

ACKNOWLEDGEMENT OF DOCUMENTS RECEIVED

REGISTRY KLERKSDORP OFFICE

Applicant /Holder of Right: J.C. Molnar

File No: NW 30/5/1/... 1.2/10498 PF NW 30/5/1/... 3/2/1/... 10498 EM

File No : NW 5/3/2/..... NW 6/2/2/.....  
NKI-000110PF/102

CHECKLIST: MINERAL LAW ADMINISTRATION

- Joint venture agreement / Bee
Proof Of Consultation with Landowner/Interested/Affected Parties
Other Amendment of EA

CHECKLIST: MINE ENVIROMENTAL MANAGEMENT

- 1 Original + ..... Copies ( Scoping Report / EMP/BAR/ EIA)
Closure application
Memorandum Agreement
Itemisation as required in terms of Section 24 P(3) of NEMA
Letter from the Bank : Financial Provision
Bank Guarantee

Receipt of the above-mentioned documentation is hereby acknowledged and the responsible sub-directorate will revert back to you once the documents has been assessed.

REGISTRY OFFICIAL

CLIENT SIGNATURE

COPY TO BE PROVIDED TO CLIENT





## mineral resources

Department:  
Mineral Resources  
**REPUBLIC OF SOUTH AFRICA**

# **ENVIRONMENTAL IMPACT ASSESSMENT REPORT and ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT**

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF 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: **J. C. Moolman**

TEL NO: **082 926 3752**

FAX NO: -

POSTAL ADDRESS: **P.O. Box 107, Wolmaransstad 2630**

FILE REFERENCE NUMBER SAMRAD: **NW30/5/1/1/2/10498PR – SEC 102 – NW-00110-PR/102**

## 1. IMPORTANT NOTICE

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

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

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

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

**It is 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.

## 1. 2. OBJECTIVE OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

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

- (a) determine the policy and legislative context within which the activity is located and document how the proposed activity complies with and responds to the policy and legislative context;
- (b) describe the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
- (c) identify the location of the development footprint within the preferred site based on an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects of the environment;
- (d) determine the—
  - (i) nature, significance, consequence, extent, duration and probability of the impacts occurring to inform identified preferred alternatives; and
  - (ii) degree to which these impacts—
    - (aa) can be reversed;
    - (bb) may cause irreplaceable loss of resources, and
    - (cc) can be avoided, managed or mitigated;
- (e) identify the most ideal location for the activity within the preferred site based on the lowest level of environmental sensitivity identified during the assessment;
- (f) identify, assess, and rank the impacts the activity will impose on the preferred location through the life of the activity;
- (g) identify suitable measures to manage, avoid or mitigate identified impacts; and
- (h) identify residual risks that need to be managed and monitor

**PART A**  
**SCOPE OF ASSESSMENT AND ENVIRONMENTAL IMPACT ASSESSMENT**  
**REPORT**

3. Contact Person and correspondence address

**a) Details of**

**(i) Details of the EAP**

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

Name of the Practitioner: **DERA Environmental Consultants - Mr. Daan Erasmus**

Tel No.:018 468 5355

Fax No.:018 468 4015

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

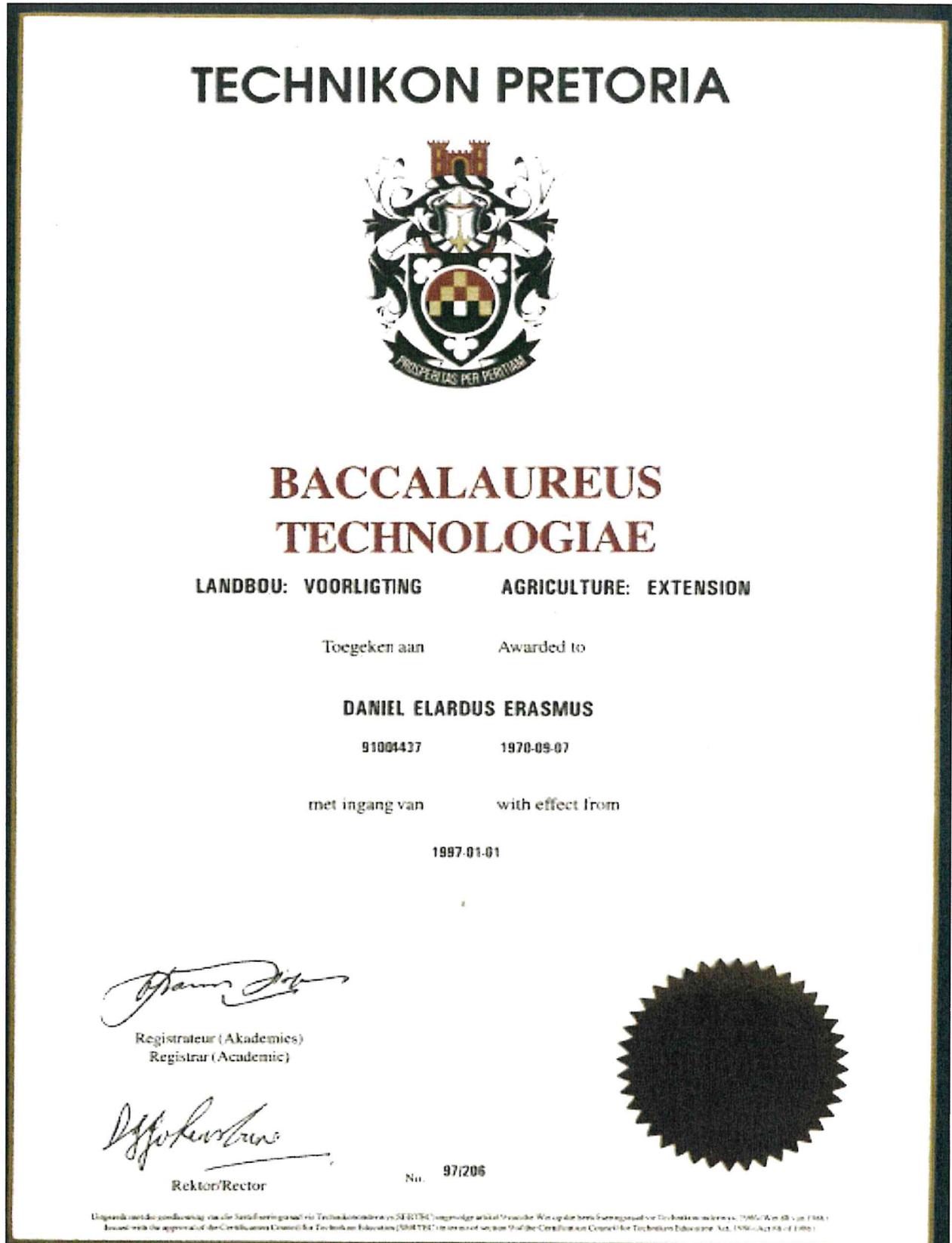
**(ii) Expertise of the EAP**

**(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)(iv)*

See next page for copy of qualification, **Figure 1.**

Figure 1 – Copy of Qualification



TECHNIKON  
PRETORIA



TECHNIKON  
PRETORIA

# NASIONALE NATIONAL DIPLOMA

LANDBOU: HULPBRONBENUTTING

AGRICULTURE: RESOURCE UTILIZATION

Toegeken aan

Awarded to

DANIEL ELARDUS ERASMUS

91004437

7009075033088

met ingang van

with effect from

1994-01-01

Die volgende is voltooi

The following were completed

(In Afrikaans)

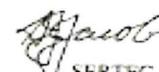
(In English)

Landbou-ekonomie I, II en III  
 Voorligtingsmetodiek I en II  
 Akkerbou I, II en III  
 Weidingkunde A  
 Bodenbeplanning I en II  
 Bodembewaring I  
 Grondkunde I en II  
 \*Meganisasie  
 Fisiese Wetenskap  
 Melkproduksietegnologie  
 Vleisbeesproduksietegnologie  
 Kleinveesproduksietegnologie  
 Grondklassifikasie III

Agricultural Economics I, II and III  
 Extension Method I and II  
 Field Husbandry I, II and III  
 Pasture Science A  
 Land Use Planning I and II  
 Soil Conservation I  
 Soil Science I and II  
 Mechanisation\*  
 Physical Science  
 Milk Production Technology  
 Beefer Production Technology  
 Small Stock Production Technology  
 Soil Classification III

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Minimum Opleidingstydperk: 3 Jaar  
Minimum Training Period : 3 Years

  
 SERTEC  
 Uitvoerende Direkteur/  
 Executive Director

Nr./No. ND1117/94

  
 TECHNIKON  
 Rektor/Rector

Die Nasionale Diploma is deur die Minister van Opleiding en Wetenskap (SERTEC) goedgekeur en deur die Provinsiale Opleidingsraad goedgekeur. Dit is deur die Minister van Opleiding en Wetenskap goedgekeur. Dit is deur die Provinsiale Opleidingsraad goedgekeur. Dit is deur die Minister van Opleiding en Wetenskap goedgekeur. Dit is deur die Provinsiale Opleidingsraad goedgekeur.

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

See **Figure 2** below Curriculum Vitae of D. E. Erasmus.

**Figure 2** – Copy of Curriculum Vitae

# DAAN ERASMUS

ENVIRONMENTAL PRACTITIONER



**CONTACTS** 

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 daane@dera.co.za

 +27 82 895 3516

 Klerksdorp, North-west Province, South Africa

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**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*

**ABOUT ME** 

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Environmental Practitioner with 29 years' experience in Agricultural Science, and Mining- and Environmental Management.

Began own company – DERA Environmental Consultants (Pty) Ltd 2003.

Main scope of business: Compiling and submission of mining related applications; manage and compile legal environmental documents.

Furthermore doing monitoring work to evaluated compliance to environmental legislation; evaluating outstanding rehabilitation liabilities for mining companies.

Assist legal companies in determining environmental damage.

Do risk assessment and applications for closure certificates.

Give guidance in rehabilitation practices.

Compile EMPR/EIA for Mining Rights and compilation of EMPlan's for Prospecting and Mining Right applications.

Compile BAR & EMPR reports in support of application of Chicken Broilers and – facilities, Feed lots, Fuel Storage, Ploughing of virgin soil and associated infrastructure for Environmental Authorizations and many more based on experience from management of the natural resources and the mitigation of impacts.

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**WORK EXPERIENCE** 

<u>JAN 1989</u>	<b>MILITARY SERVICE</b>
SEPT 1990	<i>National Defence Force</i>
Officers Course: II Lieutenant	
<u>JAN 1991</u>	<b>CHIEF RESOURCE CONSERVATION INSPECTOR</b>
FEB 2003	<i>National Department of Agriculture</i>
Administration of Act 43 of 1983, Agricultural Resource Conservation Act in North West Province. The main activities were veld inspections in order to monitor correct utilization of natural resources and where necessary take corrective steps. Other activities included discussions and lectures at farmers union meetings; municipalities and other institutions in order to promulgate the Act. Management of personnel and personnel related matters; management of budget of regional office in Potchefstroom; management and control of declared weeds and invader species. Evaluation of EMPr's and EIA's and monitoring mine rehabilitation and environmental management out of agricultural point of view Audit and compliance inspections of mining operations.	

Page 1

Page 7 of 57

**WORK EXPERIENCE (Continues)**



MAR 2003 ENVIRONMENTAL PRACTITIONER  
 PRESENT DERA Environmental Consultants

Compiling and submission of mining related applications; manage and compile legal environmental documents.  
 Furthermore doing monitoring work to evaluated compliance to environmental legislation; evaluating outstanding rehabilitation liabilities for mining companies.  
 Assist legal companies in determining environmental damage.  
 Do risk assessment and applications for closure certificates.  
 Give guidance in rehabilitation practices.  
 Compile EMPR/EIA for Mining Rights and compilation of EMPlan's for Prospecting and Mining Right applications.  
 Compile BAR & EMPr reports in support of application of Chicken Broilers and –facilities, Feed lots, Fuel Storage, Ploughing of virgin soil and associated infrastructure for Environmental Authorizations and many more based on experience from management of the natural resources and the mitigation of impacts.

**EDUCATION**



1988 HIGH SCHOOL DIPLOMA– with Full Exemption  
 Wolmaransstad High School, North West, SA

English	Afrikaans
Mathematics	Science
Geography	Accounting

1994 NATIONAL DIPLOMA: AGRICULTURE: RESOURCE  
 Pretoria Technikon (Tshwane University of Technology) – Pretoria, Tshwane

Agricultural Economics I, II and III	
Extension Method I, II and III	Field Husbandry I, II and III
Pasture Science A	Land Use Planning I and II
Soil Conservation I	Soil Science I and II
Mechanization	Physical Science
Milk Production Technology	Beef Production Technology
Small Stock Production Technology	
Soil Classification III	Computer Application I

1996 BACCALAUREUS TECHNOLOGIAE: AGRICULTURAL EXTENTION  
 Pretoria Technikon (Tshwane University of Technology) – Pretoria, Tshwane

Agricultural Communication I	Agricultural Extension IV
Crop Production IV	Research Methodology

EDUCATION - continues 

1999                    **MASTERS DEGREE IN SUSTAINABLE AGRICULTURE** - uncompleted  
*Orange Free State University, Bloemfontein, SA*

Conservation of agricultural resources and the Environment  
 Soil-, climate and water use and soil and water Management  
 Plant and energy utilization and management  
 Economics of sustainability and development  
 Scrip – project proposal  
 Sustainable plant production systems  
 Farm management for sustainable agriculture  
 Strategic management, marketing and planning  
 Communication and technology transfer  
 Final dissertation - uncompleted

EIA- EXPERIENCE 

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

- Compliance Creators (Goedgevonden) – 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.
- Diamsure (Palmietfontein) - was done as part of Prospecting Right Application with Bulk Sampling, my role entailed: site visit, impact assessment and evaluation and compilation of report and handling of application process.
- Brenda Gagiano [Katdoornplaats] - was done as part of Prospecting Right Application with Bulk Sampling, my role entailed: site visit, impact assessment and evaluation and compilation of report and handling of application process.
- J & K Steyn Trust [Klipkuil] - was done as part of Prospecting Right Application with Bulk Sampling, my role entailed: site visit, impact assessment and evaluation and compilation of report and handling of application process.
- Pilansberg Tented Facility [Pilansberg] - was done as part of an Environmental Authorization for a listed activity for new tented camp, my role entailed: site visit, impact assessment and evaluation and compilation of report and handling of application process.
- FMS Trust [Saamgevoeg] - was done as part of an Environmental Authorization for a listed activity, for the construction of Chicken Broilers, my role entailed: site visit, impact assessment and evaluation and compilation of report and handling of

SHORT COURSES 

Computer training Dbase IV  
 Seminar in public speaking  
 Veld assessment course  
 Resource Identification and utilization course  
 ArcView GIS course  
 Persuasion skills  
 Wetlands identification  
 Rehabilitation of Wetlands  
 Management skills  
 Agricultural law course

**b) Location of the overall Activity.**

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

(i) 21 digit Surveyor General Code for each farm portion	TOHO0000000022400000 TOHO0000000022400003 TOHO0000000022400004 TOHO0000000022400009
(ii) Farm Name:	Doornbult 224 HO ✓ Remaining Extent ✓ Portion 3 ✓ Portion 4 (Pot of 1) ✓ Remaining Extent of Portion 9
(iii) Coordinates - Co-ordinates List WG 27°	Co-ordinates: A1: 25.8127 -27.3639 A2: 25.8129 -27.3673 A3: 25.8436 -27.3656 A4: 25.8429 -27.3730 A5: 25.8136 -27.3749 A6: 25.8150 -27.3895 A7: 25.7984 -27.3907 A8: 25.7972 -27.3759 A9: 25.7640 -27.3794 A10: 25.7606 -27.3673 WGS 84/WGS 84
Application area (Ha)	1120.5631 ha
Magisterial district:	Wolmaransstad is a maize-farming town situated on the N12 between Johannesburg and Kimberley in North West Province of South Africa. The town lies in an important alluvial diamond-mining area and it is the main town of the <b>Maquassi Hills Local Municipality</b> . And further fall under the District Municipality of Dr Kenneth Kaunda. Total Area is 41.68 km <sup>2</sup> and Population of (2011) total 3,633 and density of 87/km <sup>2</sup> .
Distance and direction from nearest town	Approximately 29.2 km south-west of Wolmaransstad.
Minerals applied for	Alluvial Diamonds (DA)

**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)**

See **Appendix 1(a) - Locality Map** indication where the applied area are situated within the district of Wolmaransstad, North West Province and **Appendix 1(b) – Infrastructure and Activity Map** indication applied area with attached coordinates of the area.

**Appendix 1(a) – Locality Map  
&  
Appendix 1(b) – Infrastructure and Activity Map**

**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 has an approved Prospecting Right [**Protocol No: 1010/2015/2018**] (10498PR) over Portion 4 (portion of portion 1) of the farm **Doornbult 224 HO** for 428.2660 ha. The purpose of this amended EMPr/EIA is with regards to a Section 102 application that was lodged in order to increase the application area. The increase of the application area will still be over of the farm **Doornbult 224 HO** but the area will increase to be a total area of 1120, 5631 ha, over the portions: **the Remaining Extent, Portion 3, Portion 4 (portion of portion 1) & Remaining Extent of Portion 9**. Here will be only one site at any time on one of the farm portions, thus reflected in the quantum. Because the scope of this application is to do: geological surveys, test pits and to do bulk sampling, it is required that a NEMA EMPr to be submitted. The prospecting will first be done to confirm the presence of the applied minerals: Alluvial Diamonds (DA). The prospecting methods as described in the Prospecting Works Programme (PWP) will have started with geological surveys and test pits under the existing prospecting right and there after bulk sampling will be done to define the area where economical viable mining can be done if the reserve proof to exist. The area is characterized as being a rural area mostly under natural vegetation, used as natural grazing by the landowners. There are no

active cultivated fields; it looks as if all have been withdrawn from cultivation. The central part of the application has been disturbed by mining activities, which can clearly be seen on the Google Earth Images since before 2010, see **Figure 3**. The infrastructure in and around the application area are gravel roads and fence lines. There are further no other infrastructure that can be seen over the application area. There is a secondary gravel road (Soutpan Road) that cuts through the application area, from point "A6" running north, see **Appendix 1 (b)**. The application area is situated 29.2 km south-west of the town of Wolmaransstad. There are an old stream area that have been heavily mined over the years, and which natural runoff have also probable been change because of historical mining activities.

