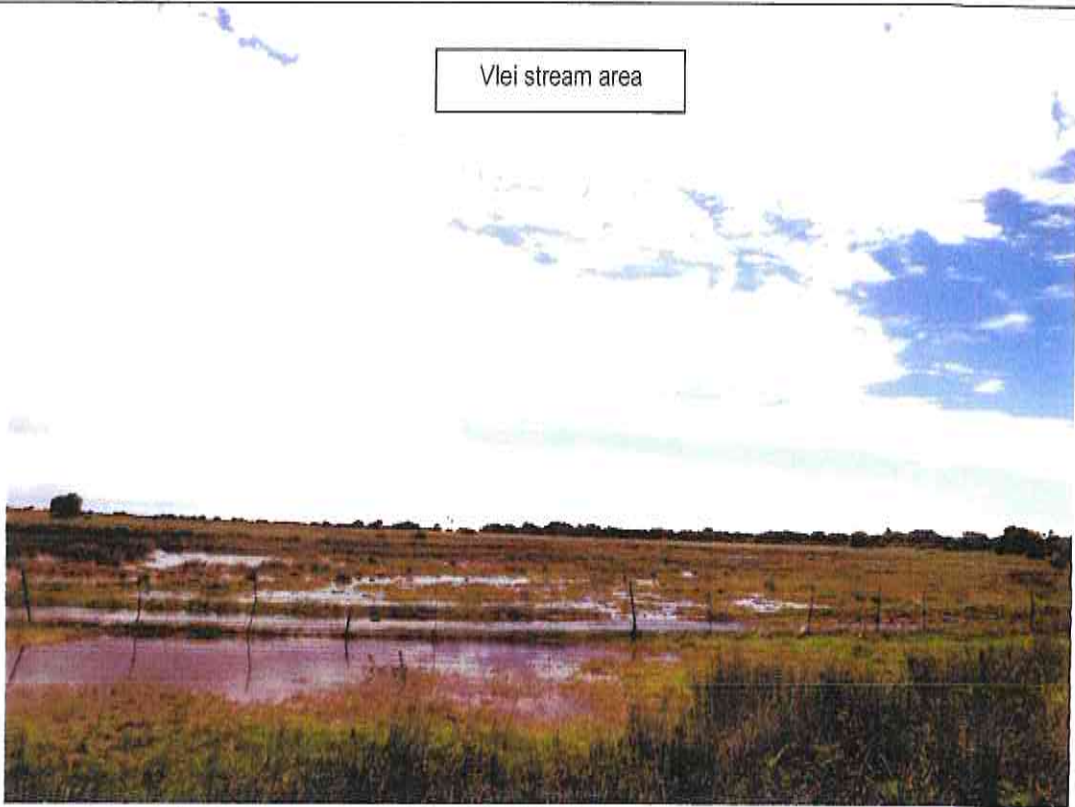
Grazing for cattle and also vlei area with typical vlei grasses , etc



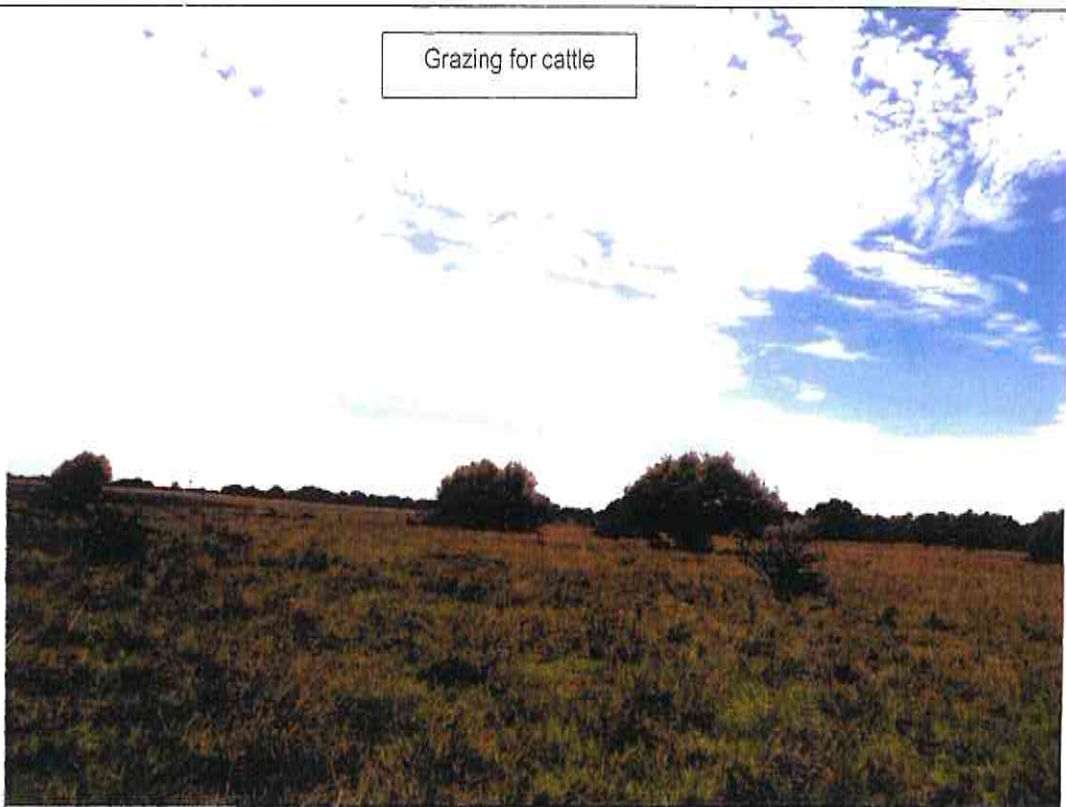
Grazing for cattle and also vlei area with typical vlei grasses ,etc.



Vlei stream area



Grazing for cattle



Screening of environmental sensitivity of the proposed site (See Appendix 3 for full report):

Furthermore according to the DEDACT's (Department of Economic Development, Environment, Conservation and Tourism's) screening tool the footprint of this application area, although only **small scale prospecting (0.96 ha disturbed over 36 months)**, are classified (by background reference to the whole prospecting right application area (31.2013 ha) as per summary table below.

According to the **screening of environmental sensitivity of the proposed prospecting right application area (315.2013ha)** it is indicated that **Terrestrial Biodiversity Theme** was classified as being VERY HIGH. Also the whole of the area is being regarded as to have a LOW environmental sensitivity with regard to plant species and LOW with regard to animals. The majority of the areas have been disturbed by agricultural activities and certain parts by historic mining activities. The site itself does not represent anymore the SVk4 Kimberley Thornveld. All trees, shrubs have been removed on the site is being utilized as grazing for cattle (agricultural use). **The prospecting right site should be regarded as a "brownfields site"** as the site has been disturbed by agriculture and historic prospecting activities. During the site investigation Cattle were found on site. The **Animal Species Theme** is regarded as of LOW sensitivity. **The site has been disturbed by agricultural activities in the past and currently** and it is likely that animals would not stay in such a habitat but rather move to other undisturbed areas.

Palaeontology Theme was further classified as being HIGH sensitivity. It is however not foreseen that there will be any such sites of the application area that the landowner (applicant) may not be aware of any findings and they would have come across item if there were any. **The prospecting activity will be only alluvial gravel and not hard rock formations.** The prospecting project manager will have to keep a look out for possible sightings and report it as soon as possible.

According to the screening of environmental sensitivity of the proposed site it is indicated that **Agricultural Theme** was classified as being MEDIUM sensitivity. The prospecting activities will disturb only 0.96 ha in total over 36 months and should be regarded as a "brownfields site" as the site has been disturbed by agriculture activities (Grazing for cattle) and historic prospecting activities. . No cultivation is taking place .Only grazing by cattle. Rehabilitation of the 0.96 ha site will return the site to some grazing capability for cattle. **The majority of the farm still continues with agricultural activity (grazing for cattle)(IV; marginal potential arable land) and is in no way hindered by the proposed activity and the environmental sensitivity for the 0.96 ha should be low.**

According to the screening of environmental sensitivity of the proposed site it is indicated that **Plant species Theme** was classified as being MEDIUM sensitivity. **Giving the fact that the majority of the prospecting right application area is regarded as of MEDIUM environmental sensitivity and the fact that the remaining area has been impacted by agricultural activities the site is actually "Brownfields site".**

See Summary: See results of full screening report Appendix 3 for KAREEFONTEIN 340 HO (over the Remaining extent of Portion 12) within the prospecting right application area of 315.2013 ha in total as shown in Table 4 below.

Table 4: DEDACT - Screening Report

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme			X	
Animal Species Theme				X
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme				X
Civil Aviation Theme			X	
Defence Theme				X
Palaeontology Theme		X		
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Climate: Warm-temperate, summer-rainfall region, with overall MAP of 520 mm. Summer temperatures are high. Severe frequent frost occurs in winter.

Geology & Soil: Andesitic lavas of the Allanridge Formation of the Ventersdorp Supergroup, sometimes covered with silcrete or calcrete of the Kalahari Group. **Shallow Brandvlei Form (Orthic A/Soft calcrete horizon) soils.**

Up to 1984, the total alluvial diamond from secondary deposits in the North-West Province was about 14.4 million carats. Small scale production persists today. The deposits lie within three geographical areas: The Lichtenburg field (67.8% of total production); the Ventersdorp field (18.6%) and the Schweizer-Reneke-Wolmaransstad-Bloemhof field (13.6%). In the Schweizer-Reneke area there are three distinct gravel types: (a) the oldest "Rooikoppie" gravel, a chemically mature one to two metre thick, unsorted lateritized colluvial gravel unit, situated on hillcrests and the upper sections of hill slopes; (b) the younger upward fining "terrace-type" gravels of one to four metres thick occurring on the lower slopes of the present drainage valleys; and (c) the youngest "spruittype" gravels, texturally and compositionally similar to the terrace-type gravels and occur in the current river valley floors. At Schweizer-Reneke, the per-carat value of diamonds is much higher than Lichtenburg, suggesting that these diamonds have undergone some transport. No primary sources for the diamonds in any of these alluvial fields have been identified.

River terrace gravel (Qa) occurs along the Vaal River at Christiana, along the tributaries of the Vaal River north and north-east of Bloemhof and south of Vryburg (Harmse 1963, Butzer 1971, Butzer et al. 1973). The oldest gravels occur higher above and farthest from the Vaal River or before, and formed when the Vaal River shifted south east wards during the Lower Pleistocene (Harmse 1963).

The old red sand is found on Dundee 807 (Free State) just west of the Bloemhof Dam as river boundary dunes. The sand is coarser than the other sands. The characteristic vegetation on this is *Acacia erioloba* (Harmse 1963). Diamond bearing gravel forms strips between the Vaal- and Harts Rivers and the surface runs of the Vaal River. The best known are the Gezicht-, Kafferpan-, London-, Bloemhof-, Bamboes Spruit, Vaalbank- and Makwassie strips (Stratten 1979). The oldest gravel in the area is known as the Rooikoppie Gravel. It occurs as a 1-2 m thick, unsorted, matrix-propped upward-finer-becoming cycle that has been completely lateralized. This gravel is usually found on the crests of cups or on the upper hill slopes ("hill slopes"), and is overlaid by a ground cover up to 1 m thick. Younger terrace deposits occur on the lower slopes of the present tributaries of the Vaal- and Harts Rivers. These gravels are about 1-4 m thick and occur under an 8-10 m cover of sand, silt and lime screed. Economic diamond deposits are found in vortex hole in the Ventersdorp lava, behind obstructions such as large boulders in ancient river channels and in sand banks. The latest

gravel is found in the current tributaries of the Vaal River, and represents newer reworking all parent deposits. The diamonds found in the area, is generally of a high quality.

This type of geology in the Bloemhof district normally has good prospects for alluvial diamond bearing gravel. The geology of the region is made up of andesitic lavas and tuffs dating to the Allanridge Formation of the Ventersdorp Supergroup. All the different fluvial terrace deposits are covered by Rooikoppie gravels, which represent mobile, multi-cycle deflation and gravitational deposits and/or elevated (inverted) fluvial deposits and preserved and recycled repeatedly from one successive land surface to the next. This type of geology in the Bloemhof district normally substantiates alluvial diamond gravel. Alluvial prospecting historically and on adjacent farms in this area did show the potential of alluvial gravel.

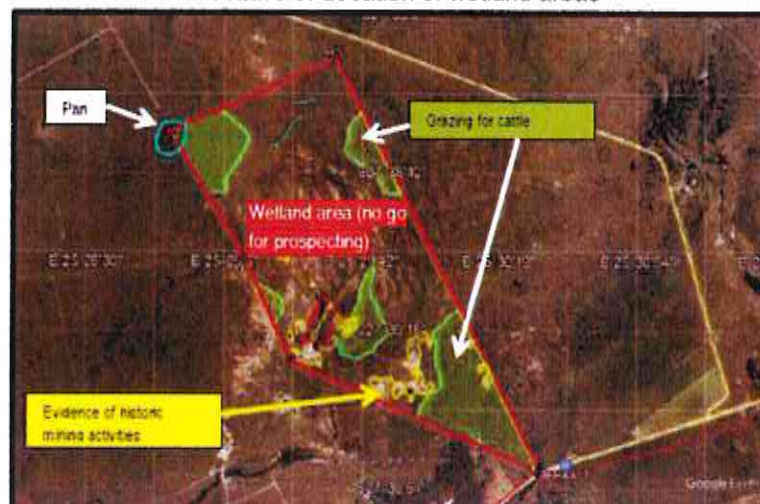
See Geological map attached as Annexure 4.

Animal Life [Fauna]: Not many species were directly observed but the presence of nesting sites in the area is an indication that this area is an acceptable habitat for shelter and food for avian species. The natural animal life occurring over the application area includes but is not restricted to, small animals common in this area. List of mammals which are likely to occur over the project area were derived based on distribution record from the Animal Demography Unit (ADU) web portal: <http://ymus.adu.org.za>. Animals that are likely to occur here are: *Cynictis penicillata* (Yellow Mongoose), *Sylvicapra grimmia* (Bush Duiker), *Hystrix africaeaustralis* (Cape Porcupine), *Canis mesomelas* (Black-backed Jackal), *Herpestes sanguineus* (Slender Mongoose), *Raphicerus campestris* (Steenbok), *Otocyon megalotis* (Bat-eared Fox), *Phacochoerus africanus* (Common Warthog (Suidae). The study area is being known for the agriculture with regard to the production of Cattle.

Surface Water: This application area fall within the water management area of the Lower Vaal (10) and secondary catchment area C91 and tertiary drainage region C91A (Surface area 360 km²). It is not expected that this prospecting sites area will have any effect on the surface runoff in the drainage catchment area (C91A). *There is a wetland area on site that will definitely be impacted on by proposed prospecting activities, if it comes within 100-meters of this wetland area. See description under SENSITIVE LANDSCAPES for further information. No prospecting could take place within 100m from such sensitive landscape.*

According to NEMA's Screening Tool the Aquatic biodiversity sensitivity was classified as being VERY HIGH sensitive.

Figure 8: Location of wetland areas

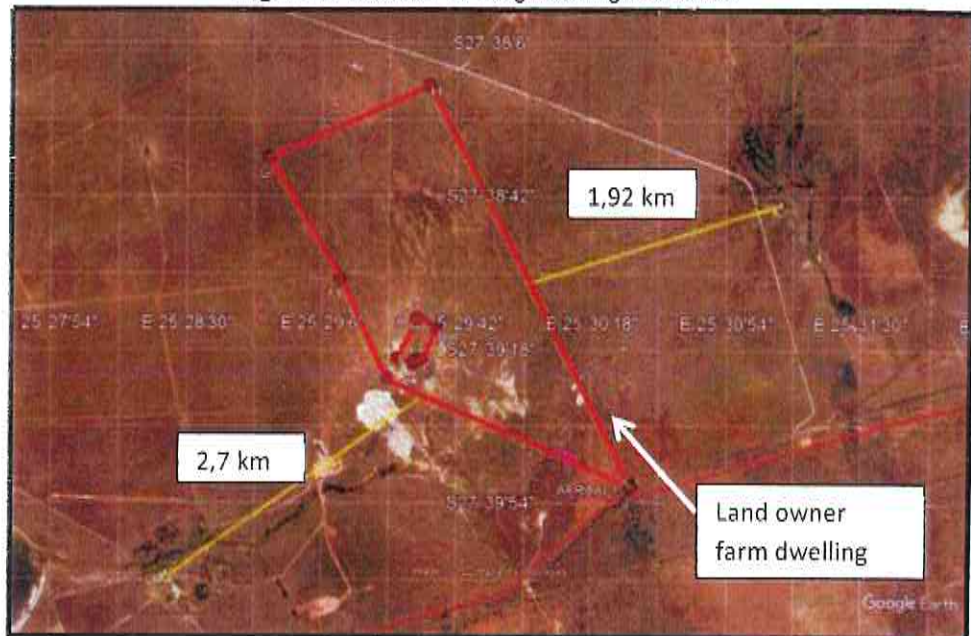


Ground Water: The applicant intends TO USE WATER from a BOREHOLE located on the farm. Water uses will be 2'000 liters a day for the primary processing in the bulk sampling phase.

Air Quality: The impact on air quality will occur from test pits, trenches and movement on the roads. This impact will be low and will be monitored and mitigated through wetting of the roads. This area falls in a very rural area and the impact from windblown dust particles, can have just as big an impact. Areas where testing are completed must be backfilled and re-vegetated so soon as possible to establish a vegetation layer in order to retain the loose soil fractions.

Noise: The impact of noise will be generated by the prospecting equipment. This operation will only be in day time working hours and will have a low impact on current surroundings. And because of the extent of this prospecting activities over the next 36 months is limited to only 0.96 ha, the sound will get lost and no residence on neighboring farms will be adversely affected. The landowner's farmstead is also being located within the application area and will they be the most affected by any noise of the prospecting activities. The impact may be greater with regards to wild animals, but they tend to move away toward areas less influenced by noise disturbance.

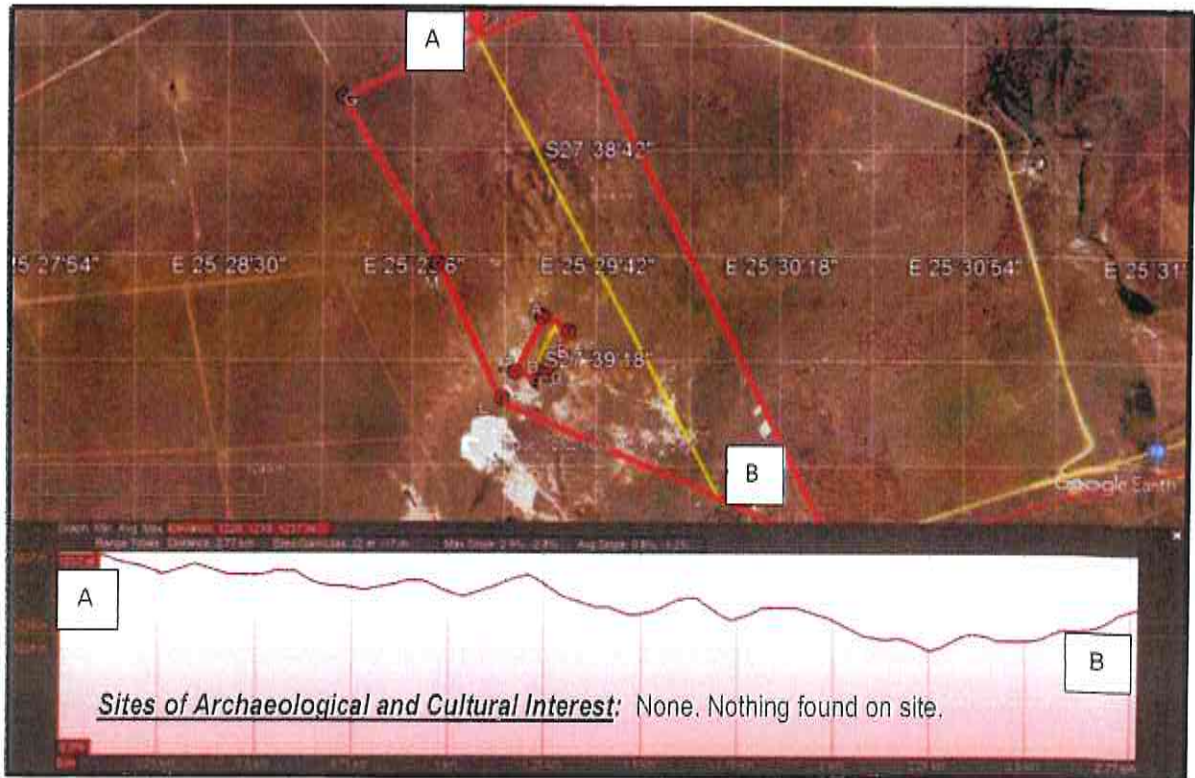
Figure 8: Location for neighbouring residence



Sensitive Landscapes: An extensive wetland area, pans are located on the 315.2013 ha site. See Surface water section for more info regarding the location of the site. No prospecting could take place within such a sensitive landscape.