The scope of the prospecting activities will entail that prospecting will be done in two phases namely: *Phase 1 – Test pits*: In Phase 1 test pits will be made (1 m x 2 m x ± 2m deep), on a grid of 100 x 100meters and where necessary on a 50 x 50 meters grid where the gravel outcrops. This test pits are made with a 30 ton excavator, to determine if any diamond bearing gravel does occur. This test pits will be closed up immediately before the excavator move on to the next one and *Phase 2* - 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 will be 6 x 60 x ± 2 m (deep). In one trench ± 540m<sup>3</sup> (864ton) gravel will be exposed and tested with a 14 feet washing pan at a rate of 6m<sup>3</sup> (10 ton) an hour. The total prospecting area is 1570 hectares, thus it is anticipated that a total of 5 000m<sup>3</sup> (8 000ton) 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 960m<sup>3</sup> a month. See **Appendix 1(b)** for an indication of the proposed main listed activities and existing/proposed infrastructure and **Figure 3** – Google Earth Images for more detail of what the side looks like.

The main access to the application area is gained via Soutpan Road off the N12 between Wolmaransstad and Bloemhof. The application area is on both sides of this road.

Only a small portion ( 0.6. ha) of the land will be impacted upon at any given time and land use on the rest of the area can proceed normally. The mining focus area will be clearly demarcated. The area applied for fall over the entire portions. It is envisaged that all impacts on the environment can be properly managed and mitigated. The restoration and rehabilitation will however need special attention. After prospecting the land can again be used for agriculture if all test pits and trenches are properly closed. Also see **Appendix 1(b)** for Infrastructure Plan.

**Figure 3: Google Earth Images**



**(i) Listed and specified activities**

**Appendix 1(b) – Environmental and Activity Map**

The area is characterized as being a rural area mostly under natural vegetation, used as natural grazing by the landowners. There are no active cultivated fields; it looks as if all have been withdrawn from cultivation. The central part of the application has been disturbed by mining activities, which can clearly be seen on the Google Earth Images since before 2010, see **Appendix 1(b)** for an indication of the proposed main listed activities and existing/proposed infrastructure and **Figure 3** – Google Earth Images for more detail of what the site looks like pre-prospecting. The infrastructure in and around the application area are gravel roads and fence lines. There are further no other infrastructure that can be seen over the application area. There is a secondary gravel road (Soutpan Road) that cuts through the application area, from point "A6" running north, see **Appendix 1 (b)**. The application area is situated 29.2 km south-west of the town of Wolmaransstad. There are old stream areas that have been heavily mined over the years, and which natural runoff has also been change because of historical mining activities. 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. The prospecting focus area will be clearly demarcated after Phase 1 is completed. The area applied for is over the entire portions.

**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 <sup>2</sup> )	LISTED ACTIVITY Mark with an "X" where applicable or affected.	APPLICABLE LISTING NOTICE (GNR544, GNR 545 or GNR546) / NOT LISTED
<p><b>Listing 1 – Activity 20:</b> Any activity including the operation of that activity which requires a prospecting right in terms of section 16 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including—</p> <p>(a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource[.]; or [including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)]</p> <p>(b) <u>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.</u></p>	1611 ha	X	327
<p><b>Listing 1 – Activity 27:</b> 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 (ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>	1 ha	X	327
<p><b>Listing 2 – Activity 19:</b> The removal and disposal of minerals contemplated in terms of section 20 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including—</p> <p>(a) associated infrastructure, structures and earthworks, directly related to prospecting of a mineral resource [.]; or</p> <p>(b) [including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)] <u>the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing;</u></p> <p><u>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.</u></p>	1.5 ha	X	325
Plant area where washings pans and stockpiles will be			
Stockpiles of topsoil next to the open excavation			
Roads within the prospecting area			
Ablution facilities, chemical and flush toilets			

**(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)*

The prospecting area was identified through aerial photographs .The extent of the prospecting area will be 1120.5631 hectares. Information from Geological surveys 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**

In Phase 1 test pits will be made (1 m x 2 m x ± 2m deep), on a grid of 100 x 100meters and where necessary on a 50 x 50 meters grid where the gravel outcrops. This test pits are made with a 30 ton excavator, to determine if any diamond bearing gravel does occur. This test pits will be closed up immediately before the excavator move on to the next one. **24 Months are needed for Phase 1.**

**PHASE 2**

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 will be 6 x 60 x ± 2 m (deep). In one trench ± 540m<sup>3</sup> (864ton) gravel will be exposed and tested with a 14 feet washing pan at a rate of 6m<sup>3</sup> (10 ton) a hour. The total prospecting area is 1570 hectares, thus it is anticipated that a total of 5 000m<sup>3</sup> (8 000ton) 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 960m<sup>3</sup> a month. **The processing of 8 000m<sup>3</sup> will take about 32 months for Phase 2.**

**A. DESCRIPTION OF PLANNED NON-INVASIVE ACTIVITIES:**

**Table 2: Description of non-invasive activities to be followed**

Activities	Description of phases	Associated structures and infrastructures
	As this an already active prospecting right, this part is not applicable	

**B. DESCRIPTION OF PLANNED INVASIVE ACTIVITIES:**

**TECHNICAL DETAIL REGARDING THE PROSPECTING METHODS**

**Table 3: Description of invasive activities to be followed**

Activities	Description of phases	Associated structures and infrastructures
Phase 1	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 (1m x 2m x ± 2 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.	The topsoil and grass will be cleaned on the small area of 2 m x 2 m x 3.5 m 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 2	A bulk sample to a total of 30000m <sup>3</sup> gravel will be taken, consisting of trenches 6 x 60 x ± .5m (deep). With the average gravel depth of 3.5m, (3m thickness) 16 trenches will be needed to get to 30 000m <sup>3</sup> . These trenches will be ±100 m apart from each other, the envisaged positions of the trenches will be indicated on a map at the end of Phase 2. The topsoil will be removed with an excavator and stored on a separate stockpile for rehabilitation purposes. The overburden will then be stripped and placed on the side of the excavation. The gravel is then removed with an excavator and transported with a front end loader to the washing plant consisting of a 14 feet pan. The puddle is washed directly back into the excavation. The rough out of the pan will also be put directly back into the open excavations. The concentrate out of the pan will be sorted by hand where the diamonds will be recovered and the grade of the prospecting area determined.	The washing pan will be on the plant area with stockpiles.

**Table 4: Technical data detailing the prospecting method**

Phase	Activity	Skill(s) required	Timeframe	Outcome	Time frame for outcome	What technical expert will sign off on the outcome?
1	Test pits	Excavator operator & Manager (applicant)	24	Areas where alluvial diamond gravel is found will be identified.	From month 1 - 24	Experienced applicant
2	Trenching	Excavator operator; Front end loader operator; Washing pan operators & Manager	32	Diamonds found from bulk sample will be evaluated in terms of carats/100ton and value in \$/carat.	From month 25 - 56	Experienced applicant.

**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) <small>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).</small>	Activity 20, listing 1 Activity 19, Listing 2, Activity 27, Listing 1	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) <small>EA Authorization and EIA/EMP. Submit documents that will describe the impacts and sustainable mitigation thereof. Compliance to Act and Regulations during course of activities. Show impacts and mitigation thereof.</small>	Regulation 21	EIA & EMP in process following by EIA/EMP
National Water Act, 1998 (Act 36 of 1998) <small>Application for Water abstraction for mining use</small>	Section 21 (a)	Application for water use license with DWS, will follow.
Conservation of Agricultural Resources Act No 43 of 1983 <small>Compliance to Act and Regulations during course of activities. Stabilization of soil after rehab to be sustainable with no erosion. Eradication of declared weeds</small>	Section 29	Regulation will be applicable during construction and operational phases of mining.
National Heritages Resources Act, 1999 (Act 25 of 1999) <small>Compliance to Act and Regulations during course of activities. Ensure that no graves or heritage site will be disturbed.</small>	Section 36	SAHRA was notified process will be followed.

**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 as applied for. There is evidence of old mining operation over the central part of the application area along the dry run since before 2010 according to Google Earth Images (history) over the application area, which further motivates the possibility of the appearance of the said minerals. Mr. J C. Moolman have been prospecting over Portion 4 for the past five years and further realised through prospecting results that the Alluvial Diamonds can also be present on the other neighbouring portions therefore the application for a Section 102 to include these other portions. The sustained employee positions could also contribute to great opportunity for revenue generation in this rural area. The locality of the activities is currently over the central part of the application area but the application area is for all four portions as indicated and will prospecting also continue over these portions. The specific activities as listed will be over the whole areas of the application area. Where the potential of a gravel run is found with the test pits under phase 1 it will be followed by bulk sampling during phase 2 and washing/sampling will take place. The duration of the activities will be 5 years.

**g) Motivation for the preferred development footprint within the approved site including a full description of the process followed to reach the proposed development footprint within the approved site.**

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

The application area shows potential for the applied mineral: Alluvial Diamonds (D) thus these specific areas need to be prospected further. The area is characterized as being a rural area under natural vegetation, there are also prospecting taking place over the central part of the application area, there are no houses over the applied area. There is not a lot of infrastructure over the application area, only fence lines, gravel/access roads and existing prospecting equipment. Access to the application area is gained via Soutpan Road that turns off from the N12 between Wolmaransstad and Bloemhof. All of the area is under natural veld; see **Figure 3** – Google Earth Images for more detail. Only a certain portion 0.6 ha) of the land will be impacted upon at any given time and land use on the rest of the surrounding area can proceed normally. The area will be bulk sampled and rehabilitated. The prospecting focus area will be clearly demarcated. The area applied for is over the entire portions which are over natural veld.

**i. Details of the development footprint alternatives considered**

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

**Details of the development footprint alternatives considered**

Since it is a rural area and the local grow and development in this area is very slowly. Prospecting operation like this contributes to local economic growth and work opportunities in such a rural area. As can be seen on **Figure 3**, the current land use is grazing and prospecting. The option to explore the possibility for prospecting is not a new alternative land use as there have been prospecting taking place over this area since before 2010. The applicant, **Mr. J. C. Moolman** are not interested in any other alternative land use over this land aside for the further 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.

(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.

(b) the type of activity to be undertaken  
The type of activity is in line with the submitted Prospecting Works Programme.

(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. The footprint of the actual disturbance on site does have the alternative where the puddle can be deposited onto a puddle dam or back into the excavations whereby the latter will have a smaller footprint.

(d) the technology to be used in the activity  
The technology used in the activity are as described in the Prospecting Works Programme and the best options will be determined by the applicant. The footprint of the actual disturbance on site does have the alternative where the puddle can be deposited onto a puddle dam or back into the excavations whereby the latter will have a smaller footprint. The puddle dam method however can lead to quicker rehabilitation and re-use of the land for grazing as the excavations are backfilled with dry material and immediately rehabilitated.

(e) the operational aspects of the activity, and  
The operational aspect is only the prospecting for Alluvial Diamonds (D) on this specific area.

(f) the option of not implementing the activity  
This option might only be possible if the applicant decide to abandon the project.

**ii) Details of the Public Participation Process Followed**

The process as described by NEMA for Environmental Authorization was followed. See **Table 5 & 6** below for the identification of Interested and Affected Parties to be consulted with. The landowners (Stofcor Boerdery CC – which is also the applicant) and direct neighbors 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 farm. With this site notice all passersby are requested to submit any written comments to be forwarded to the consultant. (Still awaiting response). See photo attached and proof of consultation under **Appendix 2** and in **Table 7** below. A legal notice was published in the Stلالander Newspaper dated 5<sup>th</sup> August 2020 inviting all interested and affected parties to lodge their comments in writing and forward it to the consultant within 30 days. See copy attached under **Appendix 2**. The Public Participation process is still ongoing and the documents will be updated as more feedback is received back.

**Appendix 2 – Proof of consultation.**

**Table 5: Description of process to be undertaken to consult interested and affected parties**

IDENTIFICATION CRITERIA	Mark with an X where applicable	
	YES	NO
Will the landowner be specifically consulted?	X	
Will the lawful occupier on the property other than the Landowner be consulted?	X	

Will a tribal authority or host community that may be affected be consulted?		X
Will recipients of land claims in respect of the area be consulted?	X	
Will the landowners or lawful occupiers of neighboring properties been identified?	X	
Will the local municipality be consulted?	X	
Will the Authority responsible for power lines within 100 meters of the area be consulted?		X
Will Authorities responsible for public roads or railway lines within 100 meters of the area applied for be		X
Will authorities responsible for any other infrastructure within 100 meters of the area applied for be consulted? (Specify)		X
Will the Provincial Department responsible for the environment be consulted?	X	
Will all of the parties identified above be provided with a description of the proposed mining /mining operation as referred above?	X	
Will all the parties identified above be requested in writing to provide information as to how their interests (whether it be socio-economic, cultural, heritage or environmental) will be affected by the proposed prospecting project?	X	
Other, Specify		

**Table 6: Details of the engagement process to be followed.**

<b>Steps to be taken to notify interested and affected parties</b>	<b>PROVIDE DESCRIPTION HERE</b> The applicant did receive the consent from the landowner. The neighbors will be informed and personally consulted by the applicant and confirmed in the writing. A consultation letter was sent to the Maquassi Hills Local Municipality. An advertisement was placed in the local newspaper for comments and a public meeting was held.
<b>Information to be provided to Interested and Affected Parties.</b>	<b>Compulsory</b> <ul style="list-style-type: none"> <li>• The site plan.</li> <li>• List of activities to be authorized</li> <li>• Scale and extent of activities to be authorized</li> <li>• Typical impacts of activities to be authorized (e.g. surface disturbance, dust, noise, drainage, fly rock etc.)</li> <li>• The duration of the activity.</li> <li>• Sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land)</li> </ul> <b>Other, specify:</b> a prospecting works programme
<b>Information to be required from Interested and Affected Parties.</b>	<b>Compulsory</b> <ul style="list-style-type: none"> <li>• To provide information on how they consider that the proposed activities will impact on them or their socio-economic conditions</li> <li>• To provide written responses stating their suggestions to mitigate the anticipated impacts of each activity</li> <li>• To provide information on current land uses and their location within the area under consideration</li> <li>• To provide information on the location of environmental features on site to make proposals as to how and to what standard the impacts on site can be remedied. requested to make written proposals</li> <li>• To mitigate the potential impacts on their socio economic conditions to make proposals as to how the potential impacts on their infrastructure can be managed, avoided or remedied).</li> </ul> <b>Other, Specify</b>

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

Table 7: Summary of I & AP's consultation

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an "X" where those who must be consulted were in fact consulted.	Date sent and/or Comments Received	Issues raised	EAP's response to the applicant
<b>AFFECTED PARTIES</b>			
Mr. J. C. Moolman P.O. Box 107, Wolmaransstad, 2630 Tel: 082 926 3752; E-mail: <a href="mailto:stofielmoolman75@gmail.com">stofielmoolman75@gmail.com</a> Landowner on portion 4 of the farm Doornbuit	X 5 Feb 2020	Landowner is also the applicant	
<b>Lawful occupier/s of the land</b>			
<b>Landowners or lawful occupiers on adjacent properties</b>			
Mr. J. Theunissen P.O. Box 157, Makwassie, 2650 Cell: 082 856 0489; E-mail: <a href="mailto:johan@nwet.co.za">johan@nwet.co.za</a> (Neighbour on West & Eastern side)	X 1 June 2020	No objection. See signed consultation letter attached.	
<b>Municipal councillor</b>			
<b>Municipality</b>			
Maquassi Hills Local Municipality LED Manager: Peter Bolao E-mail: <a href="mailto:bolapeter@gmail.com">bolapeter@gmail.com</a>	X 6 Feb 2020	Consultation letter sent via E-mail sent	
<b>Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA.</b>			
<b>Eskom</b>			
<b>Communities</b>			
<b>Dept. Land Affairs</b>			
Mr. KeatbesweMothupi, Office of the Regional Land Claims Commissioner, N W Province: Private Bag X08, Mmabatho, 2735; Fax: 018 389 9641; E-mail: <a href="mailto:kean-belswe.mothupi@drdlr.gov.za">kean-belswe.mothupi@drdlr.gov.za</a>	X 6 Feb 2020 12 Feb 2020	E-mail sent for verification of land claims	6 Feb 2020: Acknowledgement received 12 Feb 2020: No land claims.
<b>Traditional Leaders</b>			
<b>N/A</b>			
<b>Dept. Rural Development and Land Reform</b>			
<b>Ouma Skosana</b> Agricentre Building, Cnr James Moroka & Stadium Road, Mmabatho, 2735 E-mail: <a href="mailto:oskosana@nwppg.gov.za">oskosana@nwppg.gov.za</a>	X 10 Aug 2020	EIA/EMPr sent with Fastway couriers for comments	
<b>Department of Water and Sanitation</b>			
X			

2 <sup>nd</sup> Floor, Bloem Plaza Building, Cnr East Burger & Charlotte Maxeke, Bloemfontein, 9300 Tel: 015 405 9000; E-mail: <a href="mailto:Nhlt@dwg.gov.za">Nhlt@dwg.gov.za</a>		10 Aug 2020	EIA/EMP <sub>r</sub> sent with Fastway for comments	
<b>Dept. Agriculture, Forestry and Fisheries</b>	X			
Maurice Vuyega Louis le Grange Building, Cnr Peter Mokaba & Wolmarans street, 3 <sup>rd</sup> Floor, Office nr 318, Potchefstroom, 2520		10 Aug 2020	EIA/EMP <sub>r</sub> sent with Fastway for comments	
<b>Other Competent Authorities</b>				
<b>OTHER AFFECTED PARTIES</b>				
<b>INTERESTED PARTIES</b>				

**Noticed published in Stellalander of 5 August 2020**

**iv) The Environmental attributes associated with the alternatives**

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

**Baseline Environment**

**Description of the baseline environment:** 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 identify sensitive issues/areas, which need to be considered when conducting the impact assessment. The application is over: the Remaining Extent, Portion 3, Portion 4 (portion of portion 1) & Remaining Extent of Portion 9 of the farm Doornbult 224 HO. This area is situated over a rural part of North West Province, between the towns of Wolmaransstad and Bloemhof. The current land use is mining and natural vegetation. There are no houses of infrastructure over the application area, see **Figure 3** Google Earth Images.

**Magisterial District:** Wolmaransstad is a maize-farming district situated on the N12 between Johannesburg and Kimberley in **North West Province** of South Africa. The town of Wolmaransstad lies in an important alluvial diamond-mining area and it is the main town of the **Maquassi Hills Local Municipality**. And further fall under the **District Municipality of Dr Kenneth Kaunda**. Total Area is 41.68 km<sup>2</sup> and Population of (2011) total 3,633 and density of 87/km<sup>2</sup>.

**Direction from neighbouring town:** The proposed Prospecting site which is situated 29.2 km via N12 out of Wolmaransstad, 3290. Head southwest on Broadbent St (N12) toward Kruger St (R504) for 2.7 km. Continue onto N12 for 24.5 km. Turn right onto Soutpan Road. The application area is situated on both sides of the Soutpan Road after 1.9 km, at -25.3895, 25.8150. See Location of proposed site on Locality Map Appendix 1(b).

**Longitude (approximate center of mining site):** 25.8150° E

**Latitude (approximate center of mining site):** -25.3895° S

**Existing Surface Infrastructure:** The area is characterized as being a rural area mostly under natural vegetation, used as natural grazing by the landowners and prospecting. There are no active cultivated fields; it looks as if all have been withdrawn from cultivation. The central part of the application has been disturbed by historical mining activities, which can clearly be seen on the Google Earth Images since before 2010, see **Figure 3**. The infrastructure in and around the application area are gravel roads and fence lines. There are further no other infrastructure that can be seen over the application area, beside for prospecting equipment. There is a secondary gravel road (Soutpan Road) that cuts through the application area, from point "A6" running north, see **Appendix 1 (b)**. The application area is situated 29.2 km south-west of the town of Wolmaransstad. There are an old stream area that have been heavily mined over the years, and which natural runoff have also probable been change because of historical mining activities. See **Appendix 1(b)** for Infrastructure Map and see **Figure 3** Google Earth Images.

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

VEGMAP (2006) classified this area as part of the (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. [See **Figure 5** below]

**Climate:** Summer and autumn rainfall and very dry winters. MAP from about 300 mm in the southwest to about 500 mm in the northeast. Frost frequent in winter. Mean monthly maximum and minimum temperatures for Kimberley 37.5°C and -4.1°C for January and July, respectively. Corresponding values for Vaalharts-Agr 37.4°C and -3.9°C, respectively.

**Geology & Soil:** Andesitic lavas of the Allanridge Formation in the north and west and fine-grained sediments of the Karoo Supergroup in the south and east. Deep (0.6-1.2 m) sandy to loamy soils of the Hutton soil form (Ae and Ah land types) on slightly undulating sandy plains.

**Vegetation [Flora] and Landscape Features:** Plains often slightly irregular with well-developed tree layer with *Acacia erioloba*,



*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*, *Hemibstaedtia odorata*, *Hibiscus marlothianus*, *Jamesbrittenia aurantiaca*, *Lippia scaberima*, *Osteospermum muricatum*, *Vahlia capenses* subsp. *vulgaris*. **Succulent Herbs:** *Aloe grandidentata*, *Piaranthus decipiens*. **Biogeographically Important Taxa-** (<sup>GW</sup>Griqualand West endemic, <sup>K</sup>Kalahari endemic) **Low Shrub:** *Blepharis marginata*<sup>GW</sup>. **Succulent Shrub:** *Euphorbia bergii*<sup>GW</sup>. **Graminoid:** *Panicum kalaharensis*<sup>K</sup>. **Herbs:** *Helichrysum arenicola*<sup>K</sup>, *Neuradopsis bechuanensis*<sup>K</sup>. **Succulent Herbs:** *Lithops aucampiae* subsp. *aucampiae*<sup>GW</sup>, *Tridentea marientalensis* subsp. *marientalensis*<sup>K</sup>. **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), Smil (2000).

**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://vmus.adu.org.za>. Animals that is likely to occur here are: *Orycteropus afer* (Aardvark), *Cynictis penicillata* (Yellow Mongoose), *Caracal caracal* (Caracal), *Canis mesomelas* (Black-backed Jackal), *Otocyon megalotis* (Bat-eared Fox), *Hystrix africaeaustralis* (Cape Porcupine), *Herpestes sanguineus* (Slender Mongoose), Steenbuck, *Sylvicapra grimmia* (Bush Duiker), *Phacochoerus africanus* (Common Warthog), *Raphicerus campestris* (Steenbok).

**Topography:** The prospecting area is mainly over one terrain units, which is characterized as being plains often slightly irregular with well-developed tree layer and well-developed shrub layer with occasional dense stands of grass cover. A big portion of the application area is situated on either side of the stream area through which extensive mining/prospecting have been taken place over the past 10 years. The rest of the area is fairly level old withdrawn agricultural fields. The slope varies around <0.1% to not more than 3%.

**Surface Water:** This application area fall within the water management area of the **Middle Vaal (9)** and secondary catchment area **C25** and tertiary drainage region **C25E**. There is an old stream that has been heavily mined over the years. , and which natural runoff have also probable been change because of historical mining activities. According to NEMA's Screening Tool the aquatic biodiversity theme sensitivity was classified as being very high sensitive, because this area is a fairly arid area and the maintenance and conservation of surface water bodies need to be maintained as this is the main source of natural water for livestock watering. Terrestrial biodiversity sensitive was also classified as being very high sensitive, all prospecting activities need to be kept 100 m horizontally way from any surface water bodies, its banks and wetland area associated with it. The surface area have however been severely disturbed by mining over the more than 10 years and the evidence of this can be clearly seen on the Google Earth Images, see **Figure 3**. The applicant will have to make sure to try and restore this surface runoff of this stream to as near as possible to its historic position.

**Ground Water:** There are boreholes on the application area, which have been use for previous prospecting/mining processing. The applicant and the surface owner are the same person although in different entities, thus no surface lease agreement will be necessary. The applicant intends to use water from current boreholes. The water uses out of this borehole will be for dust suppression on roads and testing of the gravel. They will require about 10000 liters per hour for all these prospecting processes.

**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 trough wetting of the roads. This area fall in very rural area and the impact form windblown dust particles, because of ploughing of agricultural fields during August can have just as big an impact. Area where testing was 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 application area 1120 ha, the sound will get lost and no residence on neighboring farms will be adversely affected. The nearest residence in ±9 km north, north east from this application area. The impact may be greater with regards to wild animals, but they tend to move away toward areas less influenced by noise disturbance.

**Sites of Archaeological and Cultural Interest:** There are no known graves or grave yards on the application area. According to Section 36(3) of the National Heritage Resources Act 25 of 1999 no person may, without a permit issued by SAHRA or a provincial heritage resources authority—

(a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;

(b) destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

(b) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation equipment, or any equipment which assists in the detection or recovery of metals.

It is recommended that the graveyard is included in the overall management plan of the mine development. Preservation of the site will require that the area is properly demarcated with at least a 20m buffer zone placed around the graveyard in order to avoid potential damage during mining activities. It will be necessary to ensure that the graveyard is accessible to the relatives of the deceased. There are no major archaeological grounds to halt the proposed development. 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.

**Sensitive Landscapes:** The dry stream running through the central part of the application area can be seen as a sensitive area. Although severely disturbed by historical and previous prospecting/mining activities, there is a quality to these ecosystems in and around this stream area that's different from the neighbouring natural grasslands. This area can be seen as a sensitive landscape as the vegetation and soil in and around these areas are normally very different from normal vegetation cover and much more vulnerable to disturbance. All prospecting associated activities should be kept 100 meter horizontally away from these surface water bodies and its associated riverbanks and wetlands areas.

**Visual Aspects:** These prospecting activities will only be really visible to people travelling on the Soutpan gravel road and neighbours. The western boundary of the application area is  $\pm$ 2-13km north east of the N12 national route between Wolmaransstad and Bloemhof and it is not foreseen that tourists will see any prospecting activities while traveling there. These areas are known for sparse vegetation coverage and as such will not help to shield the prospecting equipment.

#### **Social**

The proposed activity will employ 7 people, of which most of them will be sourced from Wolmaransstad. Various social amenities are available close to the operation. These include schools, hospitals, churches, recreation facilities as well as a Police Station at Wolmaransstad and Bloemhof and surrounding settlements, which is located approximately 29-38 km from the operation.

#### **(b) Description of the current land uses.**

The area is characterized as being a rural area under natural vegetation, there are no houses located over the applied area. There is not a lot of infrastructure over the application area, only fence lines, gravel roads and prospecting equipment. Access to the application area is gained via Soutpan Road that turns off from the N12 national route between Wolmaransstad and Bloemhof.

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

Please refer to Section 2 (d)(ii) Table 2 for a description of the activities and the infrastructure which are foreseen to form part of the proposed activity. The area is characterized as being a rural area mostly under natural vegetation. Most of the area that has not already been disturbed by historical/previous mining activities looks to be cultivated agricultural fields that were withdrawn from cultivation. The central part of the application area has been previously mined since before 2010. The infrastructure in and around this area are gravel roads, fence lines and existing prospecting equipment. The town of Wolmaransstad is situated some 29 km north-east of the application area. There is a dry stream that runs across the central part of the application area, that has been disturbed for as long as mining has taken place over this farm. See **Figure 3** for existing infrastructure.

**(d) Environmental and current land use map.**

Current land use on the application area consists of natural vegetation and prospecting. The central part of the application area has been previously disturbed by mining activities. See **Appendix 1 [Infrastructure Map]** for more detail.

**v) Impacts and risks identified including the nature, significance consequence, extent, duration and probability of the impacts, including the degree to which these impacts**

*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 EMP/EIA 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 (EMP) will be developed and implemented to regulate and minimize the direct, indirect and cumulative impacts during the operational and closure phases. There will not be a construction phase applicable as the applicant is currently working over Portion 4 under a prospecting right. Thus prospecting will just continue under the operational phase as all prospecting related infrastructure and equipment have already been established. 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 7** on the next page.

Table 9: Impact significance identification matrix for Doornbult 224 HO

PHASE	Components	A	B	C	D	ABIOTIC			E	F	G	H	I	J	K	L	M	N
						Geology	Topography	Soil										
Construction	Activity, Product or Service																	
Operational	Fencing-off active prospecting site in as required in terms of the MSA. Ensure access control (gate), etc.				M								M					H+
	Vegetation clearance, topsoil removal & stockpiling next to open cast/pit/trench within the prospecting focus area (0.6ha of surface area disturbed at any given time).		M	H	H	M	L	L	L	L	H	H	L			M		H
	Mechanically excavating overburden with an excavator and stockpile separately from topsoil dump. Remove gravel with excavator and stockpile on side of trench/pit to load onto trucks.	H	H+	H	H	H	L	L	M	L	L	H	H	L+		M		H
Operational	Transport with trucks to mineral processing plant (conveyor, screen, 1 x 14 foot washing pans) (or processing and sorting of concentrates at site intervals).			H				H	L	L	L	H		M+		M		H
	The wet waste tailings coming out of the pans will be pumped to open excavations & porphy dam, from where excess water is re-cycled. Backfilling of excavations (as part of concurrent rehabilitation) the coarse gravel (rough) affixed from the pans will be transported back by front-end-loaders towards all open pits for backfilling.	M	H	H	H	H	H	H	M	L	L					M		H
Decommissioning & closure	Final backfilling of all voids/trenches/pits and logging of overburden dumps (excess material as the result of swell factor).	H+	H+	H+	H+			H+	L	L	L			L		H+		H+
	Compaction of backfilled sites		H+	H+	H+	H+		H+	L	L						H+		H+
	Replace and spread all topsoil evenly over backfilled sites.		H+	H+	H+	H+		H+	L	L				H+		H+		H+
	Establishment of vegetation cover.		H+	H+	H+	H+		H+	L	L				H+		H+		H+
	Removal of all temporary & demotion of all permanent structures (Section 44 of the MPRDA).		H+	H+	H+	H+		H+	L	L				H+		H+		H+
	Rehabilitation of all access roads, compacted areas, etc.			H+	H+	H+		H+	L	L				H+		H+		H+
					H+	H+		H+	L	L				H+		H+		H+

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

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

**I. Introduction:**

**Table 10** 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:**

- Access Roads (Existing roads to be upgraded where necessary)
- Temporary office, workshops, ablution facility, water tanks, diesel tanks and other temporary buildings
- Prospecting equipment (drilling rig, conveyor, drum screen, washing pans, generator)
- Stockpiles
- Overburden dumps
- Opencast trenches (as part of bulk sampling)
- Tailings dam (porrel dam)

**II. Environmental Impact Assessment Summary:**

- Environment likely to be affected by the prospecting operation. (See Appendix 1(a) 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		
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 not a new land use over this area. The applicant is currently working there under an existing prospecting right. The site that is earmarked for prospecting represents ± 1 % of the total area applied for. And it is further not foreseen that prospecting activities would disturbed an area of more than 0.6 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 occurrence	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 Wolmaransstad 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.
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.

**Table 10** describes and evaluates the effects of the different prospecting projects and the associated activities

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>1. GEOLOGY</b>				
Nature of the impact	The geology will be destroyed during the opencast prospecting operation. During operation which will be for the next 5 years, the mineral resource ( <i>Diamonds (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	Phase 1	Phase 2	Closure	
	X	X		

ASPECT	IMPACTS	CUMULATIVE IMPACTS					
<b>2. TOPOGRAPHY</b>							
Nature of the impact	<p><b>* Change in landform :</b></p> <p>* The prospecting site is situated on: flat to gentle slope.</p> <p><b>* Disturbance of the surface drainage:</b></p> <p>The prospecting of the (<i>Alluvial Diamonds</i>) deposits will result in the creation of trenches (6 m x 60 m x ±35 m or less), that act as depressions in the environment that captures run-off. Prospecting activities will be concentrated as indicated on <b>Appendix 4</b> on the application area (approximately 2 m depth).</p> <p>The surface drainage is already disturbed. Normal surface drainage will be disturbed at a given point.</p> <p>Run-off if any will be diverted away from the specific site.</p>						
Extent	Site	Activity causing the impact					
Duration	Very long to Permanent	Bulk sampling trough 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>Closure</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>		Phase 1	Phase 2	Closure	X	X
Phase 1	Phase 2	Closure					
X	X	X					

3. SOIL	IMPACTS	CUMULATIVE IMPACTS					
Nature of the impact	The surface area is characterized by shallow 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	<table border="1"> <thead> <tr> <th>Phase 1</th> <th>Phase 2</th> <th>Closure</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td></td> </tr> </tbody> </table>		Phase 1	Phase 2	Closure	X	X
Phase 1	Phase 2	Closure					
X	X						

3. SOIL	IMPACTS	CUMULATIVE IMPACTS					
Nature of the impact	<p>The operation and eventually rehabilitation (demolition) of listed structures such as the access roads, stockpiles /tailings dumps, cause compaction of soil.</p> <p>Some areas already disturbed thus no topsoil.</p> <p>All prospecting activities will be concentrated on the identified prospecting focus area where (<i>Alluvial Diamonds</i>) deposits could be found.</p> <p>In the same time a certain surface area is therefore alienated. The active prospecting surface area (alienated) would be restricted within the ±0.6 ha at any given time (in relation to area of application of the prospecting right of 1120 hectares) for the next 5 years.</p>						
Extent	Site	Activity causing the impact					
Duration	Long	Site preparation for additional prospecting sites and the operation of listed infrastructure.					
Probability	High						
Significance	Moderate						
Phase responsible for the impact	<table border="1"> <thead> <tr> <th>Phase 1</th> <th>Phase 2</th> <th>Closure</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>		Phase 1	Phase 2	Closure	X	X
Phase 1	Phase 2	Closure					
X	X	X					

ASPECT	IMPACTS	CUMULATIVE IMPACTS					
<b>3. SOIL</b>							
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 due to lack of vegetation cover. Water control structures may fail or severe rainstorms may cause excessive run-off. Surface compaction due to activities taking place.					
Probability	Very low						
Significance	Low						
Phase responsible for the impact	<table border="1"> <thead> <tr> <th>Phase 1</th> <th>Phase 2</th> <th>Closure</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>		Phase 1	Phase 2	Closure	X	X
Phase 1	Phase 2	Closure					
X	X	X					