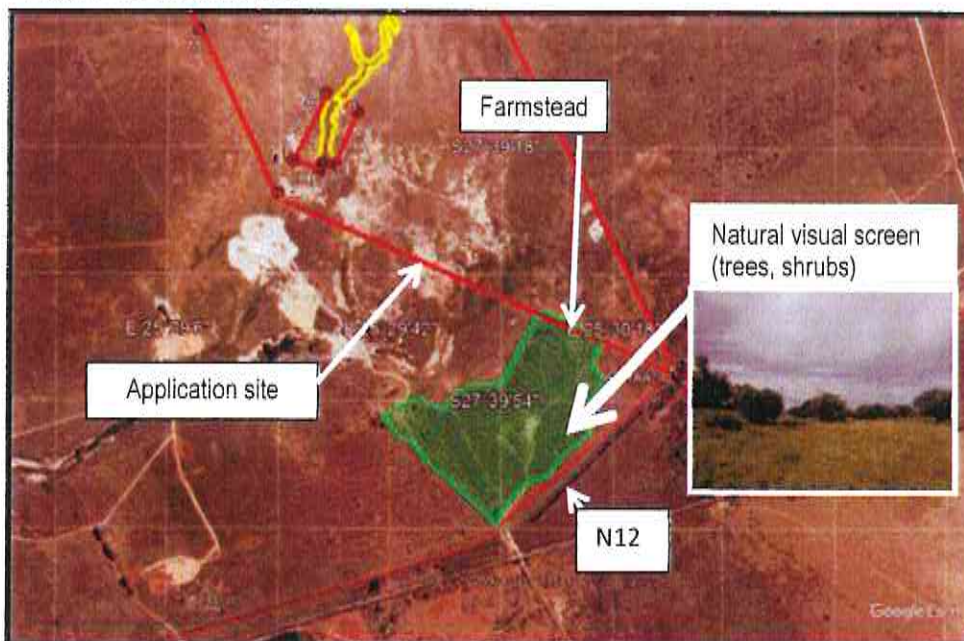
Topography: The site has one terrain type, which is characterized as "Plains with pans" (Terrain Morphological Map of S.A. 1983), covered with grassland. The average slope is 0.8 % that can be described as flat (see slope profile, Figure 9). The average elevation is between 1228-1237 m meters above sea level (masl) over most of the prospecting right permit application area.

Figure 9: Slope profile



Visual Aspects: These prospecting activities will be not visible to the landowner. The landowner's farmstead is located within the application area. The site will not be visible from the N12, as the site's visibility of the site is obscured by trees and shrubs that act as a natural visual screen.

Figure 10: Visual aspect



Social: The proposed activity will employ **7 people (manager included)**. Various social amenities are available close to the operation. These include schools, hospitals, clinics, churches, recreation facilities as well as a Police Station at Bloemhof, which is located \pm 10 km away from the proposed operation.

(a) Description of the current land uses.

The current land use (agricultural) is natural vegetation for grazing by cattle and cultivated maize fields. There are also areas that were previously mined.

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

The application is over: **KAREEFONTEIN 340 HO (over the Remaining Extent of Portion 12)**. This area consists of natural vegetation (grazing for cattle) and historical disturbed prospecting areas (rehabilitated and disturbed). **The focus area of prospecting activities will be mainly on the grazing areas for cattle. Wetland areas and pan will not be available for prospecting**

All of the above infrastructure can be seen on the Infrastructure Plan - **Appendix 1(b1 & b2)**. **The surrounding farms** areas are mostly utilized as cultivated field for cash crops and natural grazing and prospecting/prospecting. The evidence of years of alluvial diamond prospecting can clearly be seen over these neighbouring areas. Access to farm will be from the N12 running between Bloemhof and Christiana via a farm road. See **Appendix 1(b1 & b2)** for Infrastructure Plan of the application area.

(c) Environmental and current land use map.

Current land use on the application area is grazing over natural veld. This is privately owned land (Barry Wentzel Trust). See **Appendix 1 C** for more detail.

v) Impacts and risks identified

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1){(h)} (g)(v)

The proposed project is anticipated to impact on a range of biophysical and socio-economic aspects of the environment. The main purpose of the Scoping Report is to identify and evaluate the significance of these potential impacts and determine how they can be minimized or mitigated.

It should be noted that a comprehensive Environmental Management Program (EMPr) will be developed and implemented to regulate and minimize the direct, indirect and cumulative impacts during the construction and operational phases. The potential environmental impacts identified during the Scoping Phase, which will be investigated further in the Impact Assessment Phase of the project are summarized in **Table 5** on the next page.

Table 5: Impact significance identification matrix for – Kareefontein 340 HO

PHASE	Components	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
		Geology	Topography	Soil	Land capability	ABIOTIC				BIOTIC				VISJA Visual impact	SOCIO-ECONOMIC	
						Surface water	Land use potential	Air quality	Noise	Vegetation	Wildlife	Sensitive landscapes	Archaeological & cultural sites		Socio-economic impacts	Affected parties
1	Activity, Product or Service															
2	Demarcation of prospecting focus area. Establishment (site preparation, vegetation clearance, topsoil removal and stockpiling) of proper access roads (upgrade existing road), site workshop & storage area (temporary containers), mineral processing plant conveyor, mobile screen and 1 x 14 feet washing pan, generator, ect.) Initial vegetation clearance, topsoil removal & stockpiling next to first opencast/trench within the mine focus area		M	H	L	L		H	H	H	L	L				M
3	Establishment of banded diesel and oil/chemical storage facilities, chemical		M	H					M			M				
4	Provision of storage tanks for potable (drinking water) and process water (dust suppression).		H	H	H	H	M	H	H	H	M	L				
5	Provision of waste handling/disposal facilities (domestic & industrial waste bins.			L			L				L					
6	Fencing-off active prospecting site in as required in terms of the M-E-SA. Ensure access control (gate), ect.				M					M		M				H+
7	Vegetation clearance, topsoil removal & stockpiling next to opencast/trench within the mine focus area (0.5 ha of surface area disturbed at any given time).		M	H	H	M	L	L	H	L		L		M		H

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PHASE	Components	A	B	C	D	E	F	G	H	I	J	K	L	M	N												
																ABIOTIC						BIOTIC				SOCIO-ECONOMIC	
																Geology	Topography	Soil	Land capability	Land use potential	Surface water	Ground water	Air quality	Noise	Vegetation	Wildlife	Sensitive landscapes
	Activity, Product or Service																										
8	Mechanically excavating overburden with an excavator and stockpile separately from spoil dump. Remove gravel with excavator and stockpile on site of trench pit to load onto trucks	H	H+	H	H	H	L	M	L	H	L			M	H												
9	Transport with trucks to mineral processing plant (scraper, screen, 1 x 14' belt washing pans) for processing and sorting of concentrate at set intervals.			H			L	H	L	H				M	H												
10	The wet waste tailings coming out of the pans will be pumped to open excavations & pore team, from where excess water is recycled.	M	H	H	H	H	H	M	L					M	H												
	Backfilling of excavations (as part of concurrent rehabilitation) the coarse gravel (rough) sifted from the pans will be transported back by front-end-loaders towards all open pits for backfilling.																										
11	Final backfilling of all voids/trenches/pits and topping of overburden dumps (excess material as the result of swell factor).	H+	H+	H+	H+	H+	H+	H+	L					H+	H±												
12	Compaction of backfilled sites		H+	H+	H+	H+	H+	H+	L					H+	H+												
13	Replace and spread all spoil evenly over backfilled sites		H+	H+	H+	H+	H+	H+	L	H+				H+	H+												
14	Establishment of vegetation cover			H+	H+	H+	H+	H+		H+				H+	H+												
15	Removal of all temporary & completion of all permanent structures (Section 44 of the MIPDOP)			H+	H+	H+	H+	H+	L	H+				H+	H+												

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PHASE	A	B	C	D	E	F	G	H	I	J	K	L	M	N		
															ABIOTIC	
Components	Geology	Topography	Soil	Land capability	Land use potential	Surface water	Ground water	Air quality	Noise	Vegetation	Wildlife	Sensitive landscapes	Visual impact	Archaeological & cultural sites	Socio-economic impacts	Affected parties
Activity, Product or Service																
Rehabilitation of all access roads, compacted areas, etc.			H+	H+	H+	H+	H+	H+	L	H+	H+		H+		H+	H+

vi) **Methodology used in determine prospecting the significance of environmental impacts**

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix2 – 2. (1)(h) (g)(vi)

I. **Introduction:**

Table 6 describes and evaluates the effects of the different prospecting projects and the associated activities on the natural and social environments. The different environmental components, on which the project (can/may) have an impact, are:

- | | |
|--------------------|---------------------------------------|
| 1. Geology | 10. Air Quality |
| 2. Topography | 11. Noise |
| 3. Soil | 12. Archaeological and Cultural sites |
| 4. Land Capability | 13. Sensitive Landscapes |
| 5. Land Use | 14. Visual Aspects |
| 6. Vegetation | 15. Socio-economic Structure |
| 7. Wildlife | 16. Interested and Affected Parties |
| 8. Surface Water | |
| 9. Ground Water | |

IMPACT ASSESSMENT

Before the impact assessment could be done the different project activities were identified:

ACTIVITIES:

3. Access Roads (Existing farm roads to be upgraded)
4. Temporary office, workshops, ablution facility, water tanks, diesel tanks and other temporary buildings
5. Prospecting equipment (conveyor, drum screen, 1 x 14 feet washing pan, generator)
6. Stockpiles
7. Overburden dumps
8. Opencast and test pits & trenches (as part of bulk sampling)
9. Tailings dam (porrei dam)

II. **Environmental Impact Assessment Summary:**

- **Environment likely to be affected by the prospecting operation. (See Appendix 1(b) for location)**

Environmental aspect	Affected		Not affected
	Negligible	Substantial	
1. GEOLOGY		X	
2. TOPOGRAPHY	X		
3. SOIL		X	
4. LAND CAPABILITY		X	
5. LAND USE	X (Only 0,96 ha will be effected over a 36 months period in total)		
6. VEGETATION		X	
7. WILDLIFE	X		
8. SURFACE WATER			X
9. GROUND WATER	X		
10. AIR QUALITY	X		
11. NOISE	X		
12. SENSITIVE LANDSCAPES			X

13. VISUAL ASPECTS	X		
14. SOCIO ECONOMICS	X		
15. INTERESTED & AFFECTED PARTIES	X		
16. ARCHAEOLOGICAL			X

- **Environment likely to be affected by the alternative land use**

Prospecting will be a new land use over this area. The site that is earmarked for prospecting represents $\pm 0,3$ % of the total area applied for. And it is further not foreseen that prospecting activities would disturb an area of not more than 0,5 ha at any given time. The rest of the terrain would continue to be used for agriculture purposes by the landowner.

- **Assessment of the impacts created by the prospecting activity**

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

Explanation of probability of impact occurrence

Probability of impact	Explanation of probability
Very low	<20% sure of particular fact or likelihood of impact occurring.
Low	20 to 39% sure of particular fact or likelihood of impact occurring.
Moderate	40 to 59% sure of particular fact or likelihood of impact occurring.
High	60 to 79% sure of particular fact or likelihood of impact occurring.
Very high	80 to 99% sure of particular fact or likelihood of impact occurring.
Definite	100% sure of particular fact or likelihood of impact occurring.

Explanation of extent of impact

Extend of impact	Explanation of extend
Site specific	Direct and indirect impacts limited to site of impact only.
Local	Direct and indirect impacts affecting environmental elements within the Bloemhof area.
Regional	Direct and indirect impacts affecting environmental elements within North West Province.
National	Direct and indirect impacts affecting environmental elements on a national level.
Global	Direct and indirect impacts affecting environmental elements on a global level.

Explanation of duration of impact

Duration of impact	Explanation of duration
Very short	Less than 1 year
Short	1 to 5 years
Medium	6 to 12 years
Long	13 to 50 years
Very long	Longer than 50 years
Permanent	Permanent

Explanation of impact significance

Impact significance	Explanation of significance
No impact	There would be no impact at all - not even a very low impact on the system or any of its parts.
Very low	Impact would be negligible. In the case of negative impacts, almost no mitigation and/or remedial activity would be needed, and any minor steps, which might be needed, would be easy, cheap and simple. In the case of positive impacts, alternative means would almost all likely to be better, in one or a number of ways, than this means of achieving the benefit.

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Low	Impact would be of a low order and with little real effect. In the case of negative impacts, mitigation and/or remedial activity would be either easily achieved or little would be required, or both. In case of positive impacts, alternative means for achieving this benefit would likely be easier, cheaper, more effective, less time-consuming, or some combination of these.
Moderate significance	Impact would be real but not substantial within the bounds of those which could occur. In the case of negative impacts, mitigation and/or remedial activity would be both feasible and fairly easily possible. In the case of positive impacts, other means of achieving these benefits would be about equal in time, cost and effort.
High significance	Impacts of a substantial order. In the case of negative impacts, mitigation and/or remedial activity would be feasible but difficult, expensive, time-consuming or some combination of these. In the case of positive impacts, other means of achieving this benefit would be feasible, but these would be more difficult, expensive, time-consuming or some combination of these.
Very high significance	Of the highest order possible within the bounds of impacts which could occur. In the case of negative impacts, there would be no possible mitigation and/or remedial activity to offset the impact at the spatial or time scale for which it was predicted. In the case of positive impacts, there is no real alternative to achieving the benefit.

III. Assessment of the nature, extent, duration, probability and significance of the potential environmental, social and cultural impacts of the proposed prospecting operation, including the cumulative environmental impacts

ASPECT	IMPACTS	CUMULATIVE IMPACTS							
1. GEOLOGY									
Nature of the impact	The geology will be destroyed during the opencast prospecting operation. During operation which will be for the next 36 months, the mineral resource (<i>Alluvial Diamonds</i>) will be extracted. Waste rock material/overburden material is disposed off/backfilled in existing excavations as part of the prospecting process.								
Extent	Site	Activity causing the impact							
Duration	Permanent	An opencast prospecting method will be used to extract bulk samples. Therefore the original geology will be totally destroyed.							
Probability	Definite								
Significance	High								
Phase responsible for the impact	<table border="1"> <thead> <tr> <th>Phase 1</th> <th>Phase 2</th> <th>Phase 3</th> <th>Closure</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> <td></td> </tr> </tbody> </table>		Phase 1	Phase 2	Phase 3	Closure	X	X	X
Phase 1	Phase 2	Phase 3	Closure						
X	X	X							

ASPECT	IMPACTS	CUMULATIVE IMPACTS							
2. TOPOGRAPHY									
Nature of the impact	<ul style="list-style-type: none"> * Change in landform : * The prospecting site is situated over level plains with some relief. * Disturbance of the surface drainage: The prospecting of the (<i>Alluvial Diamonds</i>) deposits will result in the creation of 100 test pits (3m x 2m x ± 2.5 m deep) during Phase 2, and 15 trenches (10 m x 60 m x ±3.5 m or less) during Phase 3, that act as depressions in the environment that captures run-off. Prospecting activities will be concentrated as indicated on Figure 5 on the application area (approximately 3.5m depth). Normal surface drainage will be disturbed at a given point. Run-off if any will be diverted away from the specific site. All prospecting activities will be kept 100 m horizontally from any surface water feature (wetland area, pans and streams).								
Extent	Site	Activity causing the impact							
Duration	Short	Bulk sampling through trenches, etc.							
Probability	Definite								
Significance	High								
Phase responsible for the impact	<table border="1"> <thead> <tr> <th>Phase 1</th> <th>Phase 2</th> <th>Phase 3</th> <th>Closure</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>		Phase 1	Phase 2	Phase 3	Closure	X	X	X
Phase 1	Phase 2	Phase 3	Closure						
X	X	X	X						

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3.1 SOIL	IMPACTS	CUMULATIVE IMPACTS			
Nature of the impact	The surface area is characterized by various soil depths. Any construction of infrastructure should be preceded by the removal of all available topsoil.				
Extent	Site	Activity causing the impact			
Duration	Long	In the process of removing topsoil the soil layers are mixed and the structure may be disturbed.			
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X		

3.2 SOIL	IMPACTS	CUMULATIVE IMPACTS			
Nature of the impact	The establishment, construction, operation and eventually rehabilitation (demolition) of listed structures such as the access roads, stockpiles /tailings dumps, cause compaction of soil. Some areas already disturbed thus no topsoil. All prospecting activities will be concentrated on the identified prospecting focus area where (<i>Alluvial Diamonds</i>) deposits could be found. In the same time a certain surface area is therefore alienated. The active prospecting surface area (alienated) would be restricted within the 0,96 ha (in relation to area of application of the prospecting right of 315.2013 hectares) for the next 36 months.				
Extent	Site	Activity causing the impact			
Duration	Short	Site preparation for additional prospecting sites and the construction, operation of listed infrastructure.			
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X	X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS			
3.3 SOIL					
Nature of the impact	Soil erosion: Due to the fact that certain surface areas would become compacted and this would lead to lesser infiltration of rainwater and more run-off that could cause erosion on bare disturbed surfaces. Erosion would always be possible until such time a vegetation cover is provided during rehabilitation phase.				
Extent	Site	Activity causing the impact			
Duration	Very short	When removing topsoil during site preparation, little storm water control structures are in place. If a severe storm hits the area, it may lead to erosion on site. Topsoil stockpiles may be prone to erosion			
Probability	Very low				
Significance	Low				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X	X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS			
3.4 SOIL					
Nature of the impact	Potential of soil contamination.	None.			
Extent	Site	Activity causing the impact			
Duration	Long	Vehicle/equipment breakages and oil/lubricant /diesel spills may contaminate soil.			
Probability	Moderate				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X	X	

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ASPECT	IMPACTS				CUMULATIVE IMPACTS
3.5 SOIL					
Nature of the impact	Loss of soil structure				None
Extent	Site				Activity causing the impact
Duration	Long				In the process of removing topsoil the soil layers are mixed and the structure may be disturbed.
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X		

ASPECT	IMPACTS				CUMULATIVE IMPACTS
3.6 SOIL					
Nature of the impact	Loss of soil fertility				None
Extent	Site				Activity causing the impact
Duration	Short				The mixing of soil during site preparation, compaction and potential pollution (spillages form oil etc.) all may cause this situation.
Probability	Definite				
Significance	Low				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X			

ASPECT	IMPACTS				CUMULATIVE IMPACTS
4. LAND CAPABILITY					
Nature of the impact	<p>Temporary loss of land capability to support grazing. The small area where the active prospecting activities occur (trenches, tailings dumps, stock piles, prospecting equipment) etc. will thus be temporary alienated, until the area is rehabilitated.</p> <p>All trenches would be rehabilitated as part of the prospecting process during which trenches are back-filled.</p> <p>If the old areas be re-worked this will make more land available for grazing. The rest of the application area will still be used by the landowner as agricultural land.</p>				
Extent	Site				Activity causing the impact
Duration	Long				Site preparation for additional prospecting sites and the construction, operation of listed infrastructure, the land capability of the active prospecting area will be totally destroyed.
Probability	Definite				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X	X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
5. LAND USE					
Nature of the impact	<p>This is a new prospecting operation and therefore the land use to support grazing on a certain portion of the 315.2013 hectares during the next 36 months will be lost. Only a small portions of land (0.96 ha) would be affected by the prospecting operation relation to the total prospecting right application area of 315.2013 hectares.</p> <p>All trenches would be rehabilitated as part of the prospecting process during which excavations are back-filled.</p>				
Extent	Site				Activity causing the impact
Duration	Short				Site preparation for prospecting and the construction, operation of listed infrastructure
Probability	Definite				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X		

ASPECT	IMPACTS	CUMULATIVE IMPACTS							
6.1 VEGETATION									
Nature of the impact	Vegetation clearance, disturbance and trampling. Destruction of habitats for vegetation. Due to a disturbed ecosystem, bare ground and spreading of exotics can follow.								
Extent	Site	Activity causing the impact							
Duration	Short	The site preparation for new sites, construction of listed infrastructure will cause destruction of habitats for vegetation. Due to a disturbed ecosystem, bare ground and invasion of exotics could further							
Probability	Definite								
Significance	High								
Phase responsible for the impact	<table border="1"> <tr> <td>Phase 1</td> <td>Phase 2</td> <td>Phase 3</td> <td>Closure</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> </table>		Phase 1	Phase 2	Phase 3	Closure	X	X	X
Phase 1	Phase 2	Phase 3	Closure						
X	X	X	X						

ASPECT	IMPACTS	CUMULATIVE IMPACTS							
6.2 VEGETATION									
Nature of the impact	Habitat change, loss of species, spread of alien and invasive species.								
Extent	Site	Activity causing the impact							
Duration	Permanent	The change in the current habitat will be mitigated during final rehabilitation.							
Probability	High								
Significance	Moderate								
Phase responsible for the impact	<table border="1"> <tr> <td>Phase 1</td> <td>Phase 2</td> <td>Phase 3</td> <td>Closure</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td></td> </tr> </table>		Phase 1	Phase 2	Phase 3	Closure	X	X	X
Phase 1	Phase 2	Phase 3	Closure						
X	X	X							

ASPECT	IMPACTS	CUMULATIVE IMPACTS							
6.3 VEGETATION									
Nature of the impact	Dust coverage of plants.	None							
Extent	Site	Activity causing the impact							
Duration	Short	Heavy trucks and other vehicles on dirt roads, stockpiling, dumping of tailings are mainly responsible for this impact.							
Probability	High								
Significance	Low								
Phase responsible for the impact	<table border="1"> <tr> <td>Phase 1</td> <td>Phase 2</td> <td>Phase 3</td> <td>Closure</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td></td> </tr> </table>		Phase 1	Phase 2	Phase 3	Closure	X	X	X
Phase 1	Phase 2	Phase 3	Closure						
X	X	X							

ASPECT	IMPACTS	CUMULATIVE IMPACTS							
7.1 WILDLIFE									
Nature of the impact	Wildlife or wildlife habitat destruction /change / disturbance.	None							
Extent	Site	Activity causing the impact							
Duration	Permanent	The flora which normally serves as habitat for animals would be destroyed during site preparation. The increase in activity will temporarily scare other animals. The area will serve as a new habitat after rehabilitation.							
Probability	Very High								
Significance	Moderate								
Phase responsible for the impact	<table border="1"> <tr> <td>Phase 1</td> <td>Phase 2</td> <td>Phase 3</td> <td>Closure</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td></td> </tr> </table>		Phase 1	Phase 2	Phase 3	Closure	X	X	X
Phase 1	Phase 2	Phase 3	Closure						
X	X	X							