ASPECT	IMPACTS	CUMULATIVE IMPACTS
<b>3. SOIL</b>		
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                      Closure	
	X                                      X                                      X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS
<b>3. SOIL</b>		
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                      Closure	
	X                                      X                                      X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS
<b>3. SOIL</b>		
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                      Closure	
	X                                      X                                      X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS
<b>4. LAND CAPABILITY</b>		
Nature of the impact	<b>Temporary loss of land capability to support grazing.</b> The small area (0.6 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.	
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                      Closure	
	X                                      X                                      X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS
<b>5. LAND USE</b>		
Nature of the impact	This is not a prospecting operation and therefore will lose its land use to support grazing on a certain portion of the 1120 hectares during the next 5 years will only continue. Only a small portions of land (0.6 ha at a time) would be affected by the prospecting operation relation to the total prospecting right application area of 1120 hectares. All trenches would be rehabilitated as part of the prospecting process during which excavations are back-filled.	
Extent	Site	Activity causing the impact
Duration	Long to permanent	Site preparation for prospecting and the construction, operation of listed infrastructure
Probability	Definite	
Significance	Moderate	
Phase responsible for the impact	Phase 1                      Phase 2                      Closure	
	X                                      X                                      X	

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>6. VEGETATION</b>				
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	Long			The prospecting activities and related infrastructure causes destruction of habitats for vegetation. Due to a disturbed ecosystem, bare ground and invasion of exotics could further spread. The vegetation needs to be cleared to remove the topsoil.
Probability	Definite			
Significance	High			
Phase responsible for the impact	Phase 1	Phase 2	Closure	
	X	X		

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>6. VEGETATION</b>				
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	Phase 1	Phase 2	Closure	
	X	X		

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>6. VEGETATION</b>				
Nature of the impact	Dust coverage of plants.			None
Extent	Site			Activity causing the impact
Duration	Long			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	Phase 1	Phase 2	Closure	
	X	X		

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>7. WILDLIFE</b>				
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	Phase 1	Phase 2	Closure	
	X	X		

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>7. WILDLIFE</b>				
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	Phase 1	Phase 2	Closure	
	X	X		

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>7. WILDLIFE</b>				
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	Closure	
	X	X	X	

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>8. SURFACE WATER</b>				
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	Closure	
	X	X	X	

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>8. SURFACE WATER</b>				
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 measures provided therefore.
Probability	Moderate			
Significance	High			
Phase responsible for the impact	Phase 1	Phase 2	Closure	
	X	X		

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>8. SURFACE WATER</b>				
Nature of the impact	Change in surface water quantity: <b>Water management area (9) : Middle Orange</b> The mine falls under the primary drainage region C25 and in quaternary sub-catchment C24E. Mining has already had a major impact on this surface run and have been worked through for many years. Standing water in trenches could as the result of rain/ surface run-off ending up in shallow depressions.			
Extent	Site			Activity causing the impact
Duration	Long			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	Phase 1	Phase 2	Closure	
	X	X		

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>9. GROUND WATER</b>				
Nature of the impact	Reduction of groundwater quality Prospecting activities are not likely to impact on local ground-water quality. No chemicals area 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.			
Extent	Site			Activity causing the impact
Duration	Long			
Probability	Definite			
Significance	High			
Phase responsible for the impact	Phase 1	Phase 2	Closure	
	X	X	X	

9. GROUND WATER			
Nature of the impact	Even though abstraction is likely to have a minimal effect on the surrounding groundwater users, this is not a new use, and groundwater levels are expected to continue current trends. Groundwater will be abstracted for potable water supply and prospecting processes. The volume of water needed is small (10 000 Lit/hr) in comparison to other water use and will have a small impact on the surrounding aquifer.		
Extent	Site		
Duration	Long		
Probability	Low		
Significance	High		
Phase responsible for the impact	Phase 1	Phase 2	Closure
	X	X	X
Activity causing the impact			
Opencast prospecting operation.			

ASPECT	IMPACTS	CUMULATIVE IMPACTS	
<b>10. AIR QUALITY</b>			
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	Long	During the phase 1 & 2, dust could be generated as indicated during prospecting.	
Probability	Moderate		
Significance	Moderate		
Phase responsible for the impact	Phase 1	Phase 2	Closure
	X	X	X

ASPECT	IMPACTS	CUMULATIVE IMPACTS	
<b>11. NOISE POLLUTION</b>			
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 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.		
Extent	Local	Activity causing the impact	
Duration	Long	Earth moving equipment and vehicles (trucks).	
Probability	Definite		
Significance	Moderate		
Phase responsible for the impact	Phase 1	Phase 2	Closure
	X	X	X

ASPECT	IMPACTS	CUMULATIVE IMPACTS	
<b>12. ARCHAEOLOGICAL AND CULTURAL SITES</b>			
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 the site.		
Extent	Site	Activity causing the impact	
Duration	Permanent		
Probability	Definite		
Significance	High		
Phase responsible for the impact	Phase 1	Phase 2	Closure
	X	X	

ASPECT	IMPACTS	CUMULATIVE IMPACTS	
<b>13. SENSITIVE LANDSCAPE</b>			
Nature of the impact	No sensitive landscapes identified.		
Extent	Not applicable	Activity causing the impact	
Duration	Not applicable		
Probability	Not applicable		
Significance	Not applicable		
Phase responsible for the impact	Phase 1	Phase 2	Closure

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>14. VISUAL ASPECTS</b>				
Nature of the impact	Prospecting will only be visible to the neighbours living there. The operation is not visible to from any tourist road.			
Extent	Site			Activity causing the impact
Duration	Long			Diamond prospecting operation.
Probability	Definite			
Significance	Low			
Phase responsible for the impact	Phase 1	Phase 2	Closure	
	X	X	X	

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>15. SOCIO ECONOMICS</b>				
Nature of the impact	Increase in Socio – economic activity at local level. The project in itself would ensure that approximately 7 workers 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 Wolmaransstad 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 Wolmaransstad 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	Closure	
	X	X	X	

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>15. SOCIO ECONOMICS</b>				
Nature of the impact	The main impact on the landowners is visual impact and the small area of 0.6 ha that will not be available for agricultural activities at any given time for 5 years.			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	Closure	
	X	X	X	

ASPECT	IMPACTS			CUMULATIVE IMPACTS
<b>16. INTERESTED &amp; AFFECTED PARTIES</b>				
Nature of the impact	Impact of activities on I&AP's Temporary loss of utilization of the prospecting focus areas for agricultural purposes. The long-term benefits far out-weight the current benefits from the current use. Loss of cattle due to falling of animals in mine workings if not fenced. 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	Long			
Probability	High			
Significance	High			
Phase responsible for the impact	Phase 1	Phase 2	Closure	
	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. There is not an alternative for the location as this is the specific area where the applicant believes minerals can be found. The only alternative will be whether what method of processing to be used, puddle into the pans (wet method) or puddle dam (dry tailings method).

The footprint of the actual disturbance on site does have the alternative where the puddle can be deposited onto a puddle dam or back into the excavations whereby the latter will have a smaller footprint. The puddle dam method however can lead to quicker rehabilitation and re-use of the land for grazing as the excavations are backfilled with dry material and immediately rehabilitated. The usage of a puddle dam (Dry method) can have a positive impact on the environment as the excavations can be rehabilitated and grassed on a concurrent immediate basis. The usage of wet method will have a smaller footprint but it will take longer to fully rehabilitate and go back to grazing.

On geographical the dry method, it will be a little bit more negative as there will be a sloped area of 2 -3m high with closure. With wet method it will be flat. On heritage and cultural aspects there will be no effect of either of the methods. On biological the both the methods will be equal with very limited effects. On economical the dry tailings will have a bigger capital expense but as the rehabilitation can be finished quicker it will be financially better. On social aspect both these methods will have similar impacts as the same amount of workers will be used.

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 for diamonds as listed in the PWP. The no-go option entails the continuation of the current land use (natural grazing and prospecting) 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)*

Refer to the results of consultation contained as **Appendix 2** for the issues that were raised by I&AP's and stakeholders during the review period of the Consultation phase, as well as the response to those issues made by the Environmental Assessment Practitioner.

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

Environmental Component	Geology
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<ul style="list-style-type: none"> <li>• No mitigation exists except to backfill the excavations with the rock waste material and fine tailings.</li> <li>• 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.</li> <li>• Planned, systematic and thorough prospecting of the mineral resource (<u>Alluvial Diamonds</u>) should take place.</li> <li>• Optimal utilization of the mineral resource should take place within the boundaries of the prospecting terrain.</li> <li>• 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.</li> <li>• Care must be taken that the removal of (<u>Alluvial Diamonds</u>) deposits by means of earthmoving equipment is restricted to what is really necessary to achieve the objective.</li> </ul>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	

<b>Closure Objective</b>
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.

<b>Environmental Component</b>	<b>Topography</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<ul style="list-style-type: none"> <li>All trenches should be back-filled with waste tailings material and eventually overburden material, covered with a shallow layer of topsoil (if available).</li> <li>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.</li> <li>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.</li> </ul> <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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
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.	

<b>Environmental Component</b>	<b>Soil (topsoil &amp; access roads)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<p><b>Handling of topsoil as a natural resource:</b> 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><b>Access roads, etc:</b> 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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
The topsoil removed in the site preparation process should be replaced during the rehabilitation exercise.	

<b>Environmental Component</b>	<b>Soil (soil compaction)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<p><b>Soil compaction:</b> The prospecting operation should only be restricted to what is really required (demarcated area of exploitation) within the fenced-off area.</p> <p><b>Access roads</b> towards the sites would be restricted only to the roads (existing farm roads &amp; roads established in consultation with the surface owner). No land would be disturbed unnecessarily.</p> <p>Prospecting &amp; 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> <p>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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
Alleviation of compaction of soils would be done during rehabilitation of the prospecting terrain, including roads.	

<b>Environmental Component</b>	<b>Soil (Soil erosion)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<p><b>Soil Erosion:</b> To take preventive steps against land disturbance like erosion. Implement and maintain cut-off trenches/berms to prevent erosion.</p> <p><b>Re-vegetation of exposed soil surfaces</b> (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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	

To be included in EMP/EIA.
<b>Closure Objective</b>
No soil erosion must be visible and no potential for soil erosion must be present at closure.

<b>Environmental Component</b>	<b>Soil (Soil contamination)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<p><b>Potential for soil contamination:</b>                  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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
No soil contamination must be visible or known before closure can be given.	

<b>Environmental Component</b>	<b>Soil (Soil structure)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<p><b>Change in Soil structure:</b>                  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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
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.	

<b>Environmental Component</b>	<b>Soil (Soil fertility)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<p><b>Soil fertility:</b>                  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 analysed in a laboratory. The type of fertilizer would depend on a soil analyses and fertilizer recommendation.</p>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
The soil must be fertile enough to sustain vegetation.	

<b>Environmental Component</b>	<b>Land Capability</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<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.                  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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	

To be included in EMP/EIA.
<b>Closure Objective</b>
Rehabilitated to the state that it is suitable for the predetermined and agreed land capability.

Environmental Component	Land Use
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
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. 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. 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.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
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
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
No mitigation exists except to replace the vegetation by reseedling of grasses and natural growth. 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.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
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
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
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. <b>Develop and implement an invasive and alien control programme to control the spread of weeds and other invasive species.</b> 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.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
No invasive and alien species must be present after closure. A post-closure control program must also be implemented.	

Environmental Component	Vegetation
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
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.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
No excessive dust must be present during the normal growth season after closure.	

<b>Environmental Component</b>	<b>Wildlife (habitat)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
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. <b>Restoration of habitat:</b> Ensure the rehabilitation plan is implemented.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
The animal life habitat must be restored after decommissioning. Success will be measured against the extent to which the animals return to the area.	

<b>Environmental Component</b>	<b>Wildlife (Injury and death)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<b>Injury and death to wildlife:</b> 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.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
The animal life habitat must be restored after decommissioning. Success will be measured against the extent to which the animals return to the area.	

<b>Environmental Component</b>	<b>Wildlife</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
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.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
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.	

<b>Environmental Component</b>	<b>Surface Water (quality)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<b>Change in surface water quality:</b> 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.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
The post closure water run-off may in no circumstance impact negatively on the water quality.	

<b>Environmental Component</b>	<b>Surface Water (quantity)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<b>Change in surface water quantity:</b> 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.	

<b>EMP Performance Assessment &amp; Monitoring Reporting</b>
To be included in EMP/EIA.
<b>Closure Objective</b>
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.

<b>Environmental Component</b>	<b>Ground Water (quality)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<p><b>Reduction of groundwater quality:</b> 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-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.</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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
Post water quality need to indicate a positive trend/improvement.	

<b>Environmental Component</b>	<b>Ground Water (quantity)</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<p><b>Reduction of groundwater quantity, lowering of groundwater level:</b> 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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
Post water quality need to indicate a positive trend/improvement.	

<b>Environmental Component</b>	<b>Air Quality</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<p><b>Dust:</b> 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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
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.	

<b>Environmental Component</b>	<b>Noise</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<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>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
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.

<b>Environmental Component</b>	<b>Archaeological and Cultural Sites</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
No graves on site. 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.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
No site of archaeological importance should be disturbed or damaged until the necessary permit from SAHRA has been issued.	

<b>Environmental Component</b>	<b>Sensitive Landscapes</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
None	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	

<b>Environmental Component</b>	<b>Visual Aspects</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
Visual impact would be addressed by means of; * 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. Concurrent rehabilitation should be done simultaneously as prospecting activities progress.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
No residual visual impacts will remain after closure. The terrain should blend in with the surrounding landscape.	

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

<b>Environmental Component</b>	<b>Interested and Affected Parties</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
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 Eskom power line (10 m distance should be kept) ( <i>Permission of Inspector of Mines should be obtained.</i> )	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
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.	

**vii) 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)*

Please see **Appendix 1(b)** for more detail.

**viii) 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.** There is not an alternative for the location as this is the specific area where the applicant believes minerals can be found. The only alternative will be whether what method of processing to be used, puddle into the pans (wet method) or puddle dam (dry tailings method). The footprint of the actual disturbance on site does have the alternative where the puddle can be deposited onto a puddle dam or back into the excavations whereby the latter will have a smaller footprint. The puddle dam method however can lead to quicker rehabilitation and re-use of the land for grazing as the excavations are backfilled with dry material and immediately rehabilitated.

The applied area is the specific area need for prospecting thus no alternative. The current land use is natural grazing and prospecting. The option to explore the possibility for prospecting is already in itself an alternative land use. The applicant **Mr. J. C. Moolman** is not interested in any other alternative land use over this land aside for the exploration of the said minerals, or any other activity, or method use other than prospecting for the said minerals in the conversional way, which is the most cost effective.

**ix) Statement motivating the alternative development location within the overall 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 mining phase is reached. The feasibility of prospecting the 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 prospected by the landowner.

The option to explore the possibility for prospecting is not an alternative land use. The applicant, **Mr. J. C. Moolman**, 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 conversional way, which is the most cost effective.

The No-Go option entails the continuation the current land use (grazing and prospecting) on the application area without further exploiting the mineral reserves. The prospecting activities will contribute towards the achievement of providing employment opportunities, thus aiding socio-economic development. Should the project therefore not be authorized to proceed, the current employment opportunities 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 cultivation with small fallout areas of natural grazing 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 in surface water quality
- Dust
- Noise
- Archaeological/Cultural Sites

**Geology:**

(Alluvial Diamonds) deposits will be destroyed during the opencast prospecting operation. During operation which will be for the next 5 years, the mineral resource (Alluvial Diamonds,) will be extracted from 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. The small area (0.6 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 not a prospecting operation and therefore loss of land use to support grazing on a certain portion of the 1120 hectares during the next 5 years have been taking place. Only a small portions of land (0.6 ha at a time) would be affected by the prospecting operation relation to the total prospecting right application area of 1120 hectares. All 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 dry-water course 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. No graves were identified on site.

iii. **Description of aspects to be assessed by specialists**

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

Although is a prospecting application the stream area through which have been mined for many year, need to get special attention as prospecting progress and when the area is backfilled and rehabilitated. The runoff and stream area of this stream need to be restored in order to handle future rainfall events and minimizing erosion damages. There were no heritage areas of significance 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, Appendix2 – 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 21 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, Appendix2 – 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 from 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, Appendix2 – 2. (1)(i)(h)(a)(vi)*

Consultation with all competent authorities will be done. The EIA & EMP was sent 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, Appendix2 – 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 was consulted. Please see **Table 9** 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 9** for the identification of Interested and Affected Parties to be consulted with. The landowners (how is also the applicant) and the direct neighbours was consulted personally

and through written letters that will be given to them. A site notice was placed at the entrance to the application area. With this site notice all passers-by are requested to submit any written comments to be forwarded to the consultant (still awaiting response). A notice was published in the Stellalander Newspaper of 5<sup>th</sup> August 2020 for the Section 102 application, response is also awaited. See proof of consultation under **Appendix 2**. The Public Participation process is still on going and the documents will be updated as more feedback is received back. The EIA & EMPr was send to all relevant State Departments for evaluation. No comments were received.

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

A copy of the map, and Prospecting Works Programme and draft Environmental Management Programme will be handed to the neighbours and landowners as per request. A copy of the EIA & EMPr was send to the State Departments and a copy of the EMP/EIA will also be circulated to their offices.

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.

**i) Assessment of each identified potentially significant impact and risk**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(i)*

**(i) & (ii) Description of all environmental issues and risk and assessment of significance of each issue**

NAME OF ACTIVITY	POTENTIAL	ASPECTS AFFECTED	PHASE	SIGNIFICANCE	MITIGATION TYPE	SIGNIFICANCE if mitigated
Making test pits to identify possible sites for Alluvial Diamonds	1.1 Test pits. Disturbance of 0.1hectare at any given time.	Air quality	Operational	Low -	The prospecting method will serve as mitigation measure because it will limit dust to the active prospecting area, where the excavator. Daily spraying of the roads with water.	
	1.3 Stripping of all available topsoil and stockpiled next to pits.	Soil	Operational	Low -	Any area on the prospecting area where disturbance will take place the top soil must be removed and stockpiled for rehabilitation purposes in a demarcated area.	
	1.4 Soil erosion: Due to the fact that certain surface areas would become devoid of any vegetation cover and compacted this would lead to lesser infiltration of rain water and more run-off that could cause erosion on bare disturbed areas and side slopes	Soil	Construction	Low-	To take preventive steps against erosion. Concurrent rehabilitation and re-vegetation of pits must happen as soon as the particular pits are tested. Rehabilitated areas must be inspected and managed in such a way that any signs of erosion can be mitigated immediately.	
	1.5 Land capability and land use. Loss of land to support grazing.	Land capability & Land use	Operational and closure	Low-	As this is only a very small area of 0.6 hectare, the impact is not so big. As the test pits will be backfilled and vegetated the area must be treated as sensitive when grazed as overgrazing can trigger erosion and infiltration of declares weeds.	
	1.6 Generation of dust by excavators and vehicle movement	Air quality	Operational	Low -	The prospecting method will serve as mitigation measure because it will limit dust to the active prospecting area, where the excavator works. Daily spraying of the roads with water.	
Excavations for gravel and stone for bulk sampling	2.1 Removal of the alluvial gravel up to 3m. Disturbance of 0.3 hectare at any given time. 2.2 Change in landform. The entire prospecting area will be lowered by 3m and normal surface drainage will be disturbed at this specific point. The pit will be backfilled	Geology & soil Topography	Operational Operational and closure	High - Moderate -	The impact will be mitigated by backfilling and stabilizing the soil to prevent erosion. The excavations will be backfilled. The area will be top soiled and vegetated. A surface water cut-off trench should be put in place around the active prospecting site in order to prevent surface run-off water on the prospecting site. Rehabilitation of the new backfilled landscape in such a way that it would blend in with the surrounding landscape.	Low + Moderate +
	2.3 Stripping of all available topsoil and stockpiled. Stockpile and plant area of 0.3 hectare at any given time.	Soil	Operational	Low -	Any area on the prospecting area where disturbance will take place the top soil must be removed and stockpiled for rehabilitation purposes in a demarcated area.	Low +
	2.4 Soil erosion: Due to the fact that certain surface areas would become devoid of any vegetation cover and compacted this would lead to lesser infiltration of rain water and more run-off that could cause erosion on bare disturbed areas and side slopes	Soil	Construction	Low-	To take preventive steps against erosion. Implement and maintain cut-off trenches and or berms around the prospecting area to prevent water entering that can cause erosion. Concurrent rehabilitation and re-vegetation of mined areas must happen as soon as the particular area is mined out. Rehabilitated areas must be inspected and managed in such a way that any signs of erosion can be mitigated immediately.	Low +

2.5 Land capability and land use. Loss of land to support grazing.	Land capability & Land use	Operational and closure	Low-	As this is only a very small area of 0.6 hectare, the impact is not so big. As the excavation will be backfilled and vegetated the rehabilitated area must be treated as sensitive when grazed as overgrazing can trigger erosion and infiltration of declares weeds.
2.6 Generation of dust by excavating and vehicle movement	Air quality	Operational	Low -	The prospecting method will serve as mitigation measure because it will limit dust to the active prospecting area, where the excavator and trucks operating. Daily spraying of the roads with water.

**i) Summary of specialist reports.**

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(f)

NAME OF ACTIVITY	POTENTIAL IMPACT	(i) CUMULATIVE IMPACTS	(ii) SIGNIFICANCE	(iii) EXTEND AND DURATION	(iv) PROBABILITY OF THE IMPACT OCCURRING	(v) DEGREE TO WHICH IMPACT/RISK CAN BE REVERSED	(vi) DEGREE TO WHICH IRREPLACEABLE LOSS MAY OCCUR	(vii) DEGREE TOWHICH IMPACT/RISK CAN BE MITIGATED
Making test pits to identify possible sites for Alluvial Diamonds	1. Low negative effect as the area that will be disturbed will almost not be noticeable of property	None	Low -	24 Months	High	Possible	Partly reversible	Fully Mitigated
Excavations for gravel and stone for bulk sampling	2.1 Removal of the alluvial gravel up to 3m. Disturbance of 0.3 hectare at any given time. 2.2 Change in landform. The entire prospecting area will be lowered by 2m and normal surface drainage will be disturbed at this specific point. The excavations will be backfilled	None Topography on adjacent farms if prospecting is also practised	High - Moderate -	At open excavations 5 years 5 years	High Moderate	Impossible Possible	Not reversible at all Partly reversible	Not mitigated Fully Mitigated
	2.3 Stripping of all available topsoil and stockpiled. Stockpile and plant area of 0.3 hectare at any given time.	Localized	Low -	5 years	High	Impossible	Partly reversible	Fully Mitigated
	2.4 Soil erosion: Due to the fact that certain surface areas would become devoid of any vegetation cover and compacted this would lead to lesser infiltration of rain water and more run-off that could cause erosion on bare disturbed areas and side slopes.	Localized	Low-	5 years	Low	Possible	Reversible	Fully mitigated
	2.5 Land capability and land use. Loss of land to support grazing.	If old disturbances not rehabilitated.	Low-	5 years	Low	Possible	Reversible	Full mitigated
	2.6 Generation of dust by excavating and vehicle movement	Air quality	Low -	5 years	Low	Possible	Reversible	Fully mitigated.

**k) Summary of findings and recommendations of any specialist reports**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(k)*

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
None			

No specialist reports were conducted for the following reasons: The application area was already historically disturbed by other mining activities. The bulk sampling will not be deeper than 3m thus groundwater table will not be intersected. All the impacts identified can be mitigated and will not be significant. This will only be a prospecting for short period. Although the stream that is crossing the application area and which have been severely mined for year have been, in places, totally disturbed. It could still be rehabilitated and could functions again.

**l) Environmental impact statement**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(l)(i)(ii)(iii)*

**(i) Summary of the key findings of the environmental impact assessment;**

The small scale prospecting operation is definitely going to have an impact on the environment. The main impact relates to topography, geology, soil, vegetation, and land use and land capability. The (*Alluvial Diamonds*) resource will be prospected over a period of 5 years. The existing land-use is utilized mainly as natural grazing and prospecting. This is a small operation and for the next 5 years only a small portion of the farm will be temporarily alienated.

The conservation of topsoil is of utmost importance and therefore in order to ensure a sustainable land use again on the 0.6 ha, the top at least 30 cm topsoil need to be removed prior to prospecting of the underlying alluvial gravel (up to 2 m depth). This will be used again as growth medium during the rehabilitation phase of the excavations. Topsoil will be stored in berm walls on the border of the excavation in order to divert any surface run-off during a rainfall event. Other environmental impacts relates to the day to day operation that could easily be managed, such as dust and noise.

**(ii) Final Site Map**

Attach as **Appendix 1 (a)** – Infrastructure Map.

**(iii) Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;**

The site is selected in such a way that farming will still be possible on the rest of the farm. The loss of land use and land capability will be temporary as the site will be rehabilitated in such a way that it allows the establishment of a grass cover again. The rest of the farm will still be continued to be used for grazing. Although this is small (*Alluvial Diamonds*) prospecting operation it would also add to the increased economic activity within the farming and exiting mining community around Wolmaransstad. Jobs for 7 permanent laborers will be created. Negative impacts on the area are expected to be temporary and can be mitigated to a large extent if the recommendations of the EMP are adhered to e.g. rehabilitation. No concerns have been raised as yet by any I & AP. The specific occurrence of the *Alluvial Diamonds* deposit dictates the selection of the specific prospecting site.

**m) Based on the assessment and where applicable, recommendations from specialist reports, proposed impact management objectives and the impact management outcomes for inclusion in the EMPr;**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(m)*

The main closure objective of **Mr. J. C. Moolman** is to rehabilitate the entire prospecting site in such a way to ensure that the new man-made topographical landscape would blend in with the surrounding landscape, not pose a safety hazard to humans and animals, while at the same time allow for alternative land uses. Establish a self-sustaining and stable vegetation cover in order to mitigate the visual impact, to control erosion and to create some habitat for animals. The rehabilitated environment also needs to be aesthetically acceptable according to the principle of BPEO. The applicant will ensure that the Operation/Sites are:

- Neither a danger to public health and safety nor to animal health and safety;
- Not a source of any pollution;
- Stable (ecological and geophysical);
- Rehabilitated to the state that is suitable for the predetermined and agreed land use (grazing);
- Compatible with the surrounding biophysical environment;
- A sustainable environment;
- Aesthetically acceptable;
- Not an economic, social or environmental liability to the local community or the state now or in the future.

**n) Final proposed alternatives**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(n)*

None

**o) Aspects for inclusion as conditions of Authorisation**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(o)*

None

**p) Description of any assumptions, uncertainties and gaps in knowledge**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(p)*

None

**q) Reasoned opinion as to whether the proposed activity should or should not be authorized**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(q)*

**Reasons why the activity should be authorized or not**

This activity will have only low and very low impacts and no significant impacts were identified. No concerns were raised by the interested parties. These prospecting activities will have no significant impacts on them or their surrounding environment.

**Conditions that must be included in the authorization**

None

**r) Period for which the Environmental Authorization is required**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(r)*

5 years

**s) Undertaking**

The Environmental Management Programme will, should it comply with the provisions of section 39 (4) (a) of the Act and the right be granted, be approved and become an obligation in terms of the right issued. As part of the proposed Environmental Management Programme, the applicant is required to provide an undertaking that it will be executed as approved and that the provisions of the Act and regulations thereto will be complied with.

**UNDERTAKING BY APPLICANT TO COMPLY WITH THE PROVISIONS OF THE ACT AND THE REGULATIONS THERETO**

**UNDERTAKING**

I, **D. E. Erasmus**, the undersigned and duly authorised thereto by **Mr. JC Moolman** have studied and understand the contents of the Environmental Management Programme and duly undertake to adhere to the conditions as set out therein, unless specifically or otherwise agreed to.

Signed at **Klerksdorp** on this day.....*01*.....of.....*August*.....2020.

.....  
Signature of Mine Manager

**t) Financial Provision**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(t)*

Mr. Moolman does have an existing Guarantee to the amount of **R152 317.00**. This guarantee will still be sufficient as only one site on one portion will be worked at any given time.

In total there will be 16 trenches in total(0.96ha) where it is taken on worst case scenario that 5 trenches of 0.3ha will be open at any given time and 0.3 ha will be used for the plant area.

R109 052.00 for rehabilitation. See quantum attached as **Appendix 3**.

**u) Indicate any deviation from the approved EIA & EMPr**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(u)*

(i) The same methodology was used for determining the significance of the potential environmental impacts and risks with no deviation.

(ii) No deviation.

**v) Any specific Information required by the competent Authority**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(v)*

No specific information by Authority.

**w) Other matters required in terms of sections 24(4)(a) and (b) of the Act**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 3 – 3. (1)(w)*

There are no alternatives, as the application area applied for is the area where the applicant believes is potential for alluvial gravel deposits.

## PART B

### ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

#### 1) Draft environmental management programme.

##### a) Details of the EAP

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(a)*

The EAP Mr. Daan Erasmus has a National Diploma in Agriculture Resource Utilization and a Baccalaureus Technologiae degree in Agricultural Extension.

Yes see **Part A**.

##### b) Description of the Aspects of the Activity

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(b)*

Yes see **Part A**.

##### c) Composite Map

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(c)*

See **Appendix 1 (a)**

##### d) Description of Impact management objectives including management statements

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(d)*

###### i) **Planning and design**

The main closure objective of **Mr. J. C. Moolman** is to rehabilitate the entire prospecting site in such a way to ensure that the new man-made topographical landscape would blend in with the surrounding landscape, not pose a safety hazard to humans and animals, while at the same time allow for alternative land uses. Establish a self-sustaining and stable vegetation cover in order to mitigate the visual impact, to control erosion and to create some habitat for animals. The rehabilitated environment also needs to be aesthetically acceptable according to the principle of BPEO. Another main objective is to manage the surface water in such way that an acceptable water standard is achieved when a closure certificate is issued. As this area was disturbed before there is not top soil available on all the areas but on the non-disturbed area all available top soil will be stripped and stockpiled.

###### **Mr. J. C. Moolman will ensure that the Operation/Sites are:**

- ✓ Neither a danger to public health and safety nor to animal health and safety;
- ✓ Not a source of any pollution;
- ✓ Stable (ecological and geophysical);
- ✓ Rehabilitated to the state that is suitable for the predetermined and agreed land use;
- ✓ Compatible with the surrounding biophysical environment;
- ✓ A sustainable environment;
- ✓ Aesthetically acceptable;
- ✓ Not an economic, social or environmental liability to the local community or the state now or in the future.

**Mr. J. C. Moolman will furthermore:**

- ✓ Ensure that the physical and chemical stability of the rehabilitated site will be such that risk to the environment is not increased by naturally occurring forces to the extent that such increased risk cannot be contended with by the installed measures;
- ✓ Subscribe to the optimal exploitation and utilization of South Africa's mineral resources (*Diamonds Alluvial*);
- ✓ Ensure that the prospecting site is closed efficiently and cost effectively.
- ✓ Ensure that the operation is not abandoned but closed in accordance with the relevant requirements;
- ✓ Ensure that the interest of all interested and affected parties will be considered;
- ✓ Ensure that the all-relevant legislation regarding mine closure will be adhered to, and all relevant application procedures followed.

ii) **Pre-construction activities**

Clearing of vegetation and stockpiling of top soil

iii) **Construction activities**

**Mr. J. C. Moolman will ensure that the Operation/Sites are:**

- ✓ Neither a danger to public health and safety nor to animal health and safety;
- ✓ Not a source of any pollution;
- ✓ Stable (ecological and geophysical);
- ✓ Rehabilitated to the state that is suitable for the predetermined and agreed land use;
- ✓ Compatible with the surrounding biophysical environment;
- ✓ A sustainable environment;
- ✓ Aesthetically acceptable;
- ✓ Not an economic, social or environmental liability to the local community or the state now or in the future.

iv) **Rehabilitation of environment after construction and post closure**

The main closure objective of **Mr. J. C. Moolman** is to rehabilitate the entire prospecting site in such a way to ensure that the new man-made topographical landscape would blend in with the surrounding landscape, not pose a safety hazard to humans and animals, while at the same time allow for alternative land uses. Establish a self-sustaining and stable vegetation cover in order to mitigate the visual impact, to control erosion and to create some habitat for animals. The rehabilitated environment also needs to be aesthetically acceptable according to the principle of BPEO. Another main objective is to manage the surface water in such way that an acceptable water standard is achieved when a closure certificate is issued.

As this area was disturbed before there is not top soil available on all the areas but on the non-disturbed area all available top soil will be stripped and stockpiled.

v) **If relevant, operation activities**

Not relevant

**vi) Impacts to be mitigated in their respective phases**

**Measures to rehabilitate the environment affected by the undertaking of any listed activity**

ACTIVITIES	PHASE	SIZE AND SCALE of disturbance	MITIGATION MEASURES	COMPLIANCE WITH STANDARDS	TIME PERIOD FOR IMPLEMENTATION
1. Test pits	Operational	0.1 hectares at any stage	Concurrent rehabilitation by backfilling the pits to be stable/sustainable and covered with topsoil and vegetate.	Backfilling of the pits and providing a base for the replacement of topsoil.	As part of concurrent rehabilitation.
2. Excavations	Operational	0.3 hectare at any stage	Concurrent rehabilitation by backfilling of the excavation to be stable/sustainable and covered with topsoil and vegetate.	The pits will backfilled with puddle for stability and providing a base for the replacement of topsoil.	As part of concurrent rehabilitation.
3. Gravel Stockpile area	Operational	0.1 hectares at any stage	Keep this area as small as possible within the demarcated area. Prevent spillages of fuels by machines	Immediate cleaning of spillages	Concurrent with prospecting
4. Washing of gravel	Operational	0.2 hectares at any stage	Keep this area as small as possible. Prevent spillages of fuels by equipment.	Immediate cleaning of spillages	Concurrent with the prospecting

**e) Impact Management Outcomes**

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(e)

ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	MITIGATION TYPE	STANDARD TO BE ACHIEVED
1. Test pits to identify Diamond Run	1.1 Test pits to be excavated on average 3m deep	Geology & soil	Operational	The impact will be mitigated by backfilling the pits and stabilizing the soil to prevent soil erosion.	A stable levelled area that can sustain vegetation without excessive erosion.
	1.3 Stripping of all available topsoil and stockpiled	Soil	Operational	The top soil must be removed before any disturbance take place. The top soil must be removed and stockpile in a demarcated area for rehabilitation purposes.	Enough topsoil for rehabilitation to ensure sustainable vegetation.
	1.4 Soil erosion due to the fact that certain surface areas would become devoid of any vegetation cover and compacted. This would lead to lesser infiltration of rain water and more run-off that could cause erosion on bare disturbed areas and side slopes.	Soil	Operational	To take preventive steps against erosion. Implement and maintain cut-off trenches and or berms around the Prospecting area to prevent water entering that can cause excessive erosion.	No excessive erosion that cannot be stabilized.
	1.5. Loss of Land capability & land use.	Land capability & land use	Operational and closure	This area is 1120 hectares; the impact is anticipated to be low. As the excavations will be backfilled and vegetated, the rehabilitated area must be treated as sensitive when grazed as overgrazing can trigger erosion and infiltration of declared weeds.	Sustainable rehabilitated area.
	1.6 Generation of dust by and vehicle movement	Air quality	Operational	The generation of dust will only be localized at the Prospecting site. Daily spraying of roads with water	No excessive dust that can be harmful to the environment and humans.
2. Excavations for alluvial gravel	1.1 Removal of the gravel up to 3 m	Geology & soil	Operational	The impact will be mitigated by backfilling the excavation and stabilizing the soil to prevent soil erosion.	Stable slopes that can sustain erosion without excessive erosion.
	1.2 Change in landform. The entire prospecting area will be lowered by 3 m and normal surface drainage will be disturbed at this specific point. The pit will be backfilled	Topography	Operational and closure	The pit will be backfilled and the soil stabilized to prevent erosion. A surface water cut-off trench should be put in place around the active prospecting site in order to prevent surface water on the prospecting site. Rehabilitation of the pit in such a way that it would blend in with the surrounding landscape.	Gentle stable slopes.
	1.3 Stripping of all available topsoil and stockpiled	Soil	Operational	The top soil must be removed before any disturbance take place. The top soil must be removed and stockpile in a demarcated area for rehabilitation purposes.	Enough topsoil for rehabilitation to ensure sustainable vegetation.
	1.4 Soil erosion due to the fact that certain surface areas would become devoid of any vegetation cover and compacted. This would lead to lesser infiltration of rain water and more run-off that could cause erosion on bare disturbed areas and side slopes.	Soil	Operational	To take preventive steps against erosion. Implement and maintain cut-off trenches and or berms around the prospecting area to prevent water entering that can cause excessive erosion.	No excessive erosion that cannot be stabilized.
	1.5. Loss of Land capability & land use.	Land capability & land use	Operational and closure	As this is only a very small area of 0.6 hectare, the impact is low. As excavations will be backfilled and vegetated, the rehabilitated area must be treated as sensitive when grazed as overgrazing can trigger erosion and infiltration of declared weeds.	Sustainable rehabilitated area.
	1.6 Generation of dust by excavating and vehicle movement	Air quality	Operational	The generation of dust will only be localized at the prospecting	No excessive dust that can be harmful

site. Daily spraying of roads with water to the environment and humans.