ASPECT	IMPACTS	CUMULATIVE IMPACTS							
7.2 WILDLIFE									
Nature of the impact	Injury and death to wildlife.	None							
Extent	Site	Activity causing the impact							
Duration	Short	The movement of vehicles may kill certain insects, rodents and possible birds. Most of the remaining animal life will however move away due to noise.							
Probability	Very low								
Significance	Low								
Phase responsible for the impact	<table border="1"> <tr> <td>Phase 1</td> <td>Phase 2</td> <td>Phase 3</td> <td>Closure</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td></td> </tr> </table>		Phase 1	Phase 2	Phase 3	Closure	X	X	X
Phase 1	Phase 2	Phase 3	Closure						
X	X	X							

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ASPECT	IMPACTS				CUMULATIVE IMPACTS
7.3 WILDLIFE					
Nature of the impact	Restoration of habitat.				None
Extent	Site				Activity causing the impact
Duration	Short				As rehabilitation progresses the habitat of certain species will be restored/created (Closure objective) Animals will probably only move back when human movement is limited.
Probability	Low				
Significance	Low				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X	X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
8.1 SURFACE WATER					
Nature of the impact	Increased silt load Clearing topsoil for footprint areas can increase infiltration rates of water to the groundwater system and decrease buffering capacity of soils to absorb contaminants from spills on surface. This can increase the risk of contamination of the groundwater system (increases aquifer vulnerability).				
Extent	Local				Activity causing the impact
Duration	Short				The clearance of vegetation and the traffic on access roads will all contribute to an increase in the silt load on the prospecting area.
Probability	Moderate				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X	X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
8.2 SURFACE WATER					
Nature of the impact	Change in surface water quality Spillages from vehicles and also surface water run-off that is not adequately diverted away from the active prospecting excavations could end-up in the excavations creating problems regarding water quality and hindering the prospecting process. Surface run-off from active prospecting sites (overburden dumps & tailings dam/dump) if not adequately contained on site could end-up in the adjacent undisturbed natural veld. If the natural surface run-off is not adequately diverted in the case of the dry-water course area, prospecting sections it could become silted-up.				
Extent	Local				Activity causing the impact
Duration	Short				"Dirty / Clean" water systems at facilities like the overburden dumps, roads, trenches, etc. may impact on the quality of the surface water. The water should be contained in the surface runoff control
Probability	Moderate				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X		

ASPECT	IMPACTS	CUMULATIVE IMPACTS							
8.3 SURFACE WATER									
Nature of the impact	<p><u>Change in surface water quantity:</u> This application area fall within the water management area of the Lower Vaal (10) and secondary catchment area C91 and tertiary drainage region C91A (Surface area 360 km²). It is not expected that this 0.96 ha prospecting sites will have any effect on the surface run-off in the drainage catchment area (C91A). There are wetland areas on the prospecting area that will be impacted by the proposed prospecting activities. See description under SENSITIVE LANDSCAPES for further information. <u>No prospecting could take place within 100m from such sensitive landscape/ water body.</u> Standing water in pits & trenches could as the result of rain/ surface run-off ending up in shallow depressions. All prospecting activities should be kept 100 meter horizontally away from this surface water body.</p>								
Extent	Site	Activity causing the impact							
Duration	Short	It is an operational objective to contain or divert all surface run-offs from the active prospecting trenches area mainly due to pollution (sediment) potential. This will reduce the run-off quantity, although small in comparison with the drainage area in total.							
Probability	High								
Significance	High								
Phase responsible for the impact	<table border="1"> <thead> <tr> <th>Phase 1</th> <th>Phase 2</th> <th>Phase 3</th> <th>Closure</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> <td></td> </tr> </tbody> </table>		Phase 1	Phase 2	Phase 3	Closure	X	X	X
Phase 1	Phase 2	Phase 3	Closure						
X	X	X							

ASPECT	IMPACTS	CUMULATIVE IMPACTS							
8.4. SURFACE WATER									
Nature of the impact	<p><u>Surface Water Quantity Use</u> No surface water abstraction will take place. No stream flowing in the area.</p>								
Extent	Site	Activity causing the impact							
Duration	Short	Opencast prospecting operation.							
Probability	Low								
Significance	High								
Phase responsible for the impact	<table border="1"> <thead> <tr> <th>Phase 1</th> <th>Phase 2</th> <th>Phase 3</th> <th>Closure</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>		Phase 1	Phase 2	Phase 3	Closure	X	X	X
Phase 1	Phase 2	Phase 3	Closure						
X	X	X	X						

ASPECT	IMPACTS	CUMULATIVE IMPACTS							
9.1 GROUND WATER									
Nature of the impact	<p><u>Reduction of groundwater quality</u> Prospecting activities are not likely to impact on local ground-water quality. No chemicals are used during the prospecting process. Handling of waste and transport of building material can cause various types of spills (domestic waste, pit latrines, hydrocarbons) which can infiltrate and contaminate of the groundwater system.</p>								
Extent	Site	Activity causing the impact							
Duration	Long								
Probability	Definite								
Significance	High								
Phase responsible for the impact	<table border="1"> <thead> <tr> <th>Phase 1</th> <th>Phase 2</th> <th>Phase 3</th> <th>Closure</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>		Phase 1	Phase 2	Phase 3	Closure	X	X	X
Phase 1	Phase 2	Phase 3	Closure						
X	X	X	X						

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ASPECT	IMPACTS				CUMULATIVE IMPACTS
9.2 GROUND WATER					
Nature of the impact	Water supply will be from a borehole with pipe/tanker to the site for prospecting use. The applicant intends TO USE WATER from a BOREHOLE located on the farm. Water uses will be 2'000 litres a day for the primary processing in the bulk sampling phase.				
Extent	Site				Activity causing the impact
Duration	Short				Opencast prospecting operation.
Probability	Low				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X	X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
10. AIR QUALITY					
Nature of the impact	Dust will be generated during the prospecting operation (loading with an excavator on to a dump truck) and transportation to the plant (conveyor, drum screen & washing pans) and on gravel/dirt/farm roads. The processing of the gravel is a wet process and therefore minimum dust is generated.				
Extent	Site				Activity causing the impact
Duration	Short				Initial construction work with regard to infrastructure (roads) that involves earth moving equipment. During the phase 2 & 3, dust could be generated as indicated during prospecting.
Probability	Moderate				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X	X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
11. NOISE					
Nature of the impact	Noise will be generated during the prospecting operation (loading with an excavator on to a dump truck) and transportation to the plant (conveyor, drum screen & washing pans). The application area itself is located in rural landscape. The impact would be of more importance regarding the direct worker environment that should adhere to the requirements in terms of the Mine Health and Safety Act.				
Extent	Local				Activity causing the impact
Duration	Short				Earth moving equipment and vehicles (trucks).
Probability	Definite				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X	X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS
12. ARCHAEOLOGICAL AND CULTURAL SITES		
Nature of the impact	The terrain is not archaeologically vulnerable. It is unlikely that the proposed development will result in any significant archaeological impact at the site. No graves were identified on site.	
Extent	Site	Activity causing the impact
Duration	Short	
Probability	Definite	
Significance	High	
Phase responsible for the impact	Phase 1 Phase 2 Phase 3 Closure	
	X X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS
13. SENSITIVE LANDSCAPE		
Nature of the impact	All prospecting activities must be kept 100 m horizontally away from any wetland area, stream or pan.	
Extent	Site	Activity causing the impact
Duration	Short	No activities will take within 100 m of the pan.
Probability	Definite	
Significance	High	
Phase responsible for the impact	Phase 1 Phase 2 Phase 3 Closure	
	X X X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS
14. VISUAL ASPECTS		
Nature of the impact	Prospecting will only be visible to landowners, neighbour and NO people traveling on the N12 road.	
Extent	Site	Activity causing the impact
Duration	Short	Diamond prospecting operation.
Probability	Definite	
Significance	Low	
Phase responsible for the impact	Phase 1 Phase 2 Phase 3 Closure	
	X X X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS
15. SOCIO ECONOMICS		
Nature of the impact	Increase in Socio – economic activity at local level. The project in itself would ensure that approximately 7 workers (including manager) would be assured of a job for some time. Job creation plays a major role in increasing the economic wellbeing of employees and their dependants in the Bloemhof district. Once all prospecting operations have ceased it would definitely have a negative impact.	The increase in socio-economic activity will add to the current growth and development in Bloemhof already created by industry and prospecting.
Extent	Local	Activity causing the impact
Duration	Long	Additional employment opportunities created.
Probability	Definite	
Significance	High	
Phase responsible for the impact	Phase 1 Phase 2 Phase 3 Closure	
	X X X X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
15. SOCIO - ECONOMICS					
Nature of the impact	The main impact on the landowners is visual impact and the small area of 0.96 ha that will not be available for agricultural activities over a period of 36 months.				The economic benefits in terms of investment and the delivery of services in the North West province will get an additional benefit from the project.
Extent	Regional				Activity causing the impact
Duration	Very Long				
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X		X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
16. INTERESTED & AFFECTED					
Nature of the impact	Impact of activities on I&AP's Temporary loss of utilization of the small prospecting focus areas (0.96 ha) for agricultural purposes. The long-term benefits far out-weight the current benefits from the current use. No negative impact is expected that could be appropriately mitigated, such as the eventual rehabilitation of the excavations.				
Extent	Local				Activity causing the impact
Duration	Short				
Probability	High				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X	X	X	

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

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(h) (g)(vii)

In terms of the EIA regulations, consideration must be given to alternatives. Alternatives are different approaches and ways of meeting the need, purpose and objectives of a proposed activity. Alternatives may include a location site alternative, activity alternatives, processes or technology alternatives, temporal alternatives etc. the no-go alternative or option is also considered, as it provides the baseline against which the impacts or other alternatives may be compared.

However, for this specific project, no alternatives have been investigated, with the exception of the no-go alternative. The reason for this being that the prospecting right is being applied for the sole purpose of prospecting (*Alluvial Diamonds gravels & Diamonds in Kimberlite*). The no-go option entails the continuation of the current land use (grazing for cattle) on the study site. The project will contribute towards providing continued jobs for current staff. Should the proposed project therefore not be authorized to proceed, it is anticipated that current employment opportunities will be terminated once the mineral reserves have been depleted.

The no-go option is therefore not a feasible option in this case, as it suggests that the mineral reserves should not be exploited and current employment opportunities should not materialize or be prolonged.

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

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(h)) (g)(viii)

There were no issues raised by any interested or affected parties or any one that was consulted. Up till now no comments were received from the State Departments, if comments still be received it will be addressed in the EIA.

The mitigation measures and technical management action plans which address potential impacts are discussed below:

Environmental Component	Geology
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<ul style="list-style-type: none"> No mitigation exists except to backfill the excavations (pits & trenches) with the rock waste material and fine tailings. As prospecting progressed and the excavation has been back-filled, a certain amount of overburden material and topsoil would be placed on these areas. This will not restore the geology, but will mitigate the impact. Planned, systematic and thorough prospecting of the mineral resource (<i>Alluvial Diamonds & Diamonds in Kimberlite</i>) should take place. Optimal utilization of the mineral resource should take place within the boundaries of the prospecting terrain. Strip, remove and store soil and overburden as far as practical in an orderly fashion and replace as far as possible on back-filled areas, in the reverse order once decision have been taken that no further prospecting would take place in a particular section or which might still be traversed by vehicles and disturbed in the process. Cognisance should be taken of the fact that bulk sampling would take place by means of an opencast prospecting method until such level is reach / cut-off point is reach where rehabilitation could begin. Care must be taken that the removal of (<i>Alluvial Diamonds & Diamonds in Kimberlite</i>) deposits by means of earthmoving equipment is restricted to what is really necessary to achieve the objective. 	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Optimal exploration of the mineral resource in order to ensure to facilitate better rehabilitation planning. The overburden and topsoil (where available) must be replaced in a responsible and planned manner in order to achieve some conformity with the surrounding undisturbed area.	

Environmental Component	Topography
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<ul style="list-style-type: none"> All pits & trenches should be back-filled with waste tailings material and eventually overburden material, covered with a shallow layer of topsoil (if available). Access to all active bulk sampling excavation areas should be controlled. The active bulk sampling area should be fenced off. The necessary warning signs should be put in place. All prospecting activities should be restricted to the fenced-off area. Surface run-off control should be put in place at active trenches (preventing water from entering) and also rehabilitated tailings dumps and overburden dumps in order to prevent the loss of growth medium on top of the dumps. <p>Prospecting would be done according to a definite PWP (only disturbing an area that is really necessary). As part of the PWP the handling of tailings material, overburden material, construction of dumps and back-filling of trenches should also form part of it.</p> <p>Rehabilitation of the new topographical landscape in such a way that it would blend in with the surrounding landscape and allow normal surface drainage to continue. As soon as a section of the prospecting site would not be explored anymore it should be rehabilitated (planned and phased manner).</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Rehabilitation of the new and old disturbances topographical landscape in such a way that it would blend in with the	

surrounding landscape and allow normal surface drainage to continue. Rehabilitation in such a way that the new landscape features would be stable and would not pose any safety hazard to human and animal anymore.

Environmental Component	Soil (topsoil & access roads)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Handling of topsoil as a natural resource: Any future expansion of the trenches or construction of infrastructure should be preceded by the removal of <u>all available topsoil</u>. The surface of any new areas to be disturbed must be kept to a minimum. <u>All available topsoil/overburden material should be removed and stockpiled for rehabilitation purposes.</u></p> <p>Access roads, etc.: The clearing of soil surface areas would be restricted to what is really necessary for the construction of infrastructure. Wherever possible all topsoil should be removed and stockpiled for rehabilitation purposes. Overburden material should also be stockpiled separately if practically possible. Topsoil and overburden material should be transported to an area earmarked for rehabilitation.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
The topsoil removed in the site preparation process should be replaced during the rehabilitation exercise.	

Environmental Component	Soil (soil compaction)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Soil compaction: The prospecting operation should only be restricted to what is really required (demarcated area of exploitation) within the fenced-off area. Access roads towards the sites would be restricted only to the roads (exiting farm roads & roads established in consultation with the surface owner). No land would be disturbed unnecessarily. Prospecting & rehabilitation should be done in a well-planned manner (according to a PWP) and in the process ensuring that activities are only restricted to surface areas really required. Compaction of soil surface areas would be alleviated once rehabilitation of certain area starts. Certain roads would probably remain for access (in consultation with the surface owner). Those that would not be required would be ripped and rehabilitated.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Alleviation of compaction of soils would be done during rehabilitation of the prospecting terrain, including roads.	

Environmental Component	Soil (Soil erosion)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Soil Erosion: To take preventive steps against land disturbance like erosion. Implement and maintain cut-off trenches/berms to prevent erosion. Re-vegetation of exposed soil surfaces (man-made surfaces on tailings dumps, overburden dumps, disturb surfaces in excavated sites, roads, etc.) should happen as soon as a particular activity has ceased in order to act as a sufficient erosion prevention measure.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No soil erosion must be visible and no potential for soil erosion must be present at closure.	

Environmental Component	Soil (Soil contamination)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Potential for soil contamination: Vehicles to be inspected to ensure no oil and hydraulic fluid leaks occur. All oil spills on soil to be removed and bio-remediate immediately (certain commercial products are available such as TerraSorb or it could be rehabilitated by means of the application of fertilizer and turn with a spade from time to time in order to enhance the natural occurring soil microbial activity). No servicing of vehicles must occur except on a concrete floor or over PVC lined area in an area allocated for that. Training w.r.t pollution hazards and their impact on the environment must be given as part of induction training. An incidence register for this purpose must be kept. Drip trays must be available and used where emergency repairs is done.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No soil contamination must be visible or known before closure can be given.	

Environmental Component	Soil (Soil structure)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Change in Soil structure: Ensure that all available (if any) topsoil is carefully removed in different areas. The soil must also be compacted as backfilling is done. No unnecessary driving outside the active prospecting area is allowed due to soil compaction that may occur. Use organic material e.g. manure to restore the soil structure during rehabilitation. Ensure that the rehabilitation plan makes provision for ripping of roads and spreading of organic material and that this is used during rehabilitation.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No compaction of any roads or any other area must be present during closure. If the soil structure is disturbed mitigation measures e.g. the use of organic material, lime and fertilizers must be implemented to restore the soil structure.	

Environmental Component	Soil (Soil fertility)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Soil fertility: Little can be done to preserve the moisture status of the soil once it is exposed. The soil must be used for rehabilitation as quickly as possible. The soil on the rehabilitated area must be analysed to determine the deficiencies and fertilizer and lime must be ploughed into the soil to restore its fertility, if necessary. Ensure that stockpiled soil is kept clean and where possible ensure that the topsoil is treated with organic material and fertilized. Do not use stockpiled soil for any other purpose but for rehabilitation. Do not use topsoil to construct roads. Ensure the rehabilitation plan makes provision for fertiliser. Make sure rehabilitated topsoil is analyzed in a laboratory. The type of fertilizer would depend on a soil analyses and fertilizer recommendation.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
The soil must be fertile enough to sustain vegetation.	

Environmental Component	Land Capability
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>The disturbance of land must be restricted (kept to a minimum) to the planned fenced-off, active prospecting site only. Remove topsoil where it is available. Take care that roads needed are restricted to one entry to the area for prospecting purposes. If new land is used for roads to enter the area it must be done in consultation with the surface owner.</p> <p>All rehabilitation will be done according to the final rehabilitation plans after approval by the Department of Mineral Resources (DMR). Topsoil will be placed in areas where it was removed and the areas will be re-vegetated accordingly. Ensure that the rehabilitation plan is implemented.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Rehabilitated to the state that it is suitable for the predetermined and agreed land capability.	

Environmental Component	Land Use
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>The disturbance of land must be restricted (kept to a minimum) to the planned active, fenced-off prospecting site only. Remove topsoil where it is available.</p> <p>Take care that roads are the only areas used to enter the area for prospecting purposes. If new land is used for roads to enter the area it must be done in consultation with surface owner.</p> <p>All rehabilitation will be done according to the final rehabilitation plans after approval by the Department of Mineral Resources (DMR). Topsoil will be placed in areas where it was removed and the areas will be re-vegetated accordingly. Ensure that the rehabilitation plan is implemented.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
The opencast section requires the land to be totally disturbed. The replacement of tailings material, overburden and topsoil would ensure that the land is able to support some grazing.	

Environmental Component	Vegetation
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>No mitigation exists except to replace the vegetation by reseeded of grasses and natural growth.</p> <p>Prospecting should be done in a well-planned manner (according to a PWP) and in the process ensuring that activities are only restricted to surface areas really required.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
During rehabilitation indigenous vegetation cover comprising of local plant species should be established in order to ensure a well-adapted sustainable plant cover that would be able to prevent erosion of the replaced topsoil on the disturbed prospecting site exposed surfaces, tailings dumps, etc.).	

Environmental Component	Vegetation
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Habitat change, loss of species, spread of alien and invasive species: No mitigation exists except to replace the vegetation by reseedling of grasses. Prospecting should be done in a well-planned manner (according to a PWP) and in the process ensuring that activities are only restricted to surface areas really required. <i>Develop and implement an invasive and alien control programme to control the spread of weeds and other invasive species.</i> Eradicate exotic weeds and invader species if it invades the terrain. All illegal invader plants and weeds shall be eradicated as required in terms of Regulation 15 & 16 of the Act on Conservation of Agricultural Resources, 1983 (Act no. 43 of 1983) which list the plants. An invasive and alien control programme must be implemented by the mine.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No invasive and alien species must be present after closure. A post-closure control program must also be implemented.	

Environmental Component	Vegetation
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Ensure that all roads on the prospecting site (utilized by prospecting vehicles) are daily sprayed with water to control dust. Site inspections to ensure the spraying are done.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No excessive dust must be present during the normal growth season after closure.	

Environmental Component	Wildlife (habitat)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Wildlife or wildlife habitat destruction /change / disturbance : To take care that no new or unnecessary destruction of habitats, other than the demarcated prospecting site should take place. Restoration of habitat: Ensure the rehabilitation plan is implemented.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
The animal life habitat must be restored after decommissioning. Success will be measured against the extent to which the animals return to the area.	

Environmental Component	Wildlife (Injury and death)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Injury and death to wildlife: Re-establish trees and grass cover as soon as possible during and after prospecting. Fence area off to ensure that no person can enter without permission. Ensure that the rehabilitation plan is compiled and executed. Keep incidence register on killings and disturbances.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	

Closure Objective
The animal life habitat must be restored after decommissioning. Success will be measured against the extent to which the animals return to the area.

Environmental Component	Wildlife
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Make game catching, traps, snares, poaching and any other unnecessary disturbance of animals a disciplinary offence. All staff must undergo basic environmental awareness lecture during induction training. Machine operators and drivers to undergo appropriate level of environmental impact training to ensure they understand their impact on the environment. Ensure all staff working on the opencast section undergo basic lecture during induction phase . Introduce the actions as listed above into disciplinary code as offence.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
The post-closure phase must be suitable for further restoration of the newly man-made animal habitat. The area must be stable and acceptable for the return of animal- and plant life.	

Environmental Component	Surface Water (quality)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Change in surface water quality: Storm water control measures must be implemented to divert clean water away from the active prospecting site and keep contaminated water contained. Water control structures must be well designed and constructed to ensure a minimum down wash of topsoil. Vegetation disturbance must be as little as possible. The PWP must be strictly adhered to. Re-vegetation to be done as quickly as possible. Final re-vegetation to be done as per rehabilitation plan. All prospecting activities must be kept 100 meters horizontally away from any surface water body (wetland area, stream, pan, etc.).</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
The post closure water run-off may in no circumstance impact negatively on the water quality.	

Environmental Component	Surface Water (quantity)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Change in surface water quantity: Once the area is rehabilitated the surface run-off will be restored and normal clean water run-off will end-up in the drainage system. Once the area is rehabilitated the normal surface run-off drainage will be restored according to rehabilitation plan. The disturbed surface area must be rehabilitated to ensure some normal drainage. Minimal run-off should end-up in trenches. Final rehabilitation will be done according to the final rehabilitation plans after approval by the Department of Mineral Resources.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Ultimately rehabilitation of the disturbed prospecting site and the construction of run-off control structures in a planned and phased manner would ensure normal drainage and stability of rehabilitated site.	

Environmental Component	Ground Water (quality)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Reduction of groundwater quality: Storm water control measures must be implemented to divert clean water away from the site and keep (silt) contaminated water contained.</p> <p>Vehicles to be inspected to ensure no oil and hydraulic fluid leaks occur. All oil spills on soil to be removed and bio-remediated immediately. No servicing of vehicles must occur except at the workshops. Training w.r.t pollution hazards and their impact on the environment must be given as part of induction training.</p> <p>Storage of fuel and oil should be done according to best practices, within a bunded area and in containers of which the integrity is sound.</p> <p>The prospecting processes will not introduce any harmful or toxic substances and the most likely sources of pollution to the groundwater system would be associated with the infrastructure and / or workshop area. The most likely contaminants is therefore nitrate and bacteria (from sewage / pit latrines), as well as hydrocarbons (from vehicle accidents, diesel storage and the workshop area).</p> <p>An incidence register for this purpose must be kept.</p> <p>Drip trays must be available and used where emergency repairs is done.</p> <p>All waste must be stored according to best practices and disposed at an authorized waste disposal facility.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Post water quality need to indicate a positive trend/improvement.	

Environmental Component	Ground Water (quantity)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>In the case of the use of borehole water: Reduction of groundwater quantity, lowering of groundwater level: Water levels in the boreholes that are used for prospecting activities should be recorded monthly.</p> <p>Water volumes should be recorded continuously to ensure compliance with the water use authorization for abstraction.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Post water quality need to indicate a positive trend/improvement.	

Environmental Component	Air Quality
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Dust: The prospecting method will serve as mitigation measure because prospecting will limit dust to the active prospecting area (area where the excavator and the trucks are operating).</p> <p>Daily spraying of roads with water. Inspection should be done on a daily basis.</p> <p>If new roads are constructed, in coordination with surface owner, dust pollution must be mitigated by means of spraying the roads with water.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Dust count must be the same as before prospecting. Rehabilitation of the bulk sampling site would ensure that no dust is generated from exposed surfaces.	

Environmental Component	Noise
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Ensure the required silencers are placed on all engines and compressors. No mitigation to reverse hooters is allowed due to safety standards.</p> <p>Inspection of vehicles and machinery to ensure silencers are fitted.</p> <p>Ensure that a complaints register is created, managed and maintained. Vehicles and earthmoving equipment should be equipped with the necessary silencers and regularly maintained in a good working condition.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No noise attributed to prospecting will be generated from the site after closure anymore. During decommissioning and closure phase some earth moving equipment and trucks would be utilized for rehabilitation.	

Environmental Component	Archaeological and Cultural Sites
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>However, the potential occurrence of unmarked graves or subsurface finds not recorded during this survey can never be excluded, so it is advised that SAHRA and a qualified archaeologist are informed immediately if archaeological objects are uncovered.</p> <p>All excavator operators must be sensitized as to identify and report any occurrence of such sites of artefacts. No activities should take place 20 m from the site.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No site of archaeological importance should be disturbed or damaged until the necessary permit from SAHRA has been issued.	

Environmental Component	Sensitive Landscapes
Environmental Management/Mitigation Measures/Action Plans/Commitments	
All prospecting activities must be kept 100 meters horizontally away from it.	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	

Environmental Component	Visual Aspects
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Visual impact would be addressed by means of;</p> <ul style="list-style-type: none"> * re-vegetation of disturbed areas with grasses; * removal of any temporary building, scrap, domestic waste, etc. that would otherwise contribute to a negative visual impact. <p>Concurrent rehabilitation should be done simultaneously as prospecting activities progress.</p>	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No residual visual impacts will remain after closure. The terrain should blend in with the surrounding landscape.	

Environmental Component	Socio-Economics
Environmental Management/Mitigation Measures/Action Plans/Commitments	
There will be a very small increase in Socio – economic activity at local level, because of the size of this prospecting activity.	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
The economic development must deliver a multiplier effect that will contribute to the local economy long after closure.	

Environmental Component	Interested and Affected Parties
Environmental Management/Mitigation Measures/Action Plans/Commitments	
Access control should always be a priority. Active prospecting site should be fenced off and also any deep water holes. If any problem should arise, meetings will be held with the landowners and affected parties to consult them on certain matters like permission to prospect and pollution. No prospecting should be conducted under or near any Eskom power line (10 m distance should be kept) (Permission of Inspector of Mines should be obtained.)	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Not to be an economic, social or environmental liability to the local community or the state now or in the future. The company will ensure that the interest of all interested and affected parties will be considered.	

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

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(h) (g)(ix)

As this is a prospecting operation of the whole of the application area (315.2013ha) will have to be geologically surveyed in order to determine where economical viable prospecting sites could be located. It will also not be a static operation as the whole area will eventually be sampled and analysed.

x) Motivation where no alternative sites were considered

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(h) (g)(x)

Alternative is not applicable. The current land use is agriculture (mainly natural grassveld for grazing by cattle). The option to explore the possibility for prospecting is not an alternative land use, as previous prospecting/prospecting has already taken place over certain areas. The applicant, BITFLOW INVESTMENTS (PTY) LTD, is not interested in any other alternative land use over this land aside for exploration of the said minerals, or any other activity, or method use other than prospecting in the conventional way, which is the most cost effective. Please note that no additional infrastructure will be established, and therefore no alternatives for the location of infrastructure were identified.

xi) Statement motivating the preferred site.

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(h) (g)(xi)

The prospecting operation will not be a static operation, the mobile plant will move as prospecting progress, thus the whole application is to determine a potential site for when the prospecting phase is being reached. The feasibility of prospecting the alluvial gravel diamond material from an environmental, social and economic perspective also plays a role.

(i) Plan of study for the Environmental Impact Assessment process

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(i)(h)(a)

i. Description of alternatives to be considered including the option of not going ahead with the activity

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(i)(h)(a)(i)

Alternative is not applicable. For this specific project, no alternatives have been investigated. The activities included in this application are determined by the location of the mineral reserves in the study area, and the proposed prospecting method to be employed as was assessed. The current land use is agricultural and is being utilized as grazing for cattle at present by the landowner (Barry Wentzel Trust (Landowner)).

The option to explore the possibility for prospecting is not an alternative land use as previous prospecting/prospecting has already taken place over some areas. The applicant, BITFLOW INVESTMENTS (PTY) LTD., is not interested in any other alternative land use over this land aside of diamonds exploration, or any other activity, or method use other than prospecting for diamonds in the conventional way, which is the most cost effective.

The No-Go option entails the continuation the current land use (grazing of cattle) on the application area without exploiting the mineral reserves. The prospecting activities will contribute towards the achievement of providing employment opportunities for members of the surrounding communities, thus aiding socio-economic development. Should the project therefore not be authorized to proceed, the current employment opportunities (7) (manager included) will be terminated. Therefore, the No-Go alternative is not a feasible option in this case, as it suggests that the mineral reserves should not be exploited and current employment opportunities should not be prolonged. Alternative is not applicable for the application area. The current land use is agricultural and is being utilized as mainly natural grazing for cattle by the landowner.

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

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(i)(h)(a)(ii)

The aspects that will be assessed as part of the proposed project and its area include:

- Geology
- Soil Erosion
- Rehabilitation of previously disturbed areas
- Fauna [Wildlife/Wildlife habitat destruction]
- Changes to surface water quality
- Dust
- Noise
- Archaeological/Cultural Sites

Geology:

(Alluvial Diamonds & Diamonds in Kimberlite) deposits will be destroyed during the opencast prospecting operation. During operation which will be for the next 36 months, the mineral resource will be extracted from gravel deposits. Waste rock material/overburden material is disposed off/backfilled in excavations as part of the backfilling process.

Soil erosion:

Due to the fact that certain surface areas would become compacted and this would lead to lesser infiltration of rainwater and more run-off that could cause erosion on bare disturbed surfaces. Erosion would always be possible until such time a vegetation cover is provided during rehabilitation phase. Temporary loss of land capability to support grazing for cattle. The **small area (0.96 ha)** where the active prospecting activities occur (trenches, tailings dumps, stock piles, prospecting equipment) etc. will thus be temporary alienated, until the area is rehabilitated.

All trenches would be rehabilitated as part of the prospecting process during which trenches are back-filled. The rest of the application area will still be used by the landowner as agricultural land.

Rehabilitation:

This is a new prospecting operation and therefore will lose its land use to support grazing on a certain portion of the **315.2013 hectares during the next 36 months. Only a small portion of land (0.96 ha) would be affected by the prospecting operation relation to the total prospecting right application area of 315.2013 hectares.** All pits & trenches would be rehabilitated as part of the prospecting process during which excavations are back-filled.

Wildlife or wildlife habitat destruction/change / disturbance:

Increase silt load. Clearing topsoil for footprint areas can increase infiltration rates of water to the groundwater system and decrease buffering capacity of soils to absorb contaminants from spills on surface. This can increase the risk of contamination of the groundwater system (increases aquifer vulnerability).

Change in surface water quality:

Spillages from vehicles and also surface water run-off that is not adequately diverted away from the active prospecting excavations could end-up in the excavations creating problems regarding water quality and hindering the prospecting process.

Surface run-off from active prospecting sites (overburden dumps & tailings dam/dump) if not adequately contained on site could end-up in the adjacent undisturbed natural veld.

If the natural surface run-off is not adequately diverted in the case of the **wetland area, associated streams, pan area, prospecting sections** it could become silted-up.

Dust:

Dust will be generated during the prospecting operation (loading with an excavator on to a dump truck) and transportation to the plant (conveyor, drum screen & washing pans) and on gravel/dirt/farm roads. The processing of the gravel is a wet process and therefore minimum dust is generated.

Noise:

Dust will be generated during the prospecting operation (loading with an excavator on to a dump truck) and transportation to the plant (conveyor, drum screen & washing pans). The mine itself is located in rural landscape. The impact would be of more importance regarding the direct worker environment that should adhere to the requirements in terms of the Mine Health and Safety Act.

Archaeological/Cultural Sites:

The terrain is not archaeologically vulnerable. It is unlikely that the proposed development will result in any significant archaeological impact at the site.

iii. Description of aspects to be assessed by specialists

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(i)(h)(a)(iii)

As this is only a prospecting application and surface area should be treated as a sensitive areas, all prospecting activities will be kept 100 metres horizontally away from this surface water body. No heritage areas of significance were noted on the application area there will be no specialist studies. All impacts noted will be mitigated.

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

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(i)(h)(a)(iv)

A thorough foot survey and site inspection was done by the EAP and further visit will be done before compiling the EIA. Each aspect was then assessed individually with the 24 year experience of the EAP.

v. The proposed method of assessing duration significance

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(i)(h)(a)(v)

The assessing of the duration is done on hand of the different phases as described in the Prospecting Works Program (PWP) which is also described under **Point ii) h)**. The significance is assessed form experience and from the actual situation on the specific site. Please see **Point vi)** for detail.

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

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(i)(h)(a)(vi)

Consultation with all competent authorities will be done. The Scoping Report will be send to them from the office of the EAP.

vii. Particulars of the public participation process with regard to the Impact Assessment process that will be conducted

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(i)(h)(a)(vii)

1. Steps to be taken to notify interested and affected parties.
The landowner, as well as the competent authorities will be consulted. Please see **Table 3** for more detail on public participation process.
2. Details of the engagement process to be followed.
The process as described by NEMA for Environmental Authorization was followed. See **Table 3** for the identification of Interested and Affected Parties to be consulted with. The landowner (Barry Wentzel Trust) and the direct neighbours were consulted personally and through a letter that was given to them by hand. A site notice was placed at the entrance gate of the Kareefontein farm. With this site notice all passers-by are requested to submit any written comments to be forwarded to the consultant (still awaiting response). An advertisement was placed in the Stellalander Newspaper of 7th November 2022. See proof of consultation under **Appendix 2**. Notice was put up at the entrance to the application area, where all passers-by are invited to give through their comments of objections toward the proposed application. A copy of the Scoping Report was sent to all the State Departments. See proof of consultation under **Appendix 2**.

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

A copy of the map, and Prospecting Works Programme and draft Scoping Report was handed to the neighbours and landowners. A copy of the Scoping Report was send to the State Departments.

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

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix2 – 2. (1)(i)(h)(a)(viii)

Site inspection by foot survey, discussions with applicant and landowner as well as discussions with competent authorities where necessary. Completion of the EIA template.

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.

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix2 – 2. (1)(i)(h)(a)(ix)

This will be kept in mind with the site inspection where each impact will again be evaluated and the mitigation and management thereof will be confirmed on site. The risk of each impact will be evaluated and if any residual risks the management thereof.

The mitigation measures and technical management action plans which address potential impacts are discussed below:

Environmental Component	Geology
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<ul style="list-style-type: none"> • No mitigation exists except to backfill the excavations with the rock waste material and fine tailings (puddle). • As prospecting progressed and the excavation has been back-filled, a certain amount of overburden material and topsoil would be placed on these areas. This will not restore the geology, but will mitigate the impact. • Planned, systematic and thorough prospecting of the mineral resource (Alluvial Diamonds & Diamonds in Kimberlite) should take place. • Optimal utilization of the mineral resource should take place within the boundaries of the prospecting terrain. • Strip, remove and store soil and overburden as far as practical in an orderly fashion and replace as far as possible on back-filled areas, in the reverse order once decision have been taken that no further prospecting would take place in a particular section or which might still be traversed by vehicles and disturbed in the process. Cognizance should be taken of the fact that bulk sampling would take place by means of an opencast prospecting method until such level is reach / cut-off point is reach where rehabilitation could begin. • Care must be taken that the removal of (Alluvial Diamonds & Diamonds in Kimberlite) deposits by means of earthmoving equipment is restricted to what is really necessary to achieve the objective. 	
Rehabilitation/ Closure:	
<ul style="list-style-type: none"> * Concurrent backfilling of the excavations (pits and trenches) with the rock waste material (overburden) and fine tailings (puddle). * The impact will be mitigated by backfilling and sloping the sides of the excavation and stabilizing the soil to prevent soil erosion. * The side of pit will be sloped and the soil stabilized to prevent erosion. * Rehabilitation of the new sloped landscape in such a way that it would blend in with the surrounding landscape. 	
Closure Objective	
Optimal exploration of the mineral resource in order to ensure to facilitate better rehabilitation planning. The overburden and topsoil (where available) must be replaced in a responsible and planned manner in order to achieve some conformity with the surrounding undisturbed area.	

Environmental Component	Topography
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<ul style="list-style-type: none"> All trenches should be back-filled with waste tailings (puddle) material and eventually overburden material, covered with a shallow layer of topsoil (if available). Access to all active bulk sampling excavation areas should be controlled. The active bulk sampling area should be fenced off. The necessary warning signs should be put in place. All prospecting activities should be restricted to the fenced-off area. Surface run-off control should be put in place at active trenches (preventing water from entering) and also overburden dumps in order to prevent the loss of growth medium on top of the dumps. <p>Prospecting would be done according to a definite PWP (only disturbing an area that is really necessary). As part of the PWP the handling of tailings material (puddle), overburden material, construction of dumps and back-filling of trenches should also form part of it.</p>	
Rehabilitation/ Closure:	
<ul style="list-style-type: none"> All trenches should be back-filled with waste tailings (puddle) material and eventually overburden material, covered with a shallow layer of topsoil (if available). Rehabilitation of the new topographical landscape in such a way that it would blend in with the surrounding landscape and allow normal surface drainage to continue. As soon as a section of the prospecting site would not be explored anymore it should be rehabilitated (planned and phased manner). 	
Closure Objective	
Rehabilitation of the new disturbances topographical landscape in such a way that it would blend in with the surrounding landscape and allow normal surface drainage to continue. Rehabilitation in such a way that the new landscape features would be stable and would not pose any safety hazard to human and animal anymore.	

Environmental Component	Soil (topsoil & access roads)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Handling of topsoil as a natural resource: Any future expansion of the trenches or construction of infrastructure should be preceded by the removal of <u>all available topsoil (shallow Lithosols)</u>. The surface of any new areas to be disturbed must be kept to a minimum. <u>All available topsoil/overburden material should be removed and stockpiled for rehabilitation purposes.</u></p> <p>Access roads, etc: The clearing of soil surface areas would be restricted to what is really necessary for the construction of infrastructure. Wherever possible all topsoil should be removed and stockpiled for rehabilitation purposes. Overburden material should also be stockpiled separately if practically possible. Topsoil and overburden material should be kept next to open excavations for easy backfilling and rehabilitation.</p>	
Rehabilitation/ Closure:	
Closure Objective	
The topsoil removed in the site preparation process should be replaced during the rehabilitation exercise.	

Environmental Component	Soil (soil compaction)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Soil compaction: The prospecting operation should only be restricted to what is really required (demarcated area of exploitation) within the fenced-off area.</p> <p>Access roads towards the sites would be restricted only to the roads (existing farm roads & roads established in consultation with the surface owner). No land would be disturbed unnecessarily.</p> <p>Prospecting & rehabilitation should be done in a well-planned manner (according to a PWP) and in the process ensuring that activities are only restricted to surface areas really required.</p>	
Rehabilitation/ Closure:	
<p>Compaction of soil surface areas would be alleviated once rehabilitation of certain area starts.</p> <p>Certain roads would probably remain for access (in consultation with the surface owner). Those that would not be required would be ripped and rehabilitated.</p>	
Closure Objective	
Alleviation of compaction of soils would be done during rehabilitation of the prospecting terrain, including roads.	

Environmental Component	Soil (Soil erosion)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Soil Erosion: To take preventive steps against land disturbance like erosion. Implement and maintain cut-off trenches/berms to prevent erosion.</p>	
Rehabilitation/ Closure:	
<p>Re-vegetation of exposed soil surfaces (man-made surfaces such as tamps overburden dumps, disturb surfaces in excavated sites, roads, etc.) should happen as soon as a particular activity has ceased in order to act as a sufficient erosion prevention measure.</p>	
Closure Objective	
No soil erosion must be visible and no potential for soil erosion must be present at closure.	

Environmental Component	Soil (Soil contamination)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Potential for soil contamination: Vehicles to be inspected to ensure no oil and hydraulic fluid leaks occur. No servicing of vehicles must occur except on a concrete floor or over PVC lined area in an area allocated for that. Training w.r.t pollution hazards and their impact on the environment must be given as part of induction training. An incidence register for this purpose must be kept. Drip trays must be available and used where emergency repairs is done.</p>	
Rehabilitation/ Closure:	
<p>All oil spills on soil to be removed and bio-remediate immediately (certain commercial products are available such as Terrasorb or it could be rehabilitated by means of the application of fertilizer and turn with a spade from time to time in order to enhance the natural occurring soil microbial activity).</p>	
Closure Objective	
No soil contamination must be visible or known before closure can be given.	