**f) Description of Proposed Impact Management Actions**

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(f)

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	TIME PERIOD FOR IMPLEMENTATION	COMPLIANCE WITH STANDARDS
Drilling sites for alluvial diamonds.	<p>1.1 Excavation of Test pits (. . .3m deep . . .) on average (3m average) m</p> <p>1.3 Stripping of all available topsoil and stockpiled</p>	<p>The impact will be mitigated by backfilling the pits and stabilizing the soil to prevent soil erosion.</p> <p>The top soil must be removed before any disturbance take place. The top soil must be removed and stockpile in a demarcated area for rehabilitation purposes</p>		
	<p>1.4 Soil erosion due to the fact that certain surface areas would become devoid of any vegetation cover and compacted. This would lead to lesser infiltration of rain water and more run-off that could cause erosion on bare disturbed areas and side slopes.</p> <p>1.5 Loss of Land capability &amp; land use</p>	<p>To take preventive steps against erosion. Implement and maintain cut-off trenches and or berms around the Prospecting area to prevent water entering that can cause excessive erosion.</p>		
	<p>1.6 Generation of dust by excavating, crushing/screening and vehicle movement</p> <p>1.1 Removal of the gravel up to 2 m</p>	<p>This area is 1611 hectares; the impact is anticipated to be low. As the excavation will be backfilled and vegetated, the rehabilitated area must be treated as sensitive when grazed as overgrazing can trigger erosion and infiltration of declared weeds.</p> <p>The generation of dust will only be localized at the Prospecting site.</p> <p>Daily spraying of roads with water</p> <p>The bulk of the material removed will be washed and the puddle back to the excavation. The impact will be mitigated by backfilling the excavation and stabilizing the soil to prevent soil erosion.</p>		
Excavations for alluvial gravel	<p>1.2 Change in landform. The entire prospecting area will be lowered by 3 m and normal surface drainage will be disturbed at this specific point. The pits will be backfilled</p>	<p>The pit will be backfilled and the soil stabilized to prevent erosion. A surface water cut-off trench should be put in place around the active prospecting site in order to prevent surface water on the prospecting site.</p> <p>Rehabilitation of the new rehabilitated landscape in such a way that it would blend in with the surrounding landscape.</p>		
	<p>1.3 Stripping of all available topsoil and stockpiled</p>	<p>The top soil must be removed before any disturbance take place. The top soil must be removed and stockpile in a demarcated area for rehabilitation purposes</p>		
	<p>1.4 Soil erosion due to the fact that certain surface areas would become devoid of any vegetation cover and compacted. This would lead to lesser infiltration of rain water and more run-off that could cause erosion on bare disturbed areas and side slopes.</p> <p>1.5 Loss of Land capability &amp; land use</p>	<p>To take preventive steps against erosion. Implement and maintain cut-off trenches and or berms around the prospecting area to prevent water entering that can cause excessive erosion.</p>		
	<p>1.6 Generation of dust by excavating and vehicle movement</p>	<p>As this is only a very small area of 0.6 ha, the impact is low. As the pits will be backfilled and vegetated, the rehabilitated area must be treated as sensitive when grazed as overgrazing can trigger erosion and infiltration of declared weeds.</p>		
	<p>1.6 Generation of dust by excavating and vehicle movement</p>	<p>The generation of dust will only be localized at the prospecting site. Daily spraying of roads with water</p>		

**g) Method of monitoring the implementation of impact management actions**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(g)*

Monitoring by daily checks by manager.

**h) Frequency of monitoring the implementation of impact management actions**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(h)*

Report Monitoring will be done continuously and annual Audit

**i) Indication of person responsible for implementation of the impact management actions**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(i)*

The applicant

**j) Time periods within which actions must be implemented**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(j)*

The rehabilitation liability will be reviewed annually and a Performance Assessment report will be submitted annually.

**k) Mechanisms for monitoring compliance with the impact management actions**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(k)*

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Prospecting site/Soil	Possible spillages of petrochemicals. Stripping of topsoil	Checking for spillages on daily basis. Checking correct stripping and	Manager and Applicant	Daily checking and reporting with Performance Assessment
Prospecting site/Topography	Concurrent backfilling of excavations.	Checking stability of slope and erosion preventive measures	Manager and applicant	Quarterly
Prospecting site/Air quality	Dust pollution from prospecting activities.	Regular wetting of roads and stockpile area where loading take place.	Manager and applicant	Daily
Prospecting site	Chemical toilet	Make sure that it is used and hygienic.	Manager and Applicant	Weekly.

**l) Program for reporting on compliance**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(l)*

An EMP Performance Assessment will be submitted to the Management and the DMR on an annual basis.

**e) Environmental Awareness Plan**

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

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(m)*

**Mr. J. C. Moolman** will contract DERA Environmental Consultants to inform the employees after the EMP was approved.

The following guidelines will be used:

- ✓ Communication
- ✓ Urge
- ✓ Leadership
- ✓ Teamwork
- ✓ Understanding
- ✓ Recognition
- ✓ Empowerment (CULTURE)

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

The biggest risks will be the degradation of soil/ land capability if the top soil is not handled correctly. The risks of soil pollution by spillages of fuel and oil will be managed on a daily basis checking for leaks on equipment and proper storage of oil and fuel. Concurrent proper rehabilitation of the excavations will ensure that pre-mining land capability can be restored.

The main closure objective of **Mr. J. C. Moolman** is to rehabilitate the entire prospecting site in such a way to ensure that the new man-made topographical landscape would blend in with the surrounding landscape, not pose a safety hazard to humans and animals, while at the same time allow for alternative land uses. Establish a self-sustaining and stable vegetation cover in order to mitigate the visual impact, to control erosion and to create some habitat for animals. The rehabilitated environment also needs to be aesthetically acceptable according to the principle of BPEO. Another main objective is to manage the surface water in such way that an acceptable water standard is achieved when a closure certificate is issued. As this area was disturbed before there is not top soil available on all the areas but on the non-disturbed area all available top soil will be stripped and stockpiled.

The risks will be dealt with by proper management actions as described in 1d.

**f) Specific information required by the Competent Authority**

*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 4 – 1. (1)(n)*

The quantum for rehabilitation liability will be reviewed with the performance assessment on annual basis.

**Table 10: Monitoring Plan**

Action	Frequency	Method	Period
1. Monitoring of perimeter fence	Monthly and following any heavy rainfall.	Foot or vehicle patrol. Record	Until closure.
2. Monitoring of re-vegetation Mined out and rehabilitated areas Leveled and Rehabilitated Dumps Mine residue dam walls Old roads Covered over waste pits Rehabilitation plots	Every 6 months	Foot inspection Initiate set up of test plots Photograph. Transect / Quadrant Get consultants in if necessary.	Until closure.

3. Monitoring of erosion Roads Mine residue dam walls Rehabilitated mined out areas Dumps Pumps and pipelines Any other areas	Every 6 months and following any heavy rainfall	Visual inspection Walk over rehab. Areas Drive along roads. Check pipelines and pumps: mine residue dams, dumps. Photographic records.	Until closure
4. Monitoring of alien plants over the whole site.	On-going until under control - then every 6 months.	Visual inspection on foot patrol. Map presence of invasive plants. Plan removal, remove and document area covered on monthly basis. Verify Photograph.	On-going until closure
5. Monitoring of Water Quality from selected points	Every 6 months	Build up database and graph the results. Compare with limits and take action on non-conformances.	Until closure.
6. Monitoring of all Rehabilitation Areas. Check compliance with gradients and variation in topography	Every 6 months.	Survey- map new rehabilitated areas. Plot on map and calculate area treated. Get rehab consultants in if necessary.	Until closure.
7. Monitoring of stability of mine Residue dams and water Storage facilities.	Monthly and summarize every 6 months	Follow specifications in mandatory code of practice for puddle dams	Until closure
8. Monitoring of disposal of metal scrap, old oil, oil filters, old oil drums, oily cloths, batteries, fluorescent tubes, tires and contaminated soil (Hazardous waste)	Monthly and summarize every 6 months.	Record each load sent off the site. Give used oils to Oilkol Ensure safe disposal certificates are obtained from suppliers if the material is given back to them.	Until closure.
9. Monitoring of maintenance of general waste disposal	All loads of waste to be recorded and quantity extrapolated. Covering of waste pit - Monthly.	Running total of loads of waste taken Record of waste taken to Bloemhof waste disposal site Keeping record of waste taken to disposal site	Until closure
10. Monitoring of condition of septic tanks	Every six months	Visual inspection. Record condition.	Until closure
11. Monitoring of condition of bunded Areas around diesel fuel tanks, Refueling area, old oil tank; and underground petrol tank.	Every six months.	Visual inspection	Until closure
12. Monitoring of water use.	Monthly	Record total water use and water use at different plants by recording flow meters. Ensure compliance with license.	Until closure

## 2) UNDERTAKING

The Environmental Assessment Practitioner

**D.E. Erasmus**

I, \_\_\_\_\_

General declaration:

- I act as the independent environmental practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and

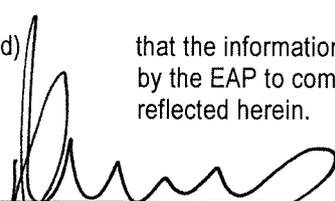
affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;

- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favorable to the applicant or not
- all the particulars furnished by me in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realize that a false declaration is an offence in terms of regulation 71 and is punishable in terms of section 24F of the Act.

**Disclosure of Vested Interest** (delete whichever is not applicable)

- I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2010;
- I have a vested interest in the proposed activity proceeding, such vested interest being:

The EAP herewith confirms

- a) the correctness of the information provided in the reports
- b) the inclusion of comments and inputs from stakeholders and I&APs;
- c) the inclusion of inputs and recommendations from the specialist reports where relevant; and
- d)  that the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties are correctly reflected herein.

Signature of the environmental assessment practitioner

**DERA Omgewingskonsultante (Pty) Ltd.**

Name of company

1/08/2020

Date

-END-

LOCALITY MAP

Co-ordinates:

WGS 84/WGS 84

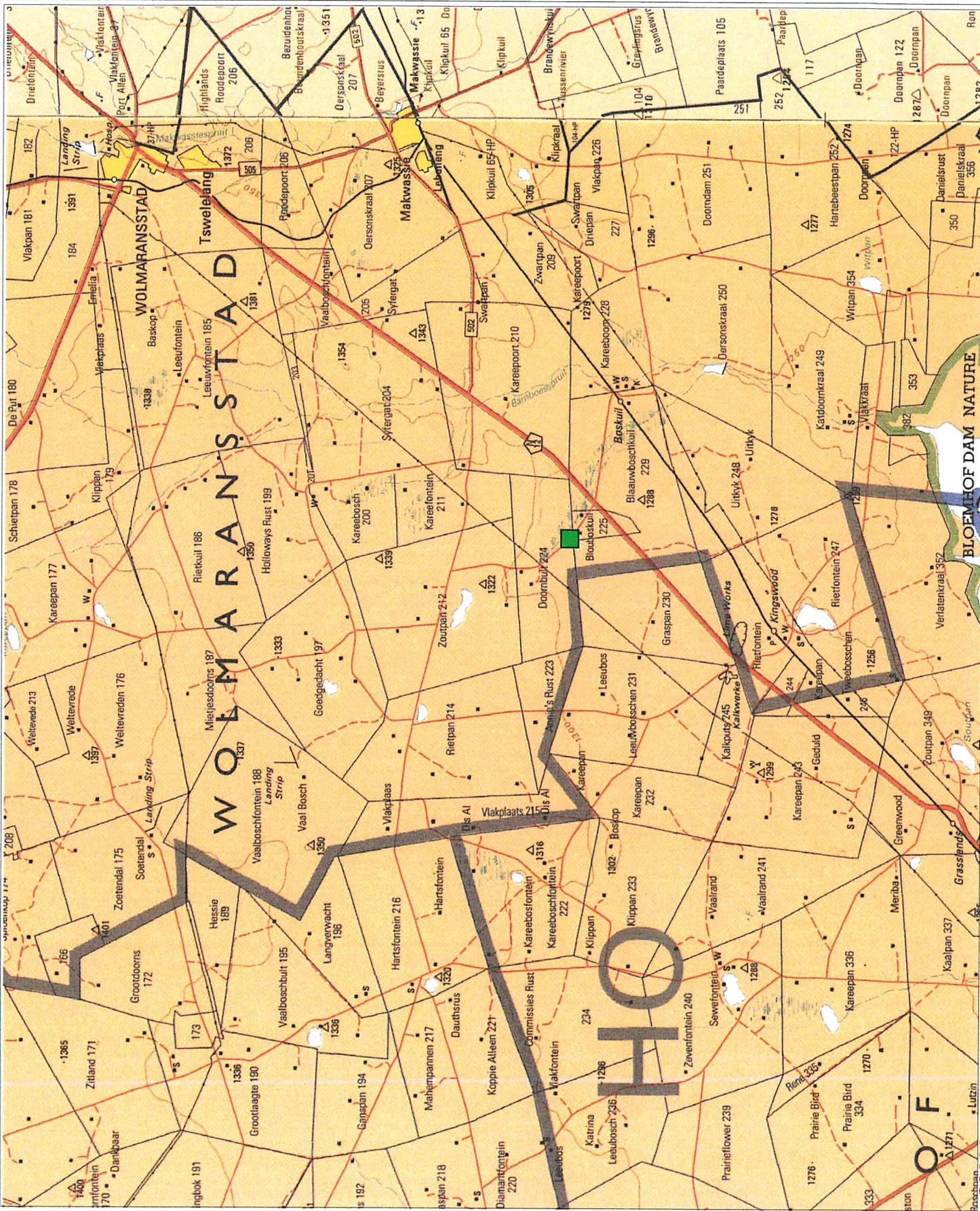


Scale 1:250000

Legend:

-  Proposed Prospecting Area
-  Tar Roads
-  Canal
-  Secondary roads
-  Houses/Farm yards/ Small holdings
-  Mining areas

40000 Meters



20000

0

20000

**SECTION 102  
AMENDED SKETCH PL,**

Over: Remaining Extent, Portion 3, Portion 4 (portion of portion 1), Remaining Extent of Portion 9 all of the farm DOORNBULT 224 HO

**Co-ordinates:**

A1:	25.8127	-27.3639
A2:	25.8129	-27.3673
A3:	25.8436	-27.3656
A4:	25.8429	-27.3730
A5:	25.8136	-27.3749
A6:	25.8150	-27.3895
A7:	25.7984	-27.3907
A8:	25.7972	-27.3759
A9:	25.7640	-27.3794
A10:	25.7606	-27.3673

WGS 84/WGS 84

**Extent: 1 120,5631 ha**

Figure (A1,A2,A3,A4,A5,A6,A7,A8, A9,A10) represent the Amended Prospecting Right area in terms of Section 102 of the MPRDA, (Act 28 of 2002), over: the Remaining Extent, Portion 3, Portion 4 (portion of portion 1), Remaining Extent of Portion 9 all of the farm DOORNBULT 224 HO, in the district of Wolmaransstad