Environmental Component	Soil (Soil structure)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Change in Soil structure: Ensure that all available (if any) topsoil is carefully removed in different areas. The soil must also be compacted as backfilling is done. No unnecessary driving outside the active prospecting area is allowed due to soil compaction that may occur.</p>	
Rehabilitation/ Closure:	
<p>The soil must also be compacted as backfilling is done. Use organic material e.g. manure to restore the soil structure during rehabilitation (if available). Ensure that the rehabilitation plan makes provision for ripping of roads and spreading of organic material and that this is used during rehabilitation.</p>	
Closure Objective	
<p>No compaction of any roads or any other area must be present during closure. If the soil structure is disturbed mitigation measures e.g. the use of organic material, lime and fertilizers must be implemented to restore the soil structure.</p>	

Environmental Component	Soil (Soil fertility)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Soil fertility: Little can be done to preserve the moisture status of the soil once it is exposed. The soil must be used for rehabilitation as quickly as possible. The soil on the rehabilitated area must be analysed to determine the deficiencies and fertilizer and lime must be ploughed into the soil to restore its fertility, if necessary. Ensure that stockpiled soil is kept clean and where possible ensure that the topsoil is treated with organic material and fertilized. Do not use stockpiled soil for any other purpose but for rehabilitation. Do not use topsoil to construct roads. Ensure the rehabilitation plan makes provision for fertiliser. Make sure rehabilitated topsoil is analyzed in a laboratory. The type of fertilizer would depend on a soil analyses and fertilizer recommendation.</p>	
Rehabilitation/ Closure:	
<p>See above section: Soil fertility : Environmental Management/Mitigation Measures/Action Plans/Commitments</p>	
Closure Objective	
<p>The soil must be fertile enough to sustain vegetation.</p>	

Environmental Component	Land Capability
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>The disturbance of land must be restricted (kept to a minimum) to the planned fenced-off, active prospecting site only. Remove topsoil where it is available. Take care that roads needed are restricted to one entry to the area for prospecting purposes. If new land is used for roads to enter the area it must be done in consultation with the surface owner.</p>	
Rehabilitation/ Closure:	
<p>All rehabilitation will be done according to the final rehabilitation plans after approval by the Department of Mineral Resources (DMR). Topsoil will be placed in areas where it was removed and the areas will be re-vegetated accordingly. Ensure that the rehabilitation plan is implemented.</p>	
Closure Objective	
<p>Rehabilitated to the state that it is suitable for the predetermined and agreed land capability.</p>	

Environmental Component	Land Use
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>The disturbance of land must be restricted (kept to a minimum) to the planned active, fenced-off prospecting site only. Remove topsoil where it is available.</p> <p>Take care that roads are the only areas used to enter the area for prospecting purposes. If new land is used for roads to enter the area it must be done in consultation with surface owner.</p>	
Rehabilitation/ Closure:	
<p>All rehabilitation will be done according to the final rehabilitation plans after approval by the Department of Mineral Resources (DMR).</p> <p>Topsoil will be placed in areas where it was removed and the areas will be re-vegetated accordingly. Ensure that the rehabilitation plan is implemented.</p>	
Closure Objective	
<p>The opencast prospecting requires the land to be totally disturbed. The replacement of tailings material, overburden and topsoil would ensure that the land is able to support some grazing.</p>	

Environmental Component	Vegetation
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>No mitigation exists except to replace the vegetation by reseedling of grasses and natural growth.</p> <p>Prospecting should be done in a well-planned manner (according to a PWP) and in the process ensuring that activities are only restricted to surface areas really required.</p>	
Rehabilitation/ Closure:	
<p>Replace the vegetation by reseedling of grasses and natural growth.</p>	
Closure Objective	
<p>During rehabilitation indigenous vegetation cover comprising of local plant species should be established in order to ensure a well-adapted sustainable plant cover that would be able to prevent erosion of the replaced topsoil on the disturbed prospecting site exposed surfaces, tailings dumps, etc.).</p>	

Environmental Component	Vegetation
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Habitat change, loss of species, spread of alien and invasive species:</p> <p>No mitigation exists except to replace the vegetation by reseedling of grasses.</p> <p>Prospecting should be done in a well-planned manner (according to a PWP) and in the process ensuring that activities are only restricted to surface areas really required.</p> <p>An invasive and alien control programme must be implemented by the mine.</p>	
Rehabilitation/ Closure:	
<p>Replace the vegetation by reseedling of grasses and natural growth.</p> <p>Habitat change, loss of species, spread of alien and invasive species:</p> <p>No mitigation exists except to replace the vegetation by reseedling of grasses.</p> <p>Prospecting should be done in a well-planned manner (according to a PWP) and in the process ensuring that activities are only restricted to surface areas really required.</p> <p>Develop and implement an invasive and alien control programme to control the spread of weeds and other invasive species.</p> <p>Eradicate exotic weeds and invader species if it invades the terrain. All illegal invader plants and weeds shall be eradicated as required in terms of Regulation 15 & 16 of the Act on Conservation of Agricultural Resources, 1983 (Act no. 43 of 1983) which list the plants.</p>	
Closure Objective	
<p>No invasive and alien species must be present after closure. A post-closure control program must also be implemented.</p>	

Environmental Component	Vegetation
Environmental Management/Mitigation Measures/Action Plans/Commitments	
Ensure that all roads on the prospecting site (utilized by prospecting vehicles) are daily sprayed with water to control dust. Site inspections to ensure the spraying are done.	
Rehabilitation/ Closure:	
No excessive dust must be present during the normal growth season after closure.	
Closure Objective	
No excessive dust must be present during the normal growth season after closure.	

Environmental Component	Wildlife (habitat)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
Wildlife or wildlife habitat destruction /change / disturbance : To take care that no new or unnecessary destruction of habitats, other than the demarcated prospecting site should take place.	
Rehabilitation/ Closure:	
Restoration of habitat: Ensure the rehabilitation plan is implemented	
Closure Objective	
The animal life habitat must be restored after decommissioning. Success will be measured against the extent to which the animals return to the area.	

Environmental Component	Wildlife (Injury and death)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
Injury and death to wildlife: Keep incidence register on killings and disturbances.	
Rehabilitation/ Closure:	
Re-establish trees and grass cover as soon as possible during and after prospecting. Fence area off to ensure that no person can enter without permission. Ensure that the rehabilitation plan is compiled and executed	
Closure Objective	
The animal life habitat must be restored after decommissioning. Success will be measured against the extent to which the animals return to the area.	

Environmental Component	Wildlife
Environmental Management/Mitigation Measures/Action Plans/Commitments	
Make game catching, traps, snares, poaching and any other unnecessary disturbance of animals a disciplinary offence. All staff must undergo basic environmental awareness lecture during induction training. Machine operators and drivers to undergo appropriate level of environmental impact training to ensure they understand their impact on the environment. Ensure all staff working on the opencast section undergo basic lecture during induction phase. Introduce the actions as listed above into disciplinary code as offence.	
Rehabilitation/ Closure:	
All staff must undergo basic environmental awareness lecture (rehabilitation) during induction training.	
Closure Objective	
The post-closure phase must be suitable for further restoration of the newly man-made animal habitat. The area must be stable and acceptable for the return of animal- and plant life.	

Environmental Component	Surface Water (quality)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Change in surface water quality: Storm water control measures must be implemented to divert clean water away from the active prospecting site and keep contaminated water contained. Water control structures must be well designed and constructed to ensure a minimum down wash of topsoil. Vegetation disturbance must be as little as possible. All domestic waste must be collected in bins and taken off site to Wolmaransstad licensed waste disposal site. All used oils and filters must be collected and responsibly recycled. The PWP must be strictly adhered to. Re-vegetation to be done as quickly as possible. Final re-vegetation to be done as per rehabilitation plan.</p>	
Rehabilitation/ Closure:	
<p>Water control structures must be well designed and constructed to ensure a minimum down wash of topsoil. Once the area is rehabilitated the surface run-off will be restored and normal clean water run-off will end-up in the drainage system. Re-vegetation to be done as quickly as possible. Final re-vegetation to be done as per rehabilitation plan.</p>	
Closure Objective	
The post closure water run-off may in no circumstance impact negatively on the water quality.	

Environmental Component	Surface Water (quantity)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Change in surface water quantity: Once the area is rehabilitated the surface run-off will be restored and normal clean water run-off will end-up in the drainage system. Once the area is rehabilitated the normal surface run-off drainage will be restored according to rehabilitation plan. The disturbed surface area must be rehabilitated to ensure some normal drainage. Minimal run-off should end-up in trenches. All prospecting activities must be kept 100 meters horizontally away from any surface water body (wetland area, associated streams, pan, etc.).</p>	
Rehabilitation/ Closure:	
<p>Water control structures must be well designed and constructed to ensure a minimum down wash of topsoil. Once the area is rehabilitated the surface run-off will be restored and normal clean water run-off will end-up in the drainage system. Re-vegetation to be done as quickly as possible. Final re-vegetation to be done as per rehabilitation plan. Final rehabilitation will be done according to the final rehabilitation plans after approval by the Department of Mineral Resources.</p>	
Closure Objective	
Ultimately rehabilitation of the disturbed prospecting site and the construction of run-off control structures in a planned and phased manner would ensure normal drainage and stability of rehabilitated site.	

Environmental Component	Ground Water (quality)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Reduction of groundwater quality: Storm water control measures must be implemented to divert clean water away from the site and keep (silt) contaminated water contained. Vehicles to be inspected to ensure no oil and hydraulic fluid leaks occur. All oil spills on soil to be removed and bio-remediate immediately. No servicing of vehicles must occur except at the workshops. Training w.r.t pollution hazards and their impact on the environment must be given as part of induction training. Storage of fuel and oil should be done according to best practices, within a bunded area and in containers of which the integrity is sound. The prospecting processes will not introduce any harmful or toxic substances and the most likely sources of pollution to the groundwater system would be associated with the infrastructure and / or workshop area. The most likely contaminants is therefore nitrate and bacteria (from sewage / pit latrines), as well as hydrocarbons (from vehicle accidents, diesel car and the workshop area). An incidence register for this purpose must be kept.</p>	

Drip trays must be available and used where emergency repairs is done.
 All waste must be stored according to best practices and disposed at an authorized waste disposal facility.

Rehabilitation/ Closure:

All oil spills on soil to be removed and bio-remediate immediately.
 All waste must be stored according to best practices and disposed at an authorized waste disposal facility.

Closure Objective

Post water quality need to indicate a positive trend/improvement.

Environmental Component	Ground Water (quantity)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Reduction of groundwater quantity, lowering of groundwater level: Water levels in the borehole that are used for prospecting activities should be recorded monthly. Water volumes should be recorded continuously to ensure compliance with the water use authorization for abstraction. Water will be supplied via a tanker.</p>	
Rehabilitation/ Closure:	
Post water quality need to indicate a positive trend/improvement.	
Closure Objective	
Post water quality need to indicate a positive trend/improvement.	

Environmental Component	Air Quality
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Dust: The prospecting method will serve as mitigation measure because prospecting will limit dust to the active prospecting area (area where the excavator and the trucks are operating). Daily spraying of roads with water. Inspection should be done on a daily basis. If new roads are constructed, in coordination with surface owner, dust pollution must be mitigated by means of spraying the roads with water.</p>	
Rehabilitation/ Closure:	
Rehabilitation of the bulk sampling site would ensure that no dust is generated from exposed surfaces.	
Closure Objective	
Dust count must be the same as before prospecting. Rehabilitation of the bulk sampling site would ensure that no dust is generated from exposed surfaces.	

Environmental Component	Noise
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Ensure the required silencers are placed on all engines and compressors. No mitigation to reverse hooters is allowed due to safety standards. Inspection of vehicles and machinery to ensure silencers are fitted. Ensure that a complaints register is created, managed and maintained. Vehicles and earthmoving equipment should be equipped with the necessary silencers and regularly maintained in a good working condition.</p>	
Rehabilitation/ Closure:	
During decommissioning and closure phase some earth moving equipment and trucks would be utilized for rehabilitation.	
Closure Objective	
No noise attributed to prospecting will be generated from the site after closure anymore. During decommissioning and closure phase some earth moving equipment and trucks would be utilized for rehabilitation.	

Environmental Component	Archaeological and Cultural Sites
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>No graveyard found on site. However, the potential occurrence of OTHER unmarked graves or subsurface finds not recorded during this survey can never be excluded, so it is advised that SAHRA and a qualified archaeologist are informed immediately if archaeological objects are uncovered. All excavator operators must be sensitized as to identify and report any occurrence of such sites of artefacts. No activities should take place 20 m from the site. The area are however identify as being high sensitive. However, the potential occurrence of unmarked graves or subsurface finds not recorded during this survey can never be excluded, so it is advised that SAHRA and a qualified archaeologist are informed immediately if archaeological objects are uncovered. All excavator operators must be sensitized as to identify and report any occurrence of such sites of artefacts.</p>	
Rehabilitation/ Closure:	
A 20m buffer zone must be marked around any graveyard in order to avoid potential damage during prospecting activities	
Closure Objective	
No site of archaeological importance should be disturbed or damaged until the necessary permit from SAHRA has been issued.	

Environmental Component	Sensitive Landscapes
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<i>Wetland area with associated streams, pan: - All prospecting activities must be kept 100 meters horizontally away from it.</i>	
Rehabilitation/ Closure:	
No impact = no rehabilitation necessary	
Closure Objective	
No surface water bodies, its flow or stream areas must be disturbed during the prospecting activities.	

Environmental Component	Visual Aspects
Environmental Management/Mitigation Measures/Action Plans/Commitments	
<p>Visual impact would be addressed by means of; * re-vegetation of disturbed areas with grasses; re-establish vegetation cover as soon as possible after closure of excavations * removal of any temporary building, scrap, domestic waste, etc. that would otherwise contribute to a negative visual impact. Concurrent rehabilitation should be done simultaneously as prospecting activities progress.</p>	
Rehabilitation/ Closure:	
<p>Visual impact would be addressed by means of; * re-vegetation of disturbed areas with grasses; re-establish vegetation cover as soon as possible after closure of excavations. * removal of any temporary building, scrap, domestic waste, etc. that would otherwise contribute to a negative visual impact. Concurrent rehabilitation should be done simultaneously as prospecting activities progress.</p>	
Closure Objective	
No residual visual impacts will remain after closure. The terrain should blend in with the surrounding landscape.	

i) **UNDERTAKING REGARDING CORRECTNESS OF INFORMATION**

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 2 – 2. (1)(j)(i), (k)(i), (l)(k), (m)(i)

UNDERTAKING

I, H.M. Erasmus, the undersigned and duly authorised thereto by

DERA Omgewingskonsultante (PTY) Ltd hereby confirms:

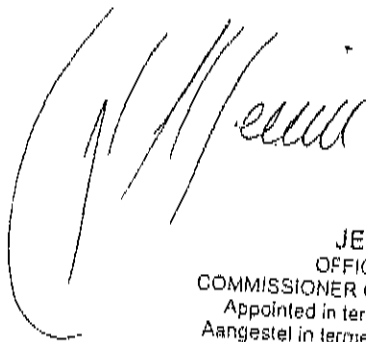
- ✓ the correctness of the information provided in this report;
- ✓ the inclusion of comments and inputs from stakeholders and I&AP's;
- ✓ the inclusion of inputs and recommendations from the specialist reports where relevant and where applicable and;
- ✓ all information provided to the interested and affected parties a true reflection of this document.

Signed at Klerksdorp on this day 5th December 2022



Signature of EAP

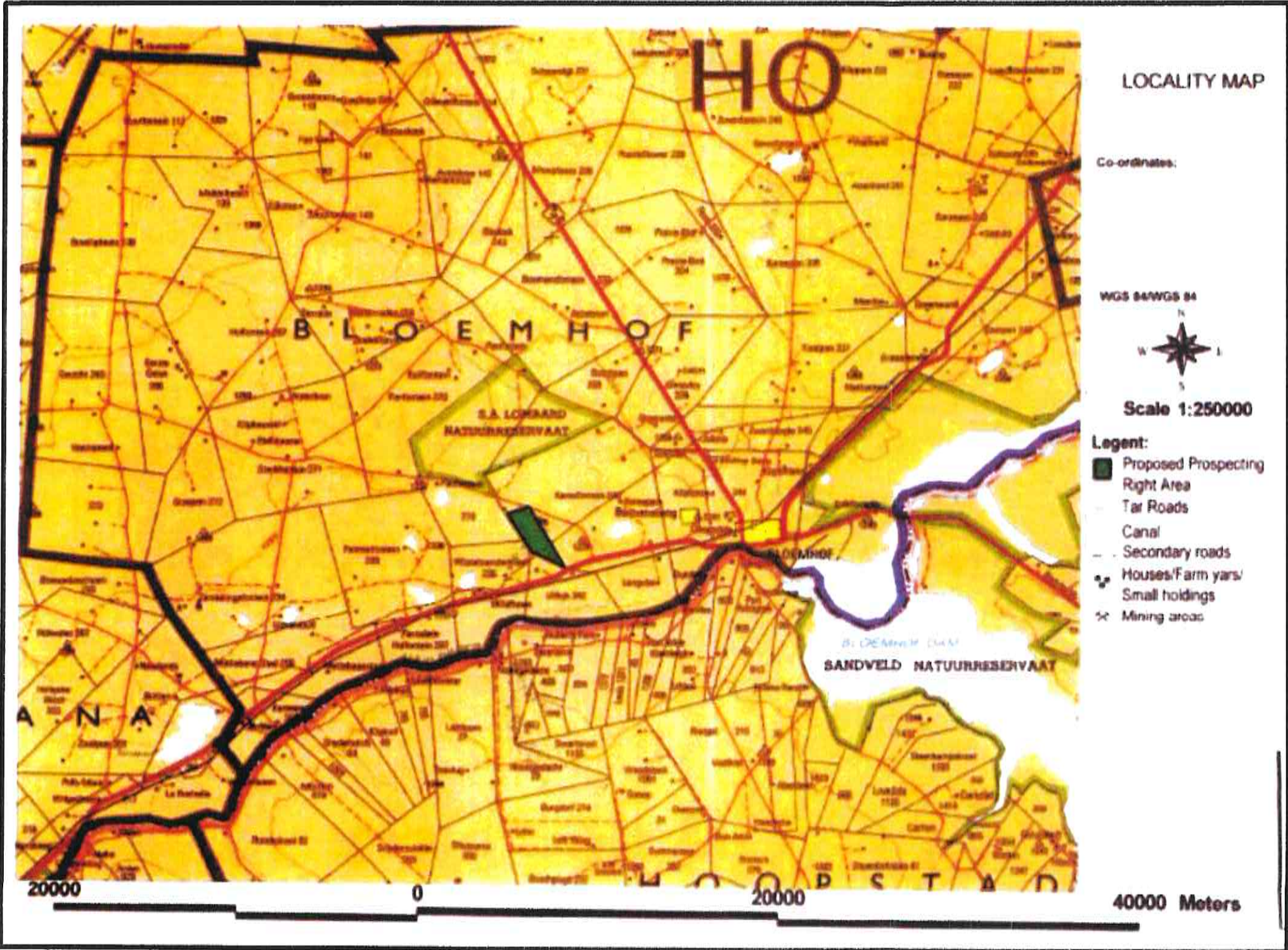
-END-



JERRY DEAN MENIN
OFFICE MANAGER / AUDITOR
COMMISSIONER OF OATHS / KOMMISSARIS VAN EDE
Appointed in terms of Section 5(1) of Act 16 of 1963
Aangestel in terme van Artikel 5(1) van Wet 16 van 1963
Centraallaan 32 Central Avenue, Flamwood, Klerksdorp
Appointed/Aangestel: 23 Oktober 2012
Reference/Verwysing: 9/1/8/2 Klerksdorp

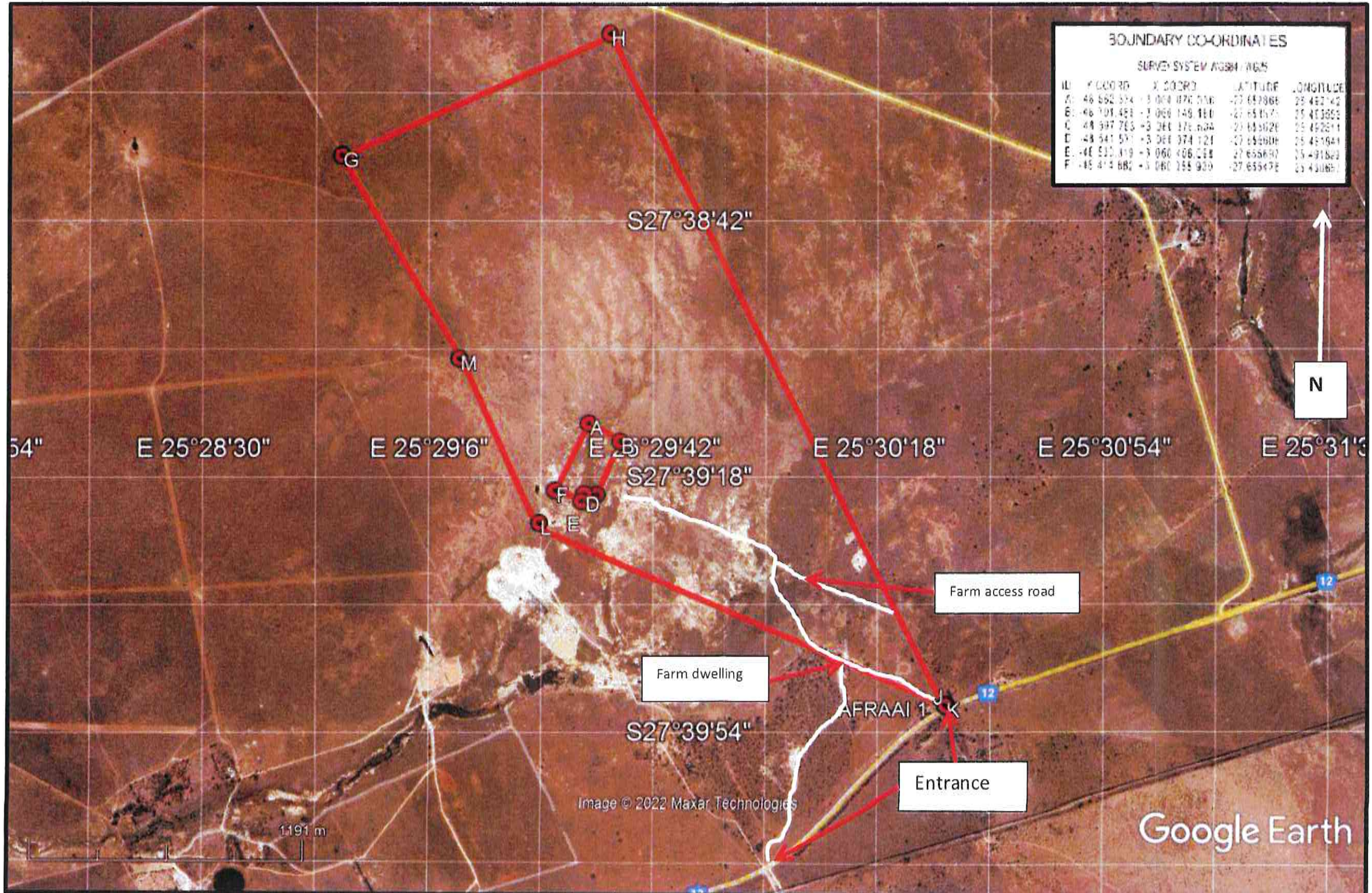
MAP 1(a), 1(b), 1(c): ANNEXURE 1

General location of Prospecting Right Application area (315, 2013ha)



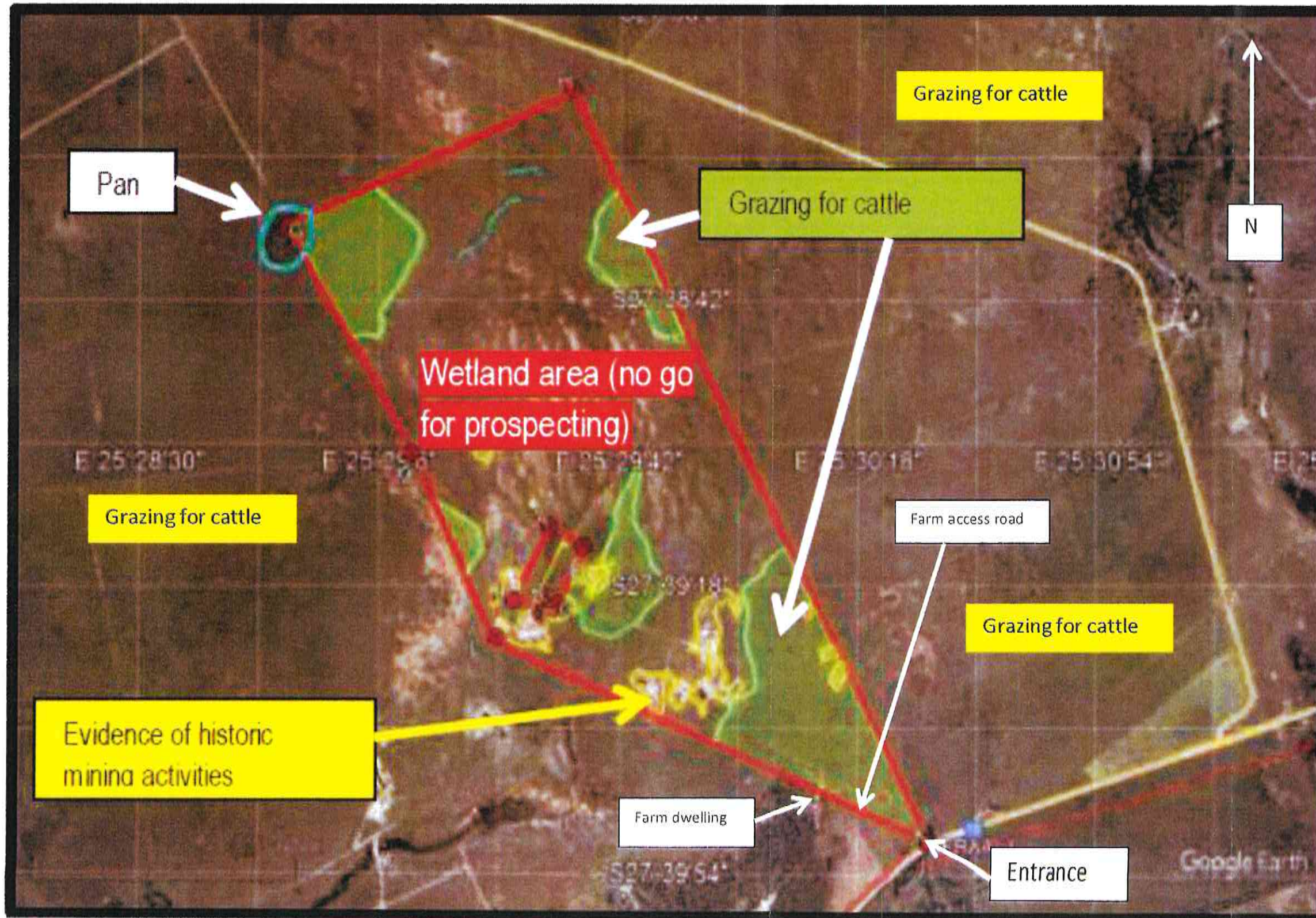
MAP 1A

SURFACE INFRASTRUCTURE MAP/PLAN



MAP/PLAN 1b2

Land use composite map



MAP/PLAN 1C

[Bitflow Investments 20 (Pty) Ltd. – KAREEFONTEIN 340 HO – NW 30/5/1/1/2/ 13614 PR]

PROOF OF CONSULTATION: **APPENDIX 2**

APPENDIX 2: DETAILS OF THE PUBLIC PARTICIPATION PROCESS

Interested and Affected Parties	Date sent and/or Comments Received	Issues raised	EAP's response to the applicant
AFFECTED PARTIES			
Landowner/s	X		
Barry Wentzel Trust (Landowner) Bloemhof, 2660 Cell: 0826320114	7 Nov 2022 15 Dec 2022	No objection, see signed consultation letter	
Lawful occupier/s of the land			
Landowners or lawful occupiers on adjacent			
Mr. P.J. Roos (Neighbour) P.O. Box 77, Bloemhof, 2660 Cell: 072 626 6808	4 Nov 2022 15 Dec 2022	No objection, see signed consultation letter	
C.L. Roos (Neighbour) P.O. Box 77, Bloemhof, 2660 Cell: 072 064 8418	4 Nov 2022 15 Dec 2022	No objection, see signed consultation letter	
Municipal councillor			
Municipality	X		
Lekwa-Teemane Local Municipality LED Manager: Mr. Pakiso Lesego E-mail: leshagep@lekwa-teemane.co.za	5 Dec 2022	Consultation letter send to Mr. Leshage via e-mail	
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA.			
Eskom			
Communities			
N/A			
Dept. Land Affairs	X		
KeabetsweMothupi Keabetswe.mothupi@doflr.gov.za	5 Dec 2022 9 Dec 2022	Request for verification of land claims Response received	Response letter received, no land claims
Traditional Leaders			
N/A			
Dept. Rural, Environment and Agricultural	X		
OumaSkosana Agricentre Building, Cnr James Moroka & Stadium Road, Mimabatho, 2735 E-mail: oskosana@mvpq.gov.za	5 Dec 2022	BAR/EMPr send with Fastway couriers	
Dept. Water and Sanitation	X		

Lerato Mokhoantle 28 Central Road, Beaconsfield, Kimberley, 8300 Tel: 083 655 8312; E-mail: MokhoantleL@dws.gov.za		5 Dec 2022	BAR/EMPr send with Courier Guy	
Dept. Agriculture, Forestry and Fisheries Maurice Vukeya Louis le Grange Building, Cnr Peter Mokaba & Wolmarans street, 3 rd Floor, Office no 318, Potchefstroom, 2520 Tel: 018-389 5156, E-mail: MauriceV@daff.gov.za	X	5 Dec 2022	BAR/EMPr send with Fastway couriers	
Other Competent Authorities South African Heritage Resources Agency (SAHRA) P.O. Box 4637, Cape Town, 8000 Tel: 021 462 4502 E-mail: info@sahra.org.za	X		Case ID:	
OTHER AFFECTED PARTIES				
INTERESTED PARTIES				

Public Notice – Stellalander of Wednesday 7 Dec 2022

.....

P O Box 6499
Flamwood
2572
Tel: 018-468 5355
Fax: 018 011 3780
Mobile: 082 89 5 3516
E-mail: dera.office@dera.co.za

DERA

2 December 2022

Environmental Consultants

To whom it may concern

CONSULTATION WITH INTERESTED AND AFFECTED PARTIES WITH REGARD TO AN APPLICATION FOR A PROSPECTING RIGHT IN TERMS SECTION 16 OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) AND NEMA, EIA 2014 OVER: REMAINDER OF PORTION 12 OF THE FARM KAREEFONTEIN 340 HO, MAGISTERIAL DISTRICT OF BLOEMHOF.

You are herewith informed that **Bitflow Investments 20 (Pty) Ltd.** has submitted an application in terms of Section 16 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002), and NEMA, EIA 2014 to the Regional Manager: Mineral Regulation, Northern West Region in respect of **Diamonds Alluvial & Diamonds in Kimberlite** in the magisterial district of **Bloemhof**.

Bitflow Investments 20 (Pty) Ltd. is in the process of compiling the Scoping Report, which needs to be submitted at the Regional Office of DMRE. The Scoping Report will be available on request for I&AP's for comments. The EIA/EMPr will be submitted within the timeframe after acceptance of the scoping report.

In terms of Section 10 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002), and in terms of Regulation 39(1) of the regulations published in the Government Notice No. R10328 (of 4 December 2014) under Chapter 6 of the NEMA, EIA 2014, the landowner or legal occupier of the land, as well as any other interested party must be notify and must be consulted with in terms of the proposed project.

Bitflow Investments 20 (Pty) Ltd. deem it necessary to consult with inter alia yourself / your company/ your organization, and you are therefore kindly requested to comment very clearly and unambiguously with regard to the proposed prospecting project. You are requested to put in writing any interest/ objection and/or comments you may have and send it back to the appointed consultants (**Reference no. NW30/5/1/1/2/13614PR**) within 30 days from the date of receipt of this letter. If no correspondence is received from you within the mentioned period, the applicant shall accept that you have no objection in the proposed prospecting activities.

Please call me if any further information is needed.

Your co-operation will be appreciated.

Yours faithfully

P.P. Els

Esna Erasmus

DERA Environmental Consultants

.....

**REGISTRATION FORM AND COMMENT FOR THE PUBLIC PARTICIPATION PROCESS
PROPOSED PROSPECTING RIGHT APPLICATION ON REMAINDER OF PORTION 12 OF THE FARM
: KAREEFONTEIN 340 HO, MAGISTERIAL DISTRICT OF BLOEMHOF.**

Esna Erasmus
P.O. Box 6499
KLERKSDORP
2572

Tel: 018-468 5355
Fax: 018-011 3760
Mobile: 082 895 3516
E-mail: dera.office@dera.co.za

PERSONAL INFORMATION:

Title/Titel: MNR Initials/Voorletters: B.C First Name/Eerste naam: BARRY
Surname/Van: WENTSEL
E-mail/E-pos:
Telephone/Telefoon: 0826320114 Fax/Faks:
Organisation (if applicable)/Organisasie (indien van toepassing):
Capacity (member, etc.)/Kapasiteit (lid ens):
Landowner/Grondeienaar/Neighbour/Buurman/Interested and/or affected party on the farm/op die plaas: KAREEFONTEIN
Postal Address/ Posadres:
Town/City/Dorp/Stad: BLOEMHOF Code/Kode: 2660

COMMENT/OBJECTION:

1. What is the nature of your interest in the proposed project/Wat is u belang in die voorgename projek?

GROND EIGENAR

2. Do you have any ground for objection /Het u enige gronde tot beswaar ten opsigte van die bogenoemde projek?

YES/NO JA/NEE

If "Yes", please list shortly/Indien 'JA', lys asseblief kortliks.

3. Do you foresee that this activity will have a negative impact on yourself or the environment/Voorsien u dat die voorgename projek 'n negatiewe inpak kan he op uself of die omgewing?

YES/NO JA/NEE

If "Yes", please describe shortly/Indien 'JA', verduidelik asseblief kortliks.

Filled in on/Ingevuur op: B.C. Wentzel day of /dag van: 12 month/maand: 12 2022

Name and Surname/ Company

Naam en Van/Maatskappy

Signature/Handtekening

.....

**REGISTRATION FORM AND COMMENT FOR THE PUBLIC PARTICIPATION PROCESS
PROPOSED PROSPECTING RIGHT APPLICATION ON REMAINDER OF PORTION 12 OF THE FARM
: KAREEFONTEIN 340 HO, MAGISTERIAL DISTRICT OF BLOEMHOF.**

Esna Erasmus
P.O. Box 6499
KLERKSDORP
2572

Tel: 018-468 5355
Fax: 018-011 3760
Mobile: 082 895 3518
E-mail: dera.office@dera.co.za

PERSONAL INFORMATION:

Title/Titel: MNR Initials/Voorletters: PJ First Name/Eerste naam: PIET
Surname/Van: Roos
E-mail/E-pos: _____
Telephone/Telefoon: 072-6277808 Fax/Faks: _____
Organisation (if applicable)/Organisasie (indien van toepassing): _____
Capacity (member, etc.)/Kapasiteit (lid ens): _____
Landowner/Grondeienaar/Neighbour/Buurman/Interested and/or affected party on the farm/op die plaas: UITKIK
Postal Address/ Posadres: POSBUS 77
Town/City/Dorp/Stad: BLOEMHOF Code/Kode: 2660

COMMENT/OBJECTION:

1. What is the nature of your interest in the proposed project/Wat is u belang in die voorgename projek?

BUURMAN

2. Do you have any ground for objection /Het u enige gronde tot beswaar ten opsigte van die bogenoemde projek?

YES/NO JA/NEE

If "Yes", please list shortly/Indien 'JA', lys asseblief kortliks.

3. Do you foresee that this activity will have a negative impact on yourself or the environment/Voorsien u dat die voorgename projek 'n negatiewe inpak kan he op uself of die omgewing?

YES/NO JA/NEE

If "Yes", please describe shortly/Indien 'JA', verduidelik asseblief kortliks.

Filled in on/ingevul op: 15 day of /dag van: 12 (month)/(maand) 2022

Name and Surname/ Company

Signature/Handtekening

Naam en Van/Maatskappy

**REGISTRATION FORM AND COMMENT FOR THE PUBLIC PARTICIPATION PROCESS
PROPOSED PROSPECTING RIGHT APPLICATION ON REMAINDER OF PORTION 12 OF THE FARM
: KAREEFONTEIN 340 HO, MAGISTERIAL DISTRICT OF BLOEMHOF.**

Esna Erasmus
P.O. Box 6499
KLERKSDORP
2572

Tel: 018-468 5355
Fax: 018-011 3760
Mobile: 082 895 3516
E-mail: dera.office@dera.co.za

PERSONAL INFORMATION:

Title/Titel: MNR Initials/Voorletters: C-L First Name/Eerste naam: CHRIS
Surname/Van: Roos
E-mail/E-pos: _____
Telephone/Telefoon: 072-0648418 Fax/Faks: _____
Organisation (if applicable)/Organisasie(indien van toepassing): _____
Capacity (member, etc.)/Kapasiteit (lid ens): _____
Landowner/Grondeienaar/Neighbour/Buurman/Intersted and/or affected party on the farm/op die plaas: UITKYK
Postal Address/ Posadres: _____
Town/City/Dorp/Stad: BLOEMHOF Code/Kode: 2660

COMMENT/OBJECTION:

1. What is the nature of your interest in the proposed project/Wat is u belang in die voorgename projek?
BUURMAN

2. Do you have any ground for objection /Het u enige gronde tot beswaar ten opsigte van die bogenoemde projek?

YES/NO JA/NEE

If "Yes", please list shortly/Indien 'JA', lys asseblief kortliks.

3. Do you foresee that this activity will have a negative impact on yourself or the environment/Voorsien u dat die voorgename projek 'n negatiewe inpak kan he op uself of die omgewing?

YES/NO JA/NEE

If "Yes", please describe shortly/Indien 'JA', verduidelik asseblief kortliks.

Filled in on/Ingevol op: 15 day of /dag van: 12 (month)/(maand) 2022

Chris Roos

Chris

Name and Surname/ Company

Signature/Handtekening

Naam en Van/Maatskappy

.....

Gerda

From: Gerda <dera.office@dera.co.za>
Sent: Monday, 05 December 2022 11:29
To: 'leshagep@lekwa-teemane.co.za'
Subject: Consultation re proposed Prospecting Right application - Kareefontein 340 HO
Attachments: Consultation re proposed Prospecting Right application - Kareefontein 340 HO.pdf

Good day Pakiso

See attached the consultation letter for a proposed new prospecting right application in the district of Bloemhof.

It will be appreciated if you can complete and return the attached consultation form to dera.office@dera.co.za

Kind regards.

Gerda Els
Cell: 083 225 1593

Esna Erasmus
Dera Omgewingskonsultante (Pty) Ltd.
Reg no: 2014/051013/07
P.O. Box 6499, Flamwood, 2572
VAT no: 4590284073
Tel: 018 468 5355
Fax: 018 011 3760
Cell: 082 895 3516
e-mail: dera.office@dera.co.za

Your message is ready to be sent with the following file or link attachments:

Consultation re proposed Prospecting Right application - Kareefontein 340 HO

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

.....

P O Box 6499
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2572
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Fax: 018-011 3760
Cell: 082 895 351 6
E-mail: dera.office@dera.co.za

DERA

2 December 2022

Environmental Consultants

Lekwa-Teemane Local Municipality

Attention: LED Manager: Mr. Pakiso Leshage
E-mail: leshagep@lekwa-teemane.co.za

RE: CONSULTATION WITH INTERESTED & AFFECTED PARTIES

It is hereby confirmed that Bitflow Investments 20 (Pty) Ltd has applied for a prospecting right over Remaining extent of the farm Kareefontein 340 HO, Magisterial district of Bloemhof.

The Department of Mineral Resources has requested that the Lekwa-Teemane Local Municipality must be informed about the proposed prospecting right application.

Please find attached the consultation letter with the information regarding the proposed prospecting right application.

It would be highly appreciated if you could return the attached consultation letter to Dera Environmental Consultants at Fax: 018 011 3760 or dera.office@dera.co.za

Should you have any questions regarding the above, please call Mrs. Erasmus at 082 895 3516

DERA Environmental Consultants can be contacted for any further enquiries.

Yours sincerely



Esna Erasmus
DERA Environmental Consultants

.....

.....

P O Box 6499
Flamwood
2572
Tel: 018-468 5 355
Fax: 018 011 3760
Mobile: 082 89 5 3516
E-mail: dera.office@dera.co.za

DERA

2 December 2022

Environmental Consultants

To whom it may concern

CONSULTATION WITH INTERESTED AND AFFECTED PARTIES WITH REGARD TO AN APPLICATION FOR A PROSPECTING RIGHT IN TERMS SECTION 16 OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) AND NEMA, EIA 2014 OVER: REMAINDER OF PORTION 12 OF THE FARM KAREEFONTEIN 340 HO, MAGISTERIAL DISTRICT OF BLOEMHOF.

You are herewith informed that **Bitflow Investments 20 (Pty) Ltd.** has submitted an application in terms of Section 16 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002), and NEMA, EIA 2014 to the Regional Manager: Mineral Regulation, Northern West Region in respect of **Diamonds Alluvial & Diamonds in Kimberlite** in the magisterial district of **Bloemhof**.

Bitflow Investments 20 (Pty) Ltd. is in the process of compiling the Scoping Report, which needs to be submitted at the Regional Office of DMRE. The Scoping Report will be available on request for I&AP's for comments. The EIA/EMPr will be submitted within the timeframe after acceptance of the scoping report.

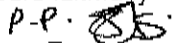
In terms of Section 10 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002), and in terms of Regulation 39(1) of the regulations published in the Government Notice No. R10328 (of 4 December 2014) under Chapter 6 of the NEMA, EIA 2014, the landowner or legal occupier of the land, as well as any other interested party must be notify and must be consulted with in terms of the proposed project.

Bitflow Investments 20 (Pty) Ltd. deem it necessary to consult with inter alia yourself / your company/ your organization, and you are therefore kindly requested to comment very clearly and unambiguously with regard to the proposed prospecting project. You are requested to put in writing any interest/ objection and/or comments you may have and send it back to the appointed consultants (**Reference no. NW30/5/1/1/2/13614PR**) within 30 days from the date of receipt of this letter. If no correspondence is received from you within the mentioned period, the applicant shall accept that you have no objection in the proposed prospecting activities.

Please call me if any further information is needed.

Your co-operation will be appreciated.

Yours faithfully



Esna Erasmus

DERA Environmental Consultants

.....

REGISTRATION FORM AND COMMENT FOR THE PUBLIC PARTICIPATION PROCESS
PROPOSED PROSPECTING RIGHT APPLICATION ON REMAINDER OF PORTION 12 OF THE FARM
: KAREEFONTEIN 340 HO, MAGISTERIAL DISTRICT OF BLOEMHOF.

Esna Erasmus
P.O. Box 6499
KLERKSDORP
2572

Tel: 018-468 5355
Fax: 018-011 3760
Mobile: 082 895 3516
E-mail: dera_office@dera.co.za

PERSONAL INFORMATION:

Title/Titel: Initials/Voorletters: First Name/Eerste naam:

Surname/Van

E-mail/E-pos

Telephone/Telefoon Fax/Faks

Organisation (if applicable)/Organisasie(indien van toepassing):

Capacity (member, etc.)/Kapasiteit (lid ens):

Landowner/Grondeienaar/Neighbour/Buurman/Intersted and/or affected party on the farm/op die plaas

Postal Address/ Posadres

Town/City/Dorp/Stad: Code/Kode:

COMMENT/OBJECTION:

1. What is the nature of your interest in the proposed project/Wat is u belang in die voorgename projek?
.....
.....

2. Do you have any ground for objection /Het u enige gronde tot beswaar ten opsigte van die bogenoemde projek?
.....
.....

YES/NO JA/NEE

If "Yes", please list shortly/Indien 'JA', lys asseblief kortliks.
.....
.....

3. Do you foresee that this activity will have a negative impact on yourself or the environment/Voorsien u dat die voorgename projek 'n negatiewe inpak kan he op usef of die omgewing?

YES/NO JA/NEE

If "Yes", please describe shortly/Indien 'JA', verduidelik asseblief kortliks.
.....
.....

Filled in on/Ingevol op day of /dag van (month)/(maand) 2022

Name and Surname/ Company

Signature/Handtekening

Naam en Van/Maatskappy

.....

Gerda

From: Gerda <dera.office@dera.co.za>
Sent: Monday, 05 December 2022 11:29
To: keabetswe.mothupi@dalrrd.gov.za
Subject: Verification of land claims - Bitflow Investments - Kareefontein 340 HO
Attachments: Verification of land claims - Bitflow Investments - Kareefontein 340 HO.pdf

Good day Kea

See attached our request for verification of land claims on the farm Kareefontein 340 HO in the Bloemhof district.

Kind regards.