Applicant: J. C. Moolman

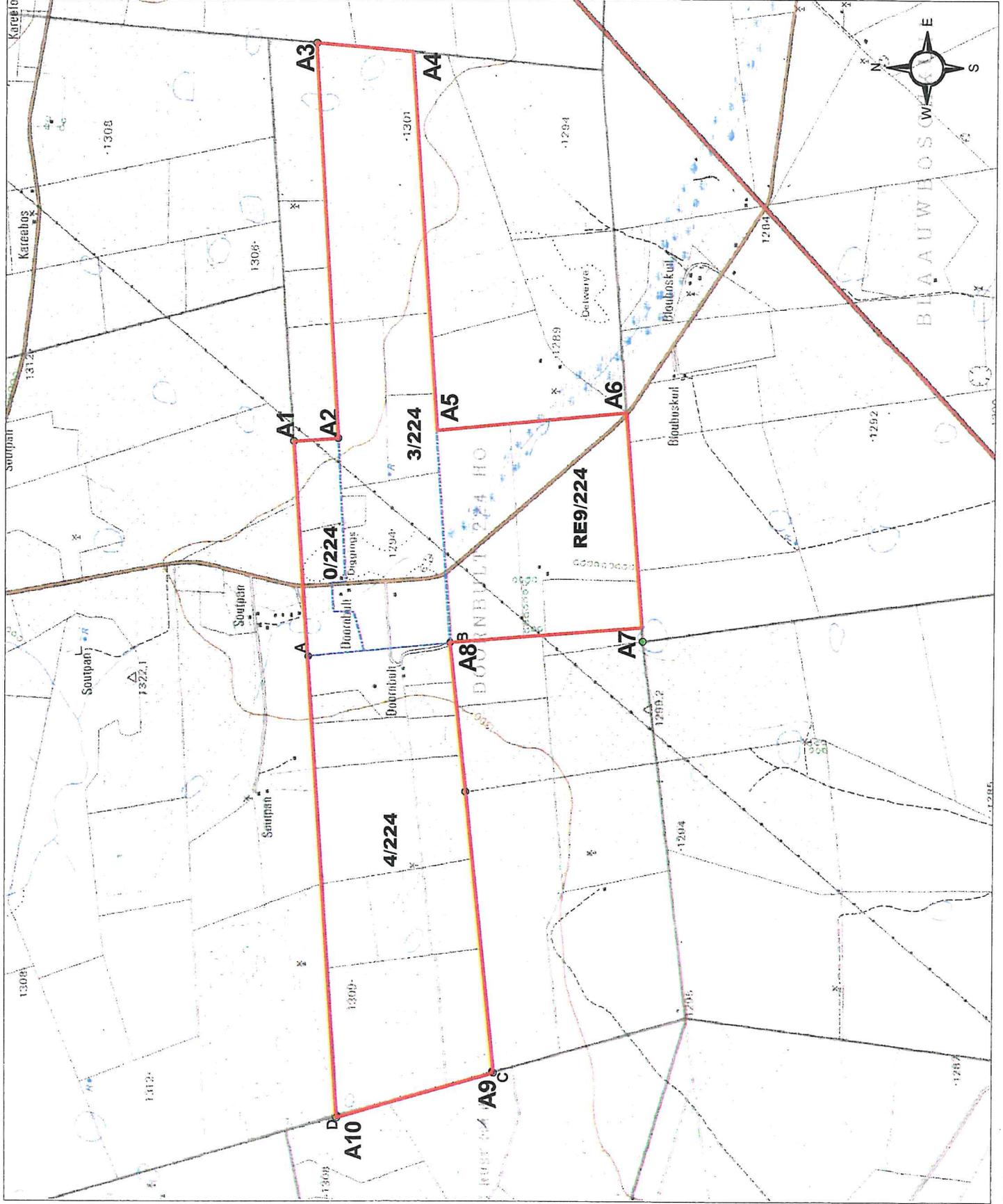
ID. No. 750613 5067 089

Date: 12/08/2019

Approved: Regional Manager

North West Region

Date: .....



# APPENDIX 2 – PROOF OF CONSULTATION

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an "X" where those who must be consulted were in fact consulted.	Date sent and/or Comments Received	Issues raised	EAP's response to the applicant
<b>AFFECTED PARTIES</b>			
Mr. J.C. Moolman P.O. Box 107, Wolmaransstad, 2630 Tel: 082 926 3752; E-mail: <a href="mailto:stoffelmoolman75@gmail.com">stoffelmoolman75@gmail.com</a> Landowner on portion 4 of the farm Doornbult	X 5 Feb 2020	Landowner is also the applicant	
<b>Lawful occupier/s of the land</b>			
<b>Landowners or lawful occupiers on adjacent properties</b>	X		
Mr. J. Theunissen P.O. Box 157, Makwassie, 2650 Cell: 082 856 0489; E-mail: <a href="mailto:johant@nwet.co.za">johant@nwet.co.za</a> (Neighbour on West & Eastern side)	1 June 2020	No objection. See signed consultation letter attached.	
<b>Municipal councillor</b>			
<b>Municipality</b>	X		
Maquassi Hills Local Municipality LED Manager: Peter Bolao E-mail: <a href="mailto:bolao peter@gmail.com">bolao peter@gmail.com</a>	6 Feb 2020	E-mail sent	
<b>Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA.</b>			
<b>Eskom</b>			
<b>Communities</b>	X		
<b>Dept. Land Affairs</b>	X		
Mr. KeathesweMothupi, Office of the Regional Land Claims Commissioner, N W Province; Private Bag X08, Mmabatho, 2735; Fax: 018 389 9641; E-mail: <a href="mailto:kean=betswe.mothupi@drtl.gov.za">kean=betswe.mothupi@drtl.gov.za</a>	6 Feb 2020	E-mail sent	6 Feb 2020: Acknowledgement received 12 Feb 2020: No land claims.
<b>Traditional Leaders</b>			
<b>N/A</b>			
<b>Dept. Rural Development and Land Reform</b>	X		
<b>Ouma Skosana</b> Agricentre Building, Cnr James Moroka & Stadium Road, Mmabatho, 2735 E-mail: <a href="mailto:oskosana@nwpg.gov.za">oskosana@nwpg.gov.za</a>	10 Aug 2020	EIA/EMPr sent with Fastway couriers for comments	
<b>Department of Water and Sanitation</b>	X		
2 <sup>nd</sup> Floor, Bloem Plaza Building, Cnr East Burger & Charlotte Maxeke, Bloemfontein, 9300 Tel: 015 405 9000; E-mail: <a href="mailto:NtllIT@dws.gov.za">NtllIT@dws.gov.za</a>	10 Aug 2020	EIA/EMPr sent with Fastway for comments	
<b>Dept. Agriculture, Forestry and Fisheries</b>	X		
Maurice Vuyega Louis le Grange Building, Cnr Peter Mokaba & Wolmarans street, 3 <sup>rd</sup> Floor, Office nr 318, Potchetstroom, 2520	10 Aug 2020	EIA/EMPr sent with Fastway for comments	

# APPENDIX 2 – PROOF OF CONSULTATION

Other Competent Authorities				
OTHER AFFECTED PARTIES				
INTERESTED PARTIES				

Public notice – Stellalander of Wednesday 5 August 2020

.....

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

# DERA

5 February 2020

## Environmental Consultants

To whom it may concern

**CONSULTATION WITH INTERESTED AND AFFECTED PARTIES WITH REGARD TO A SEC 102 APPLICATION FOR A PROSPECTING RIGHT IN TERMS SECTION 16 OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) OVER PORTION 4 (PORTION OF PORTION 1) OF THE FARM DOORBULT 224 HO, TO INCLUDE THE REMAINING EXTENT, PORTION 3 AND REMAINING EXTENT OF PORTION 9 OF THE FARM DOORBULT 224 HO, MAGISTERIAL DISTRICT OF WOLMARANSSTAD.**

You are herewith informed that **J.C. Moolman** has submitted an application in terms of Section 16 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002), to the Regional Manager: Mineral Regulation, Northern West Region in respect of the prospecting of Alluvial Diamonds in the magisterial district of Wolmaransstad.

**J.C. Moolman** is in the process of compiling the EMPr/EIA, which needs to be submitted at the Regional Office of DMR. The documents will be available for I&AP's for comments.

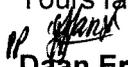
In terms of Section 10 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002), and in terms of Regulation 39(1) of the regulations published in the Government Notice No. R10328 (of 4 December 2014) under Chapter 6 of the NEMA, EIA 2014, the landowner or legal occupier of the land,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

**J.C. Moolman** deems 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 regards to the proposed prospecting project. You are requested to submit in writing, any interest/ objection and/or comments you may have and return it to the appointed consultants (**Reference no. NW30/5/1/1/2/10498PR & NW-00110-PR/102**) within 30 days from the date of receipt of this letter. If no correspondence is received from you within the mentioned time frame, the applicant shall accept that you have no objection with the proposed prospecting activities.

Please call me if any further information is needed.

Your co-operation will be appreciated.

Yours faithfully

  
**Daan Erasmus**  
DERA Environmental Consultants

.....

REGISTRATION FORM AND COMMENT FOR THE PUBLIC PARTICIPATION PROCESS

PROPOSED SEC 102 PROSPECTING RIGHT APPLICATION ON PORTION 4 (PORTION OF PORTION 1) OF THE FARM DOORNBULT 224 HO, TO INCLUDE THE REMAINING EXTENT, OF PORTION 3 AND THEIR REMAINING EXTENT OF PORTION 9 OF THE FARM DOORNBULT 224 HO, MAGISTERIAL DISTRICT OF WOLMARANSSTAD

an Erasmus  
J. Box 6499  
ERKSDORP  
72

Tel. 018-468 5355  
Fax: 018-011 3760  
Mobile: 082 895 3516  
E-mail: [daane@dera.co.za](mailto:daane@dera.co.za)

West & eastern side

**PERSONAL INFORMATION:**

Title: Mr Initials/Voorletters: J First Name/Eerste naam: JOHANN

Surname/Van: THEUNISSEN

Email/E-pos: johant@nwet.co.za

Telephone/Telefoon: 0828530489 Fax/Faks: .....

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

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

Landowner/Grondeenaar/Neighbour/Buurman/ Interested and/or affected party on the farm/ op die plaas: J. THEUNISSE

Postal Address/ Posadres: Bus 157

Town/City/Dorp/Stad: MAIKWASSIE Code/Kode: 2650

**COMMENT/OBJECTION:**

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

NOT

Do you have any ground for objection or do you support the proposed project/Het u enige gronde tot beswaar of ondersteun u die genoemde projek?

GEEN

**YES/NO JA/NEE**

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

NOT

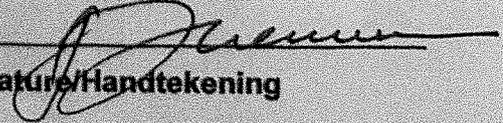
Do you foresee that this activity will have a negative impact on yourself or the environment/Voorsien u dat die voorgename projek 'n negatiewe inpak kan he op uself of die omgewing?

**YES/NO JA/NEE**

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

Filed in on/Ingevu op ..... 1 ..... day of /dag van ..... JUNE ..... (month)/(maand) 2020

Name and Surname/ Company  
Naam en Van/Maatskappy

Signature/Handtekening  


.....  
**DERA**

6 February 2020

## Environmental Consultants

**Maquassi Hills Local Municipality**

**Attention: Peter Bolao**

**RE: CONSULTATION WITH INTERESTED & AFFECTED PARTIES**

It is hereby confirmed that Mr. J.C. Moolman has applied for a Section 102 application for a prospecting right on Portion 4 (Portion of Portion 1) of the farm Doorbult 224 HO, to include the remaining extent, Portion 3 and remaining extent of Portion 9 of the farm Doorbult 224 HO, magisterial district of Wolmaransstad.

The Departement of Mineral Resources have requested that the Maquassi Hills Local Municipality must be informed about the proposed Sec 102 prospecting right application.

Please find attached the consultation letter with the information regarding the proposed Sec 102 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](mailto:dera.office@dera.co.za)

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

DERA Environmental Consultants can be contacted for any further enquiries.

Yours sincerely



Daan Erasmus  
DERA Environmental Consultants

.....

.....

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

# DERA

5 February 2020

## Environmental Consultants

To whom it may concern

**CONSULTATION WITH INTERESTED AND AFFECTED PARTIES WITH REGARD TO A SEC 102 APPLICATION FOR A PROSPECTING RIGHT IN TERMS SECTION 16 OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) OVER PORTION 4 (PORTION OF PORTION 1) OF THE FARM DOORBULT 224 HO, TO INCLUDE THE REMAINING EXTENT, PORTION 3 AND REMAINING EXTENT OF PORTION 9 OF THE FARM DOORBULT 224 HO, MAGISTERIAL DISTRICT OF WOLMARANSSTAD.**

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**J.C. Moolman** is in the process of compiling the EMPr/EIA, which needs to be submitted at the Regional Office of DMR. The documents will be available for I&AP's for comments.

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 notified and consulted with in terms of the proposed project.

**J.C. Moolman** deems 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 regards to the proposed prospecting project. You are requested to submit in writing, any interest/ objection and/or comments you may have and return it to the appointed consultants (**Reference no. NW30/5/1/1/2/10498PR & NW-00110-PR/102**) within 30 days from the date of receipt of this letter. If no correspondence is received from you within the mentioned time frame, the applicant shall accept that you have no objection with the proposed prospecting activities.

Please call me if any further information is needed.

Your co-operation will be appreciated.

Yours faithfully



**Daan Erasmus**  
**DERA Environmental Consultants**

.....

:

**REGISTRATION FORM AND COMMENT FOR THE PUBLIC PARTICIPATION PROCESS  
PROPOSED SEC 102 PROSPECTING RIGHT APPLICATION ON PORTION 4 (PORTION OF PORTION 1) OF THE  
FARM DOORBULT 224 HO, TO INCLUDE THE REMAINING EXTENT, PORTION 3 AND THER REMAINING  
EXTENT OF PORTION 9 OF THE FARM DOORBULT 224 HO, MAGISTERIAL DISTRICT OF WOLMARANSSTAD.**

Daan Erasmus  
P.O. Box 6499  
KLERKSDORP  
2572

Tel. 018-468 5355  
Fax: 018-011 3760  
Mobile: 082 895 3516  
E-mail: [daane@dera.co.za](mailto:daane@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/ Interested 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 or do you support the proposed project/Het u enige gronde tot beswaar of ondersteun u 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 descibe shortly/Indien 'JA', verduidelik asseblief kortliks.

.....  
.....

Filled in on/Ingevol op..... day of /dag van..... (month)/(maand) 2020

\_\_\_\_\_  
**Name and Surname/ Company**  
**Naam en Van/Maatskappy**

\_\_\_\_\_  
**Signature/Handtekening**  
.....

## Jana

---

**From:** Jana <dera.office2@dera.co.za>  
**Sent:** 06 February 2020 08:53 AM  
**To:** keabetswe.mothupi@drdlr.gov.za  
**Subject:** Verification of Land Claims - J.C. Moolman - Doornbult 224 HO  
**Attachments:** doc03924220200206085023.pdf

Good day Kea

See attached our letter regarding verification of land claims – Doornbult 224 HO, district Wolmaransstad.

The municipality is Maquassi Hills Local Municipality for the farm.

Regards

Ns/pp Jana Hartman  
Daan Erasmus  
DERA Omgewingskonsultante (Pty) Ltd  
Reg. no.: 2014/051013/07  
VAT no.: 4590284073  
Tel: +27 18 468 5355  
Fax: +27 18 011 3760  
Mobile: +27 82 895 3516  
E-mail: [dera.office2@dera.co.za](mailto:dera.office2@dera.co.za) / [daane@dera.co.za](mailto:daane@dera.co.za)  
P.O. Box 6499, Flamwood, 2572  
27 Lewis Street, Wilkoppies, 2571, Klerksdorp

.....

# DERA

## Environmental Consultants

6 February 2020

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 Mr. J.C. Moolman for a Sec 102 application for a Prospecting Right on the following farm in the Wolmaransstad district.

- Portion 4 (Portion of Portion 1) of the farm Doornbult 224 HO, to include the remaining extent, Portion 3 and remaining extent of Portion 9 of the farm Doornbult 224 HO.

Maquassi Hills 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 Mr. Erasmus on his cell: 082 895 3516 for any further information.

Yours truly.

PP   
Daan Erasmus

.....

**Jana**

---

**From:** Keabetswe Mothupi <keabetswe.mothupi@drrdlr.gov.za>  
**Sent:** 06 February 2020 09:43 AM  
**To:** Jana  
**Subject:** RE: Verification of Land Claims - J.C. Moolman - Doornbult 224 HO  
**Attachments:** doornbult.pdf

Good day Jana

Kindly find the attached acknowledgement letter

Regards  
Kea

---

**From:** Jana <dera.office2@dera.co.za>  
**Sent:** 06 February 2020 08:53 AM  
**To:** Keabetswe Mothupi <keabetswe.mothupi@drrdlr.gov.za>  
**Subject:** Verification of Land Claims - J.C. Moolman - Doornbult 224 HO

Good day Kea

See attached our letter regarding verification of land claims – Doornbult 224 HO, district Wolmaransstad.

The municipality is Maquassi Hills Local Municipality for the farm.

Regards

Ns/pp Jana Hartman  
Daan Erasmus  
DERA Omgewingskonsultante (Pty) Ltd  
Reg. no.: 2014/051013/07  
VAT no.: 4590284073  
Tel: +27 18 468 5355  
Fax: +27 18 011 3760  
Mobile: +27 82 895 3516  
E-mail: [dera.office2@dera.co.za](mailto:dera.office2@dera.co.za) / [daane@dera.co.za](mailto:daane@dera.co.za)  
P.O. Box 6499, Flamwood, 2572  
27 Lewis Street, Wilkoppies, 2571, Klerksdorp



OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: NORTH WEST  
Cnr James Moroka and Sekame drive, West gallery, Megacity, MMABATHO  
Tel: (018) 388 7000

---

Reference: R/7/013/02/2020  
Enquiries: Keabetswe Mothupi  
Tel: (018) 388-7220 / E-mail: keabetswe.mothupi@drdlr.gov.za

By E-Mail: [dera.office@dera.co.za](mailto:dera.office@dera.co.za)

Dear D Erasmus

**LAND CLAIM ENQUIRY: PORTION 4 (A PORTION OF PORTION 1), R/E,  
PORTION 3 AND R/E OF PORTION 9 OF THE FARM  
DOORBULT 224 HO**

I acknowledge receipt of your letter dated the 06<sup>th</sup> of February 2020 regarding the above-mentioned matter.