Gerda Els
Cell: 083 225 1593

Esna Erasmus
Dera Omgewingskonsultante (Pty) Ltd.
Reg no: 2014/051013/07
P.O. Box 6499, Flamwood, 2572
VAT no: 4590284073
Tel: 018 468 5355
Fax: 018 011 3760
Cell: 082 895 3516
e-mail: dera.office@dera.co.za

Your message is ready to be sent with the following file or link attachments:

Verification of land claims - Bitflow Investments - Kareefontein 340 HO

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

.....
DERA

5 December 2022

Environmental Consultants

Department of Land Affairs & Rural Development

Attention: Keabetswe Mothupi

Re: Verification of Land Claims

We are Environmental Consultants situated in Klerksdorp and has applied on behalf of Bitflow Investments 20 (Pty) Ltd. for a prospecting right on the following farm in the Bloemhof district.

- **Remaining extent of Portion 12 of the farm Kareefontein 340 HO**

Magisterial district of Bloemhof.

- **Lekwa-Teemane Local Municipality**

Could you please be so kind to verify if there are any land claims over the farms as mentioned above?

It would be highly appreciated if you could help us in this matter as soon as possible.

Please feel free to contact the office of Dera Environmental Consultants or Mrs. Erasmus on his cell: 082 895 3516 for any further information.

Yours truly,

P-P. 

Esna Erasmus

.....



OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: NORTH WEST
Cnr James Moroka and Sekame Drive, West Gallery, Mega City, MMABATHO 2735
Tel: (018) 388 7000/7008

Enquiries: Kaone Molebiemang
Tel: (053) 927 4128

DERA ENVIRONMENTAL CONSULTANTS

BY E-MAIL: dera.office@dera.za

Dear Esna,

LAND CLAIM ENQUIRY – REMAINING EXTENT OF PORTION 12 OF THE FARM KAREEFONTEIN 340 HO.

We refer to your letter dated 5th of December 2022.

We confirm that as at the date of this letter, no land claim appears on our database in respect of the abovementioned farm. This includes the database for claims lodged by 31 December 1998; and those lodged between 1 July 2014 and 27 July 2016 in terms of the Restitution of Land Rights Amendment Act, 2014.

Whilst the Commission takes reasonable care to ensure the accuracy of the information it provides, there are various factors that are beyond the Commission's control, particularly relating to claims that have been lodged but not yet gazetted such as:

1. Some Claimants referred to properties they claim dispossession of rights in land against using historical property descriptions which may not match the current property description; and
2. Some Claimants provided the geographic descriptions of the land they claim without mentioning the particular actual property description they claim dispossession of rights in land against.

The Commission therefore does not accept any liability whatsoever if through the process of further investigation of claims it is found that there is in fact a land claim in respect of the above property.

If you are aware of any change in the description of the above property after 19 June 1913 kindly supply us with such description so as to enable us to do further search.

Yours faithfully


MR. L.J. BOGATSU
CHIEF DIRECTOR
OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: NORTH WEST

DATE: 09/12/2022

Dera 2

From: Gerda <dera.office@dera.co.za>
Sent: Monday, 12 December 2022 08:17
To: dera.office2@dera.co.za
Subject: FW: RESPONSE LETTER
Attachments: SKM_C650i22120912200.pdf

Gerda Els
Cell: 083 225 1593

Esna Erasmus
Dera Omgewingskonsultante (Pty) Ltd.
Reg no: 2014/051013/07
P.O. Box 6499, Fairwood, 1872
VAT no: 4520284073
Cell: 083 225 1593
Email: dera.office@dera.co.za

From: Agnes Montwedi [mailto:Agnes.Montwedi@dalrrd.gov.za]
Sent: Friday, 09 December 2022 12:41
To: dera.office@dera.co.za
Subject: RESPONSE LETTER

Kindly find the attached.

Disclaimer

The information contained in this e-mail may be confidential, legally privileged and protected by law. Access by the intended recipient only is authorised. If you are not the intended recipient, kindly notify the sender immediately. Unauthorised use, copying or dissemination hereof is strictly prohibited. Save for bona fide departmental purposes, the Department of Agriculture, Land Reform and Rural Development does not accept responsibility for the contents or opinions expressed in this e-mail, nor does it warrant this communication to be free from errors, contamination, interference or interception.

PUBLIC NOTICE

APPLICATION FOR AN ENVIRONMENTAL AUTHORIZATION FOR THE PROPOSED ACTIVITIES.

Notice is given for the following application:

- 1) Environmental authorization application for prospecting.

- **Proponent:** The applicant is Bitflow Investments 20 (Pty) Ltd.
- **Ref. no:** NW30/5/1/1/2/13614PR
- **Property description:** The proposed prospecting area is over the Remainder of Portion 12 of the farm Kareefontein 340 HO, magisterial district of Bloemhof. The total extent of the prospecting area is 315.2013 hectares.
(21 SG digital codes: T0HO00000000034000012)
- **Location:** The property is situated ±10Km west of Bloemhof.
- **Project description:** The purpose of the application is to obtain the required authorisation from the Department to successfully: undertake geological surveys, test pits and bulk sampling.
- **Process of Scoping is followed**
- **Activity applied for:** the following activities as listed in terms of NEMA (Act No. 107 of 1998) as amended and EIA Regulations, 2014 was applied for under Activity 19, (Listing Notice 2) GNR325
Activity 20 (Listing Notice 1) GNR327
Activity 27 (Listing Notice 1) GNR327
- **Minerals applied for:** Diamonds Alluvial & Diamonds in Kimberlite
- **Date submitted:** 8 November 2022
- **Stakeholder involvement:** Stakeholders are invited to register as interested and affected parties and to participate in the application process by identifying issues of concern and suggestions for consideration in the Scoping Report and can contact Dera Environmental Consultants for any further information. Please submit your written comments by mail, fax or e-mail in this 30 day of this notice to:

Esna Erasmus of DERA Environmental Consultants
PO Box 6499 E-mail: daane@dera.co.za
Flamwood Tel: 018 468 5355
2572 Fax: 018 011 3760

- Advertisement – Stellalander Wednesday 7 December 2022

SITE NOTICE

APPLICATION FOR AN ENVIRONMENTAL AUTHORIZATION FOR THE PROPOSED ACTIVITIES.

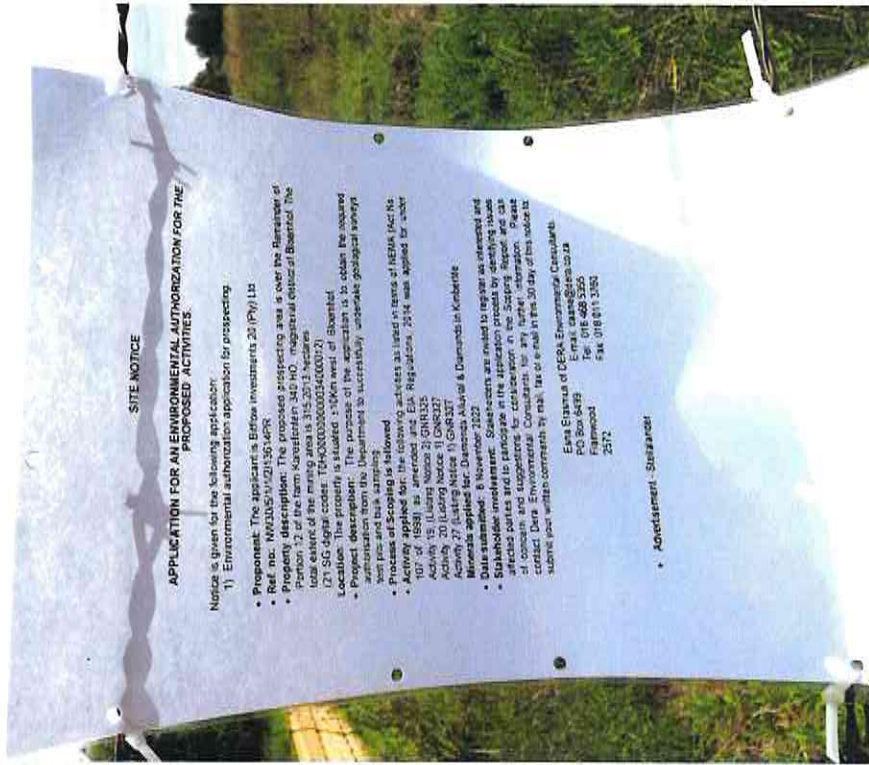
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(21 SG digital codes: T0HO00000000034000012)
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 - **Project description:** The purpose of the application is to obtain the required authorisation from the Department to successfully: undertake geological surveys, test pits and bulk sampling.
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PO Box 6499 E-mail: daane@dera.co.za
Flamwood Tel: 018 468 5355
2572 Fax: 018 011 3760
- Advertisement - Stellalander

Photo 1



Photo 2



GPS Location: 27°40'12.67" S

25°30'0.19" E

P O Box 6499
Flamwood
2572
Tel: 018-468 5355
Fax: 018-011 3760
Cell: 082 895 3516
E-mail: dera.office@dera.co.za



.....

DERA

5 December 2022

Environmental Consultants

Department of Economic Development, Environment, Conservation and Tourism
Agricentre Building, Office E36
Cnr Dr James Moroko Drive & Stadium Road
Mmabatho
2735

Attention: Ms Ouma Skosana

RE: Scoping Report

Reference Number: NW30/5/1/1/2/13614PR

It is hereby confirmed that Bitflow Investments 20 (Pty) Ltd has applied for a prospecting right over the Remaining extent of Portion 12 of the farm Kareefontein 340 HO, Magisterial district of Bloemhof.

The application was accepted by the Department of Mineral Resources and they have requested that the Department of Rural, Environment and Agricultural Development (North-West Regional Office) must be consulted about the proposed prospecting right. See attached the Scoping report for your comments, it will be appreciated if we can get the comments by 12 January 2023 if possible.

Should you have any questions regarding the above, please call Mrs. Erasmus at 082 895 3516.

DERA Environmental Consultants can be contacted for any further enquiries.

Yours sincerely

Esna Erasmus
DERA Environmental Consultants

.....

NW13614PR
20 (Pty) Ltd. Scoping Report -
Zintshani Investments

To

Company Name:

Street Address: (no PO Boxes)

To: Department of Economic Development, Environment, Conservation and Tourism

Agricentre Building

Office no E36

Cnr Dr James Moroka Drive & Stadium Road

Mmabatho

2735

Phone: 018 389 5095/5156

Attention: Ms. Ouma Skosa

No Dangerous Goods Declaration

I hereby certify that this consignment does not contain any dangerous or prohibited goods, eg. explosives, flammables, corrosives, aerosols or poisonous substances.

Name:

E. Krüger

Signature:

E. Krüger

▲ Lift & Peel



Pickup

XA0005810197

▲ Lift & Peel



Delivery

XA0005810197

XA0005810197



P O Box 6499
Flamwood
2572
Tel: 018-488 5355
Fax: 018-0 11 3760
Cell: 082 895 3516
E-mail: dera.office@dera.co.za

.....
DERA

5 December 2022

Environmental Consultants

**Department of Water and Sanitation
Private Bag X 6131
28 Central Road
Beaconsfield
Kimberley
8301**

Attention: Lerato Mokhoantle

RE: Scoping Report

NW30/5/1/1/2/13614PR

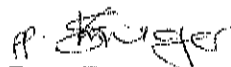
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Should you have any questions regarding the above, please call Mrs. Erasmus at 082 895 3516.

DERA Environmental Consultants can be contacted for any further enquiries.

Yours sincerely



Esna Erasmus
DERA Environmental Consultants

.....



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We would love to handle your package

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PO BOX 302 0801 263 303
Lanseria Fax:
1748 086 843 3305
After Hours
Whatsapp:
082 823 3254



D3WB7T

ACC NO.	WAYBILL NO.	CUSTOMER REF.	DATE	PARCELS	MASS	CH. MASS	ORIGIN	DEST.	OFFICE REFERENCE
DO2KRO	D3WB7T		2022-12-14	1	2	3	KLK	KIM	

Contact name: Gerda Els
Contact number: 0832251593
Company name:
Street address:
27 Lewis Street
Wilkoppies
City: Klerksdorp
Country: South Africa
Postal Code: 2571
Special instructions:
collect before 16h00

Contact name: Lerato Mokhoantle
Contact number: 083655 8312
Company name:
Department of Water and Sanitation
Street address:
28 Central Road
Beaconsfield
City: Kimberlay
Country: South Africa
Postal Code: 8301
Special instructions:

PARCEL NO.	DESCRIPTION	WEIGHT	DIMENSIONS
1	Standard flyer	2.0 kg	40.0 cm x 30.0 cm x 8.0 cm

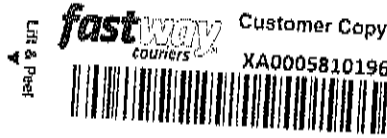
By affixing the Client's signature to this form, the client acknowledges having read, understood, and agreed to be bound by the standard conditions of carriage of THE COURIER GUY (PTY) LTD. All other standard conditions are hereby accepted.
LIABILITY COVER Y N
(ONLY DECLARE VALUE IF YES)
DECLARED VALUE R

SERVICE LEVEL
Economy (ECO)
SERVICES REQUIRED

CLIENT SIGNATURE
DATE

RECEIVED BY
THE COURIER GUY (Pty) Ltd.
DATE TIME

RECEIVERS SIGNATURE
PRINT SURNAME AND INITIALS
DATE TIME



P O Box6499
Flamwood
2572
Tel: 018-468 5355
Fax: 018-0 11 3760
Cell: 082 895 3516
E-mail: dera_office@dera.co.za

.....
DERA

5 December 2022

Environmental Consultants

Department of Agriculture, Forestry and Fisheries
Louis le Grange Building (Court Building)
Cnr Peter Mokaba & Wolmarans street
3rd Floor
Office nr 318
Potchefstroom
2520

Attention: Maurice Vukeya

RE: Scoping Report

Reference Number: NW30/5/1/1/2/13614PR

It is hereby confirmed that Bitflow Investments 20 (Pty) Ltd has applied for a prospecting right over the Remaining extent of Portion 12 of the farm Kareefontein 340 HO, Magisterial district of Bloemhof.

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Should you have any questions regarding the above, please call Mrs. Erasmus at 082 895 3516.

DERA Environmental Consultants can be contacted for any further enquiries.

Yours sincerely

Esna Erasmus
DERA Environmental Consultants

.....

NW 136148
Biflow Investments 20 (Pty) Ltd - Scoping Report

To

Company Name:

Street Address: (no PO Boxes)

To: Department of Agriculture, Forestry & Fisheries

Louis Le Grange Building (Court Building)

Cnr Peter Mokaba & Wolmarans Street

3rd Floor

Office nr 318

Potchefstroom

2520

Phone: 018 299 6739

Attention: Maurice Vukeya

Cell: 082 459 6479

No Dangerous Goods Declaration

I hereby certify that this consignment does not contain any dangerous or prohibited goods, eg. explosives, flammables, corrosives, peroxides or poisonous substances.

Name:

E. Krüger

Signature:

E. Krüger

▲ Lift & Peel



Pickup

XA0005810196

▲ Lift & Peel



Delivery

XA0005810196

XA0005810196



[Bitflow Investments 20 (Pty) Ltd. – KAREEFONTEIN 340 HO – NW 30/5/1/1/2/ 13614 PR]

NEMA SCREENING REPORT: APP ENDIX 3

**SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS
REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE
ENVIRONMENTAL SENSITIVITY**

EIA Reference number:

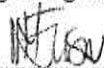
Project name: Kareefontein 340 HO - RE/Port 12

Project title: Prospecting Right

Date screening report generated: 07/11/2022 17:22:49

Applicant: Bitflow Investments 20 (Pty) Ltd

Compiler: DERA Omgewingskonsultante (Pty) Ltd

Compiler signature: 

Application Category: Mining|Prospecting rights

Table of Contents

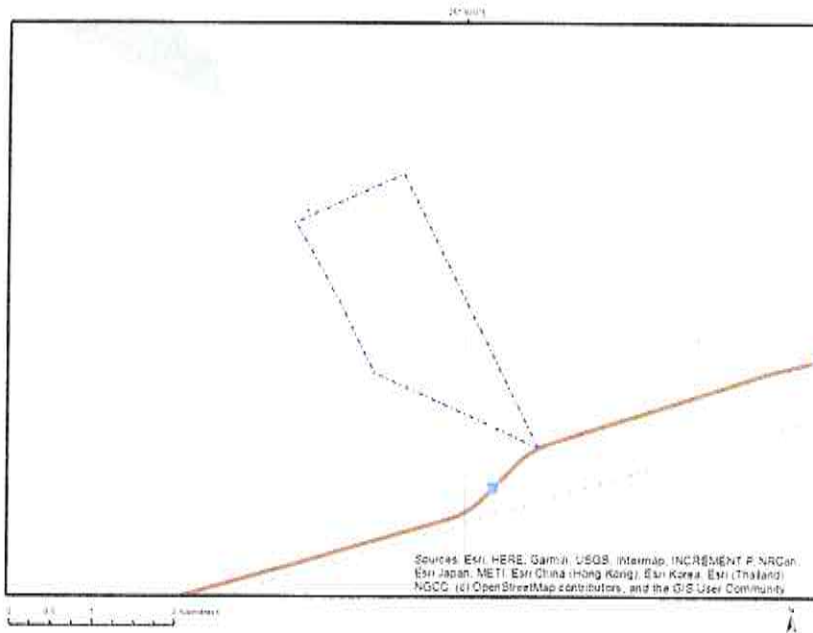
Proposed Project Location	3
Orientation map 1: General location	3
Map of proposed site and relevant area(s)	4
Cadastral details of the proposed site	4
Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area	5
Environmental Management Frameworks relevant to the application	5
Environmental screening results and assessment outcomes	5
Relevant development incentives, restrictions, exclusions or prohibitions	5
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Proposed Project Location

Orientation map 1: General location



Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	WILDEHOENDERKRAAL	296	0	27°40'19.77S	25°28'9.26E	Farm
2	PANFONTEIN	270	0	27°34'49.43S	25°26'42.69E	Farm
3	KAREEFONTEIN	340	0	27°37'53.61S	25°31'9.58E	Farm
4	UITKYK	342	0	27°40'38.43S	25°30'18.11E	Farm
5	WILDEHOENDERKRAAL	296	5	27°39'23.49S	25°29'11.52E	Farm Portion
6	KAREEFONTEIN	340	12	27°38'59.97S	25°29'38.47E	Farm Portion
7	UITKYK	342	3	27°40'43.39S	25°30'4.96E	Farm Portion
8	KAREEFONTEIN	340	0	27°38'48.83S	25°30'46.89E	Farm Portion
9	PANFONTEIN	270	12	27°38'44.13S	25°28'22.69E	Farm Portion
10	UITKYK	342	0	27°40'39.64S	25°30'37.99E	Farm Portion
11	KAREEFONTEIN	340	7	27°37'48.33S	25°29'34.64E	Farm Portion

Development footprint¹ vertices:

No development footprint(s) specified.

¹ "development footprint", means the area within the site on which the development will take place and includes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2343	Solar PV	Approved	18.4

Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

Environmental screening results and assessment outcomes

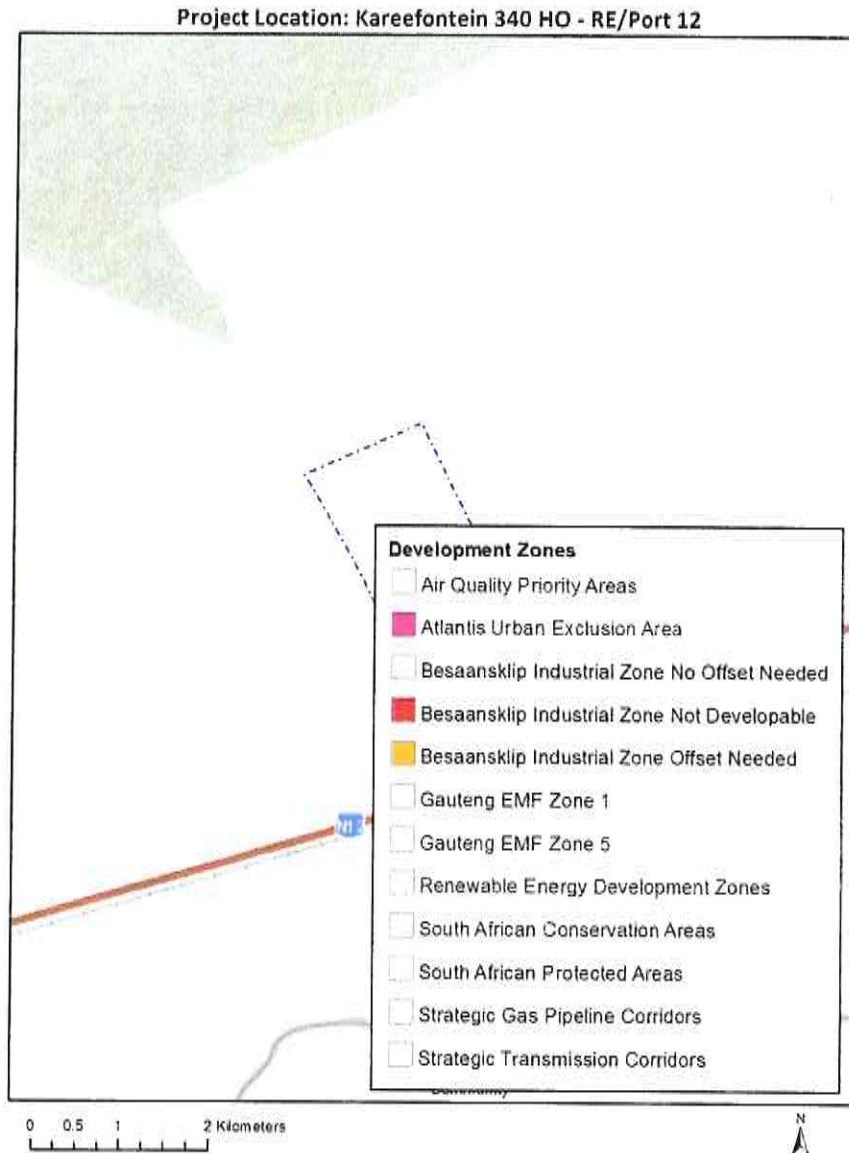
The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Mining | Prospecting rights.**

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

No intersection with any development zones found.

Map indicating proposed development footprint within applicable development incentive, restriction, exclusion or prohibition zones



Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme			X	
Animal Species Theme				X

Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme				X
Civil Aviation Theme			X	
Defence Theme				X
Paleontology Theme		X		
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Specialist assessments identified

Based on the selected classification, and the environmental sensitivities of the proposed development footprint, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

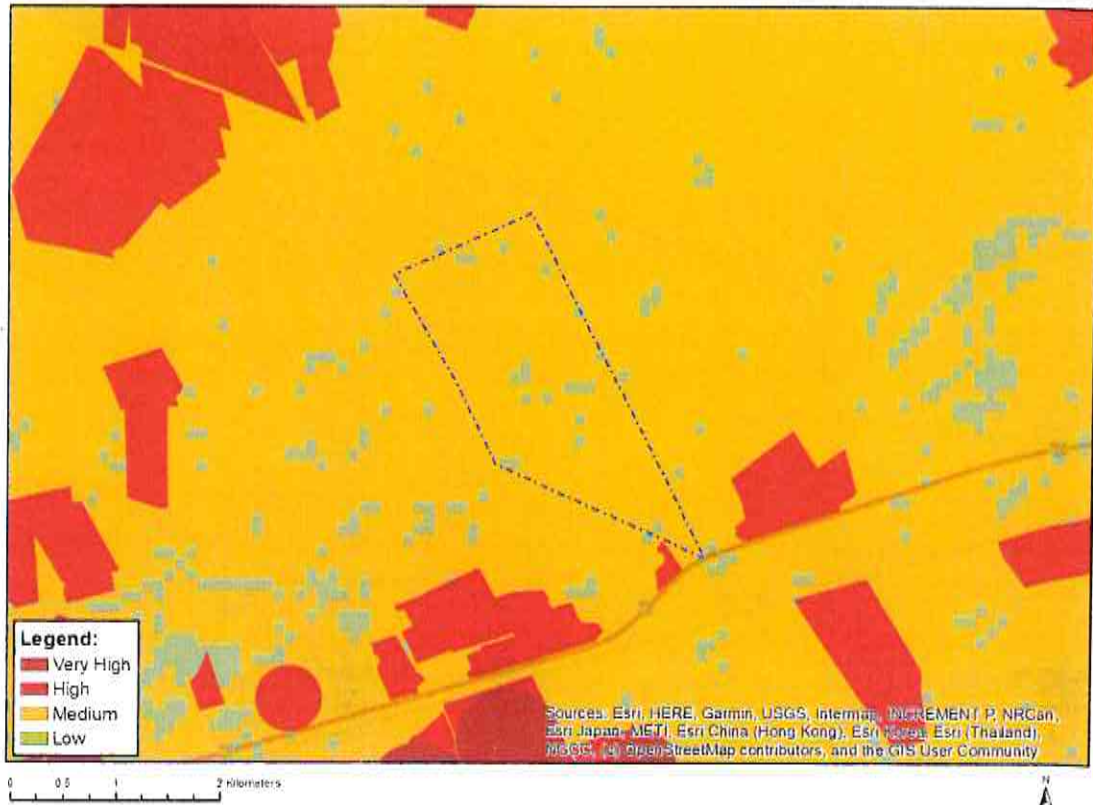
No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Agriculture Assessment Protocols.pdf
2	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
3	Paleontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
4	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Terrestrial Biodiversity Assessment Protocols.pdf
5	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Aquatic Biodiversity Assessment Protocols.pdf
6	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Noise Impacts Assessment Protocol.pdf

	ment	
7	Radioactivity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf
8	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Plant Species Assessment Protocols.pdf
9	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Animal Species Assessment Protocols.pdf

Results of the environmental sensitivity of the proposed area.

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. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY

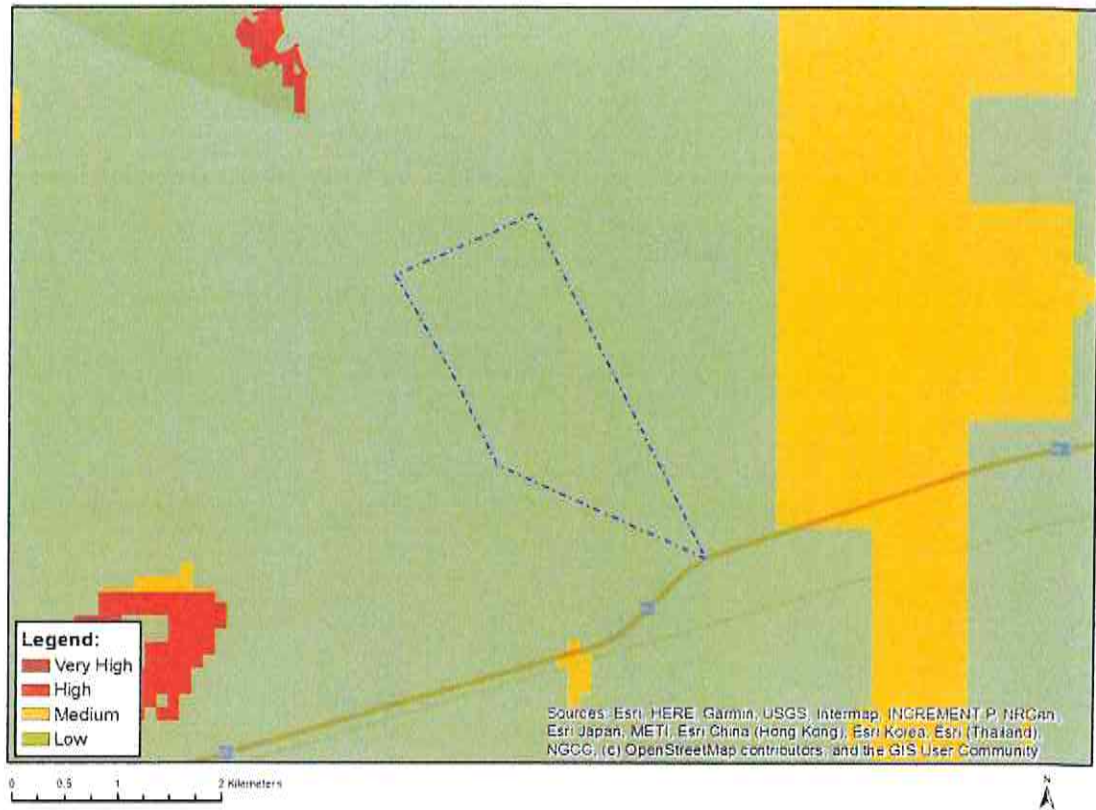


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Land capability;01. Very low/02. Very low/03. Low-Very low/04. Low-Very low/05. Low
Medium	Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



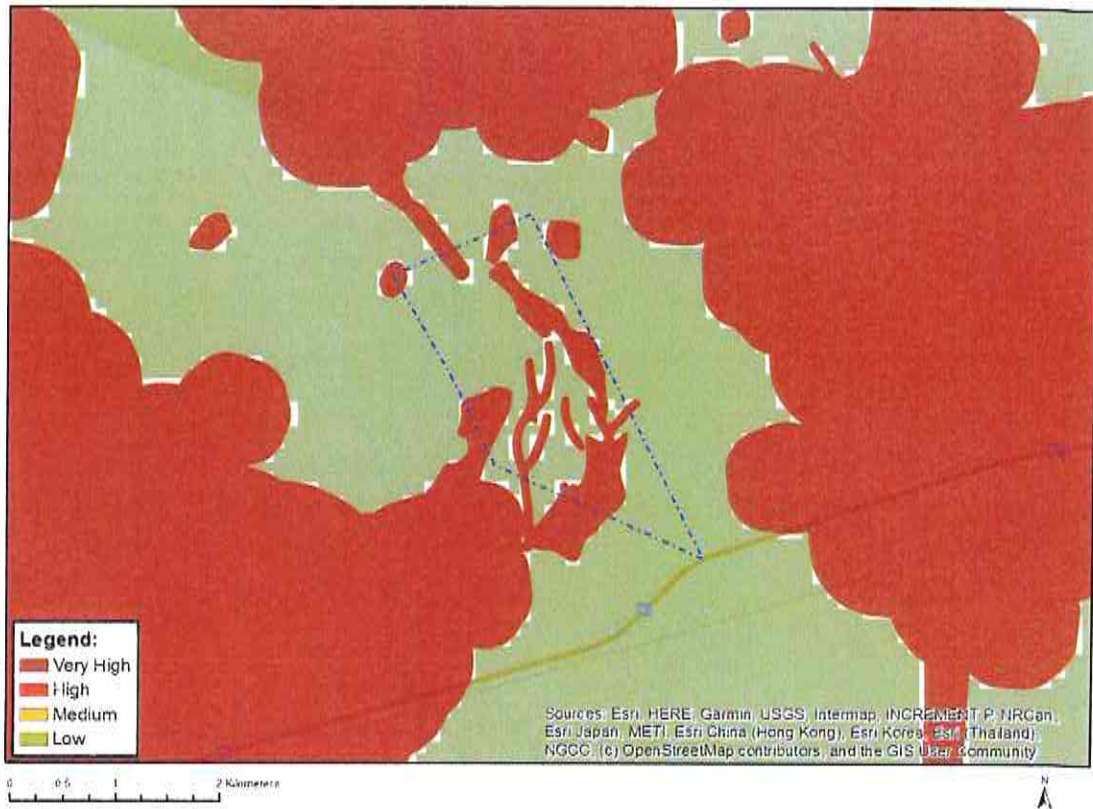
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at giadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Subject to confirmation

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

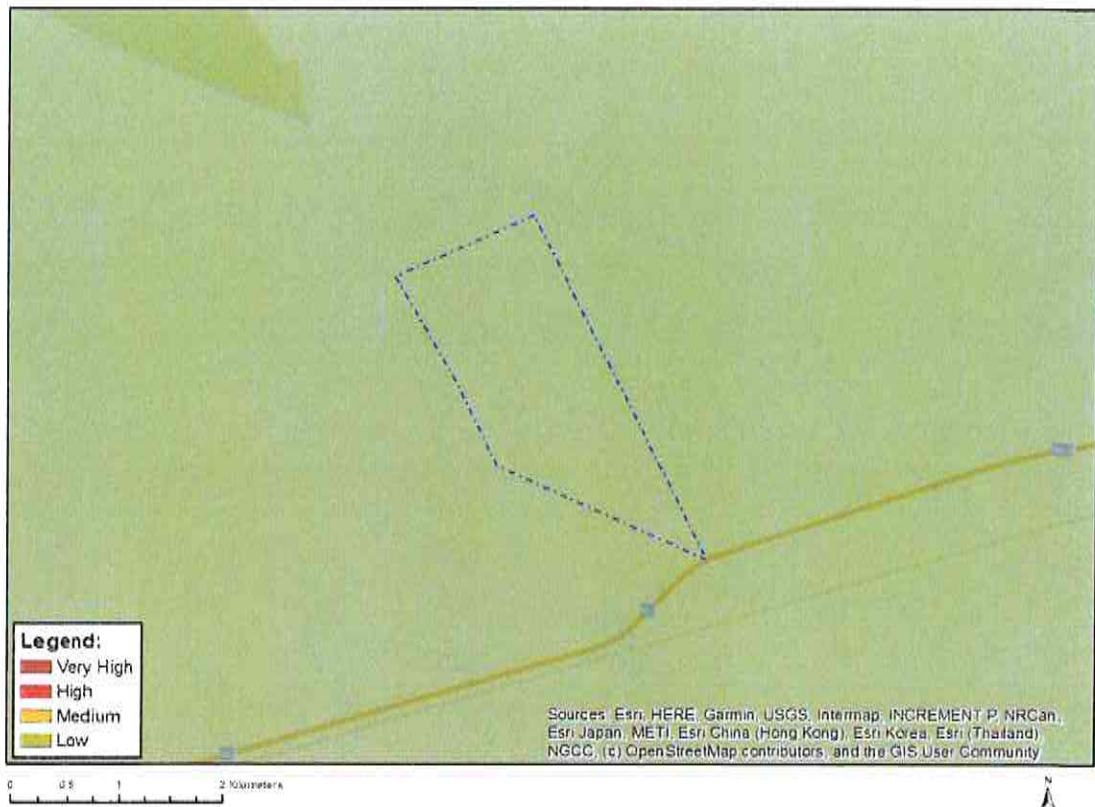


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Very High	Aquatic CBAs
Very High	Wetlands and Estuaries

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

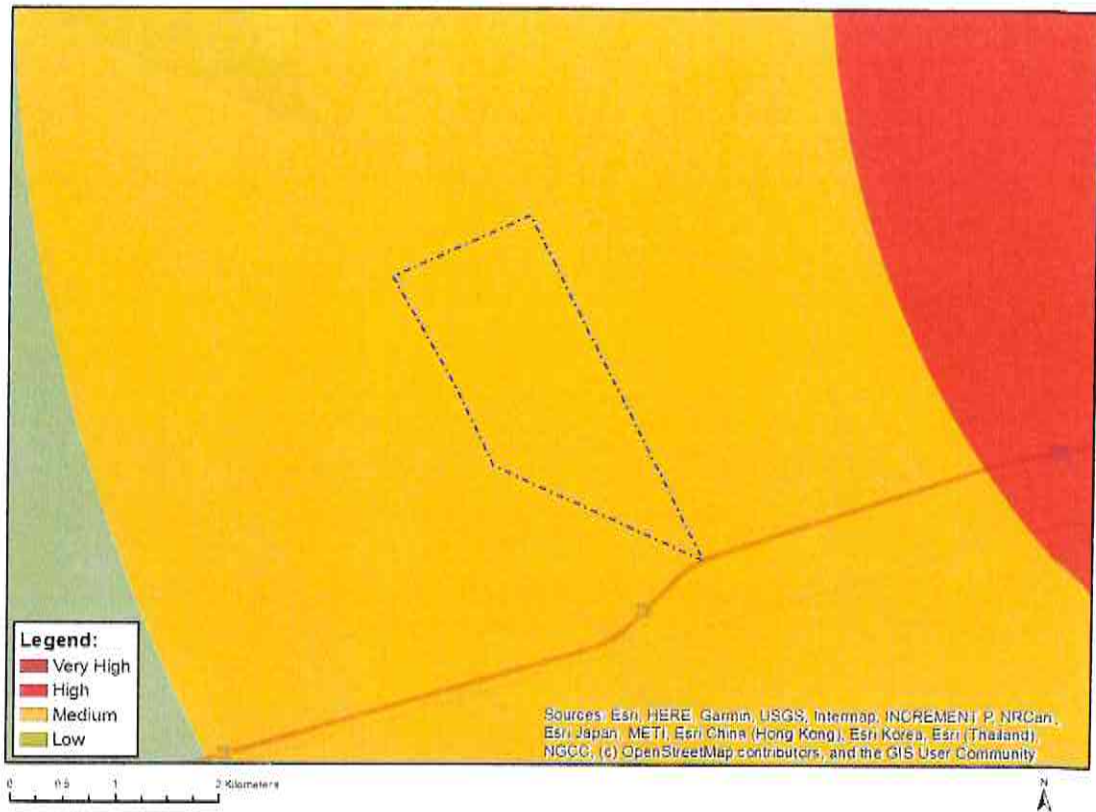


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

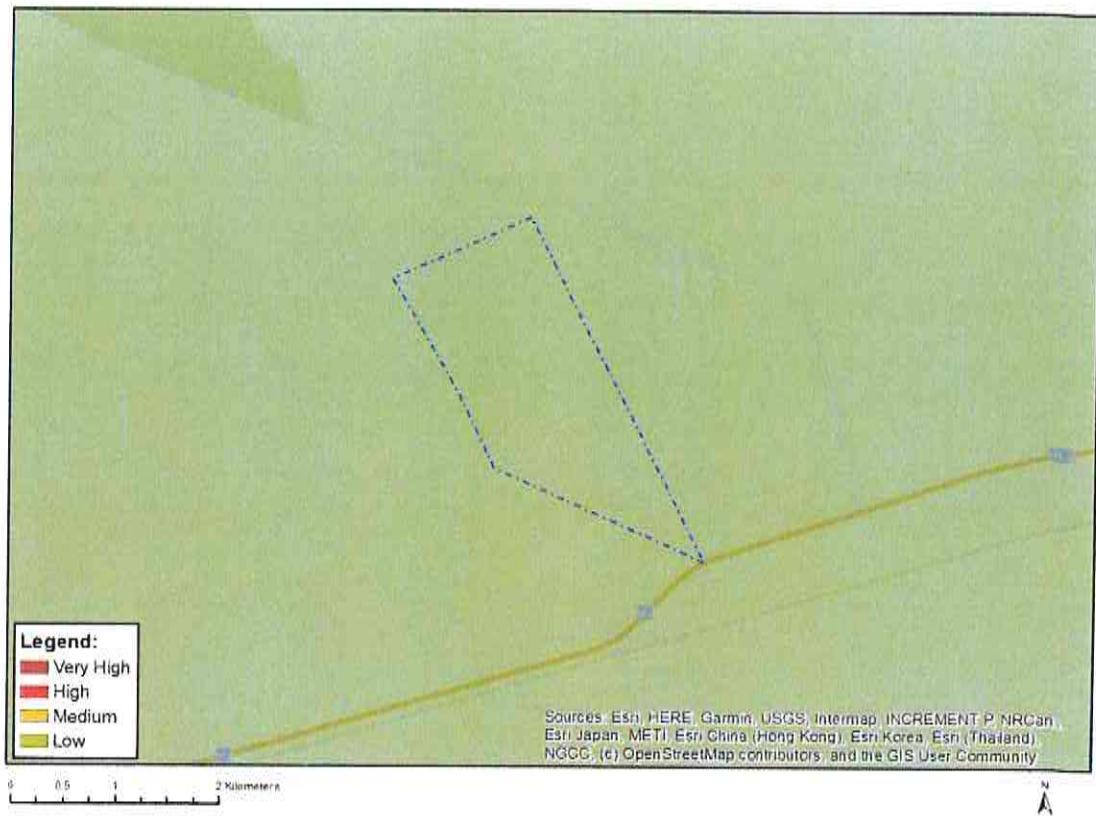


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Between 8 and 15 km of other civil aviation aerodrome

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

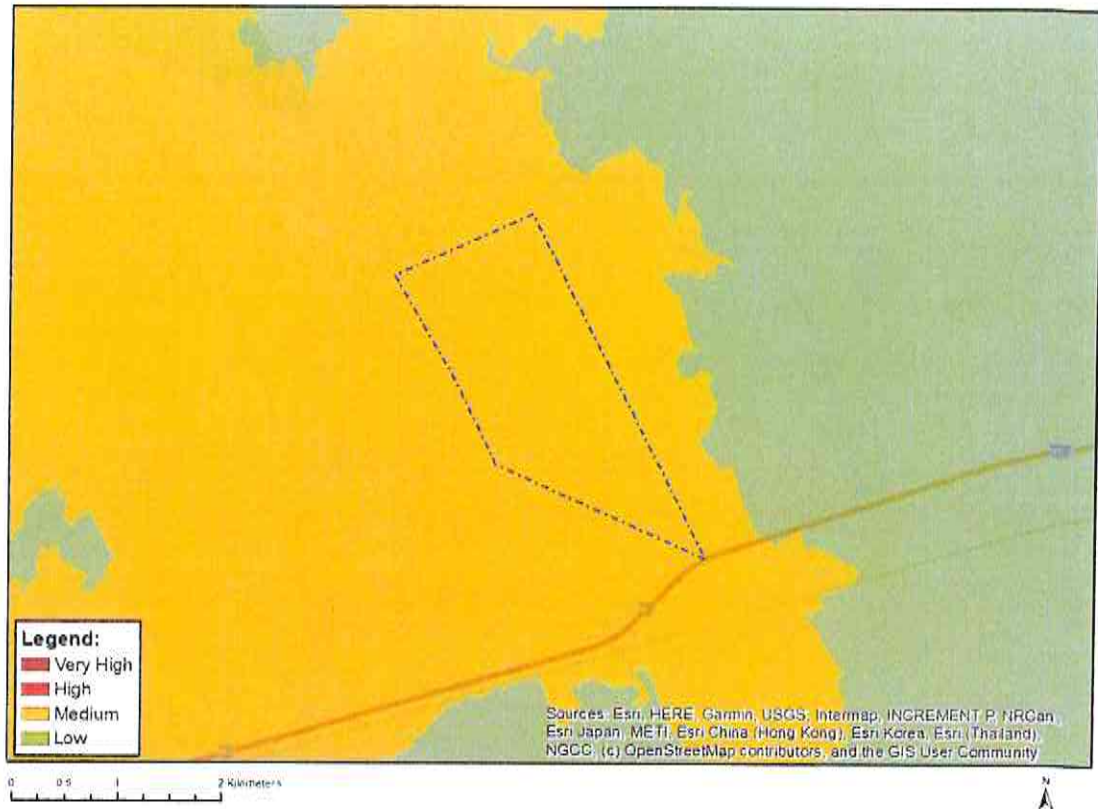


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Sensitive species 257

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Very High	Critical biodiversity area 2
Very High	Protected Areas Expansion Strategy

EXTRACTION OF GEOLOGICAL MAP: ANNEXURE 4