Kindly note that a formal response could be expected from our office within the next 7(seven) working days.

Should you however required any additional information, you can contact **Ms K.W Mothupi** at the above mentioned contact details.

Yours faithfully

**MR L.J BOGATSU  
CHIEF DIRECTOR  
OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER  
NORTH WEST PROVINCE  
DATE: 06/02/2020**

## Dera - Gerda

---

**From:** Keabetswe Mothupi <keabetswe.mothupi@drdlr.gov.za>  
**Sent:** Thursday, February 13, 2020 9:18 AM  
**To:** dera.office@dera.co.za  
**Subject:** response letter  
**Attachments:** doornbult.pdf

Good day

Kindly find the attached

Regards

Keabetswe W Mothupi  
Administrative Officer: IMS  
RLCC NW: MMABATHO  
018 388 7220



**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: Keabetswe Mothupi  
E-Mail: [keabetswe.mothupi@drdlr.gov.za](mailto:keabetswe.mothupi@drdlr.gov.za)  
Tel: 018 388 7220

J.C. Modman  
(Sec. 102)

By E-Mail: [dera.office@dera.co.za](mailto:dera.office@dera.co.za)

Dear D Erasmus

**LAND CLAIM ENQUIRY – PORTION 4 (A PORTION OF PORTION 1), R/E , PORTION 3  
AND R/E OF PORTION 9 OF THE FARM DOORBULT 224 HO**

We refer to your letter dated 06<sup>th</sup> of February 2020.

We confirm that as at the date of this letter no land claim appears on our database in respect of the above properties. 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: 12/2/2020

## PUBLIC NOTICE

### APPLICATION FOR AN ENVIRONMENTAL AUTHORIZATION FOR THE PROPOSED ACTIVITIES.

Notice is given for the following Sec 102 application:

- 1) Amendment of Environmental authorization application for prospecting.

- **Proponent:** The applicant is J.C. Moolman.
- **Ref. no:** NW30/5/1/1/2/10498PR & NW-00-00110-PR/102
- **Property description:** The proposed prospecting area is over the remaining extent of Portion 3, Portion 4 (Portion of Portion 1), remaining extent of Portion 9 of the farm Doornbult 224 HO, in the magisterial district of Wolmaransstad. The total extent of the prospecting area is 1120.5631 hectares. (21 SG digital codes:
- **Location:** The property is situated  $\pm 15$  km south of Wolmaransstad
- **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 amendment of EMP/EIA 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 20 (Listing Notice 1) GNR 327 & Activity 27 (Listing Notice 1) GNR 327
- **Minerals applied for:** Diamonds Alluvial.
- **Date submitted:** 15 August 2019 (Sec 102)
- **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 amended (EMP/EIA) for Sec 102, and are also invited to contact Dera Environmental Consultants for any further information regarding the project. Please submit your written comments by mail, fax or e-mail in this 30 day of this notice to:

Mr. Daan Erasmus of DERA Environmental Consultants  
PO Box 6499                      E-mail: daane@dera.co.za  
Flamwood                         Tel: 018 468 5355  
2572                                 Fax: 018 011 3760  
Cell: 082 895 3516;

- Date of advertisement: Wednesday 5 August 2020



.....



P O Box 6499  
Flamwood  
2572  
Tel: 018-468 5355  
Fax: 018-011 3760  
Cell: 083 225 1593  
E-mail: [dera\\_office@dera.co.za](mailto:dera_office@dera.co.za)  
daane@dera.co.za

# DERA

## Environmental Consultants

10 August 2020

Department of Rural, Environment and Agricultural Development  
Agricentre Building  
Cnr Dr James Moroko Drive & Stadium Road  
Mmabatho  
2735

Attention: Ouma Skosana

RE: EMPr/EIA

Reference Number: NW30/5/1/1/2/10498PR & NW-001110-PR/102

It is hereby confirmed that Mr. J.C. Moolman has applied for a prospecting right over Remaining extent, Portion 3 & Remaining extent of Portion 9 of the farm Doornbult 224 HO, situated in the district of Wolmaransstad, North-West Province

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 EMPr/EIA for comments.

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

DERA Environmental Consultants can be contacted for any further enquiries.

Yours sincerely

Daan Erasmus  
DERA Environmental Consultants

.....

Moalman (Sec 102)

# To

Company Name:

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

Agricentre Building

Cnr Dr James Moroko Drive & Stadium Road

Office no. E36

Mmabatho, 2735

Phone: 018 389 5095/5156 Attention: Ms. Ouma Skosana

City/Town:

State:

Postcode:

Phone:

Attention:

## 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:

**G. ELS**

Signature:

**G. ELS**

Lift & Peel



Pickup

XA0005764013

Lift & Peel



Delivery

XA0005764013

XA0005764013



.....



P O Box 6499  
Flamwood  
2572  
Tel: 018-468 5355  
Fax: 018-011 3760  
Cell: 083 225 1593  
E-mail: [dera\\_office@dera.co.za](mailto:dera_office@dera.co.za)  
[daane@dera.co.za](mailto:daane@dera.co.za)

# DERA

## Environmental Consultants

10 August 2020

Department of Agriculture, Forestry and Fisheries  
Louis Le Grange Building  
Cnr Peter Mokaba & Wolmarans Street  
3<sup>rd</sup> Floor, Office 318  
Potchefstroom  
2520

Attention: Maurice Vukeya

RE: EMPr/EIA

Reference Number: NW30/5/1/1/2/10498PR & NW-001110-PR/102

It is hereby confirmed that Mr. J.C. Moolman has applied for a prospecting right over Remaining extent, Portion 3 & Remaining extent of Portion 9 of the farm Doornbult 224 HO, situated in the district of Wolmaransstad, North-West Province

The application was accepted by the Department of Mineral Resources and they have requested that the Department of Agriculture, Forestry and Fisheries (North-West Regional Office) must be consulted about the proposed prospecting right. See attached the EMPr/EIA.

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

DERA Environmental Consultants can be contacted for any further enquiries.

Yours sincerely

Daan Erasmus  
DERA Environmental Consultants

.....

Moolman (Sec 102)

**To**

Company Name:

**To: Department of Water & Sanitation**

2<sup>nd</sup> Floor, Bloem Plaza Building

Cnr East Burger & Charlotte Maxeke

Bloemfontein, 9300

Phone: 051 405 9109 Attention: Dr. T. Ntili

City/Town:

State:

Postcode:

Phone:

Attention:

**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: G. Els

Signature:

*G. Els*

Lift & Peel

**fastway**  
couriers

Customer Copy

VA0013046860



Lift & Peel

Pickup



VA0013046860

Lift & Peel

Delivery



VA0013046860

VA0013046860



.....



P O Box 6499  
Flamwood  
2572  
Tel: 018-468 5355  
Fax: 018-011 3760  
Cell: 083 225 1593  
E-mail: [dera\\_office@dera.co.za](mailto:dera_office@dera.co.za)  
[daane@dera.co.za](mailto:daane@dera.co.za)

# DERA

10 August 2020

## Environmental Consultants

**Department of Water and Sanitation  
2<sup>nd</sup> Floor  
Bloem Plaza Building  
Cnr East Burger & Charlotte Maxeke  
Bloemfontein  
9300**

**Attention: Dr. T. Ntli**

**RE: EMPr/EIA**

**Reference Number: NW30/5/1/1/2/10498PR & NW-001110-PR/102**

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The application was accepted by the Department of Mineral Resources and they have requested that the Department of Water and Sanitation (North West Regional Office) must be consulted about the proposed prospecting right. See attached the EMPr/EIA.

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

DERA Environmental Consultants can be contacted for any further enquiries.

Yours sincerely

Daan Erasmus  
DERA Environmental Consultants

.....

Modman (Sec 102)

**To**

Company Name:

To: Department of Agriculture, Forestry & Fisheries

Louis Le Grange Building (Court Building)

Cnr Peter Mokaba & Wolmarans Street

3<sup>rd</sup> Floor Office 318

Potchefstroom, 2520

Phone: 018 299 6739 Attention: Maurice Vukeya

City/Town:

State:

Postcode:

Phone:

Attention:

**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: G. Els

Signature:



Pickup

Lift & Peel



XA0005764014

Delivery

Lift & Peel



XA0005764014

XA0005764014



## CALCULATION OF THE QUANTUM

Applicant:  
Evaluators:JC Moolman  
DERA10198PR  
Aug-20

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	16	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	195.76	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	288.49	1	1	0
3	Rehabilitation of access roads	m2	0	41	1	1	0
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	340.01	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	185.46	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	391.53	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0.3	238697	0.52	1	37236.732
7	Sealing of shafts adits and inclines	m3	0	105.09	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	136828.1	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-pouring potential)	ha	0	170416.93	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (pouring potential)	ha	0	494971.55	1	1	0
9	Rehabilitation of subsided areas	ha	0	114572.93	1	1	0
10	General surface rehabilitation	ha	0.3	126059	1	1	37817.7
11	River diversions	ha	0	108390.94	1	1	0
12	Fencing	m	0	123.64	1	1	0
13	Water management	ha	0	41213.28	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0.2	16776	1	1	3355.2
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		78409.632

1	Preliminary and General	9409.15584	weighting factor 2 1	9409.15584
2	Contingencies	7840.9632	Subtotal 2	7840.9632
				96659.75

VAT (15%)	13392.37
-----------	----------

Grand Total	109052
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**SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION OR  
FOR A PART TWO AMENDMENT OF AN ENVIRONMENTAL AUTHORISATION  
AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE  
ENVIRONMENTAL SENSITIVITY**

**EIA Reference number:**

**Project name:** J C Moolman

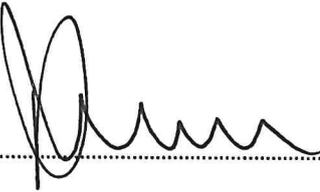
**Project title:** Doornbult 224 HO

**Date screening report generated:** 10/09/2020 12:17:28

**Applicant:** J C Moolman

**Compiler:** DERA

**Compiler signature:**



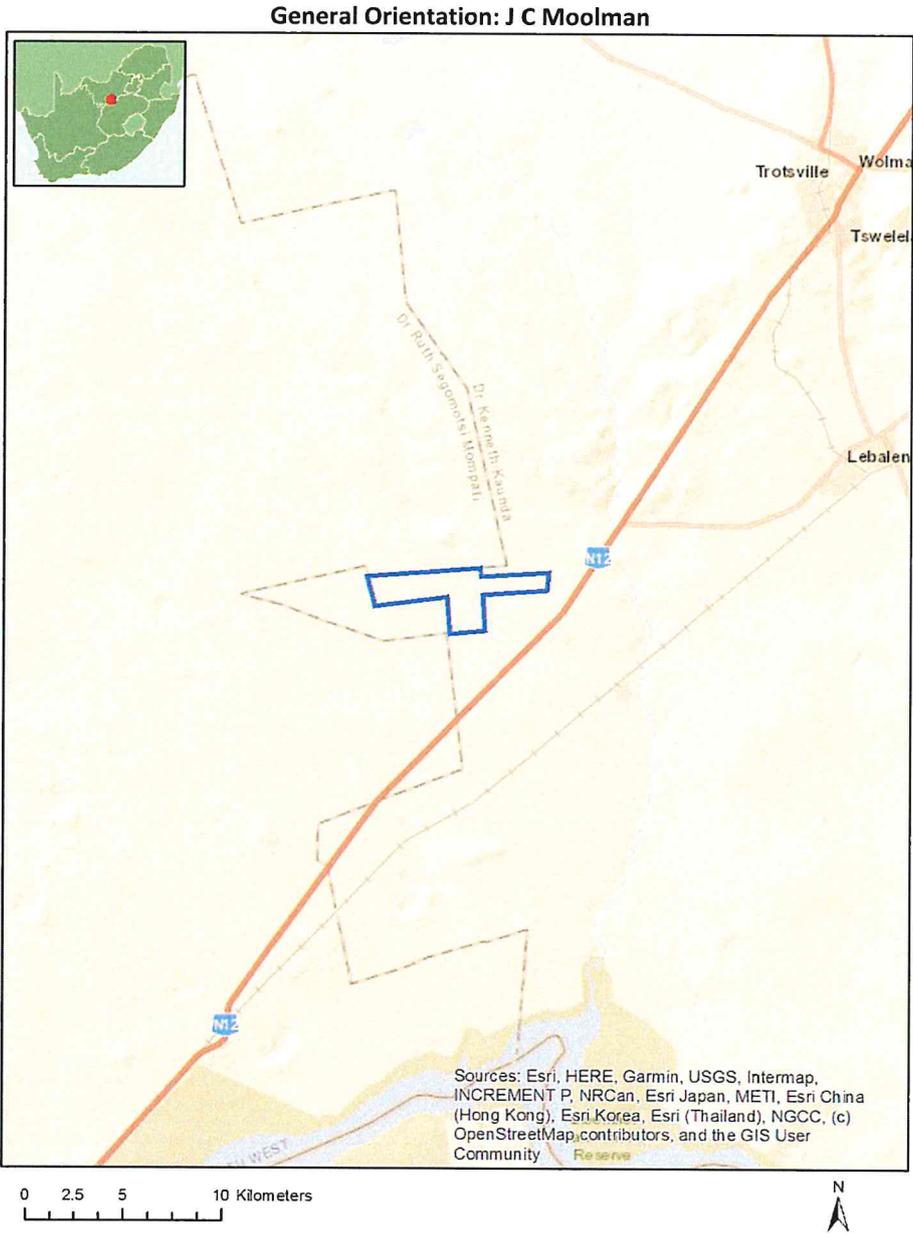
.....

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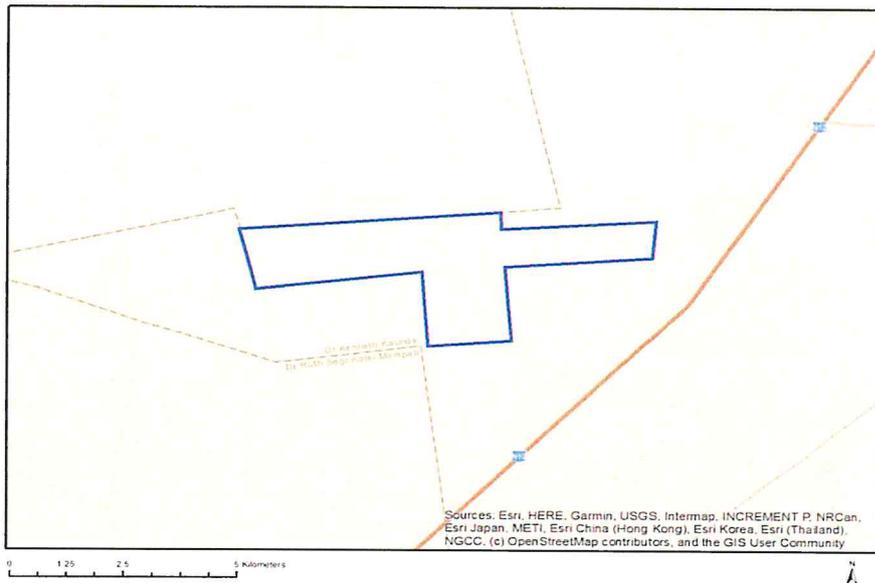
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# Proposed Project Location

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	ZOUTPAN	212	0	27°19'46.19S	25°46'57.2E	Farm
2	ANNIES RUST	223	0	27°22'25.43S	25°44'20.2E	Farm
3	DOORBULT	224	0	27°22'29.95S	25°48'10.13E	Farm
4	BLAAUWBOSCHKUIL	229	0	27°24'40.08S	25°50'13.58E	Farm
5	DOORBULT	224	0	27°21'57.36S	25°48'34.48E	Farm Portion
6	ZOUTPAN	212	14	27°20'49.37S	25°48'7.64E	Farm Portion
7	DOORBULT	224	7	27°23'1.72S	25°49'53.25E	Farm Portion
8	BLAAUWBOSCHKUIL	229	4	27°24'14.3S	25°49'8.19E	Farm Portion
9	DOORBULT	224	3	27°22'15.16S	25°49'10.87E	Farm Portion
10	DOORBULT	224	9	27°22'55.49S	25°48'23.73E	Farm Portion
11	DOORBULT	224	10	27°22'58.15S	25°47'35.33E	Farm Portion
12	ANNIES RUST	223	0	27°22'25.43S	25°44'20.2E	Farm Portion
13	DOORBULT	224	2	27°22'41.72S	25°49'29.86E	Farm Portion
14	DOORBULT	224	4	27°22'21.44S	25°46'44.23E	Farm Portion
15	BLAAUWBOSCHKUIL	229	3	27°24'16.58S	25°48'22.27E	Farm Portion
16	BLAAUWBOSCHKUIL	229	13	27°23'24.68S	25°49'9.14E	Farm Portion
17	ZOUTPAN	212	4	27°21'39.41S	25°46'56.42E	Farm Portion
18	DOORBULT	224	5	27°21'52.41S	25°49'59.89E	Farm Portion
19	DOORBULT	224	8	27°23'10.65S	25°46'36.84E	Farm Portion

Development footprint<sup>1</sup> vertices:

No development footprint(s) specified.

<sup>1</sup> "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 nearby wind or solar developments found.

## Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

## Environmental screening results and assessment outcomes

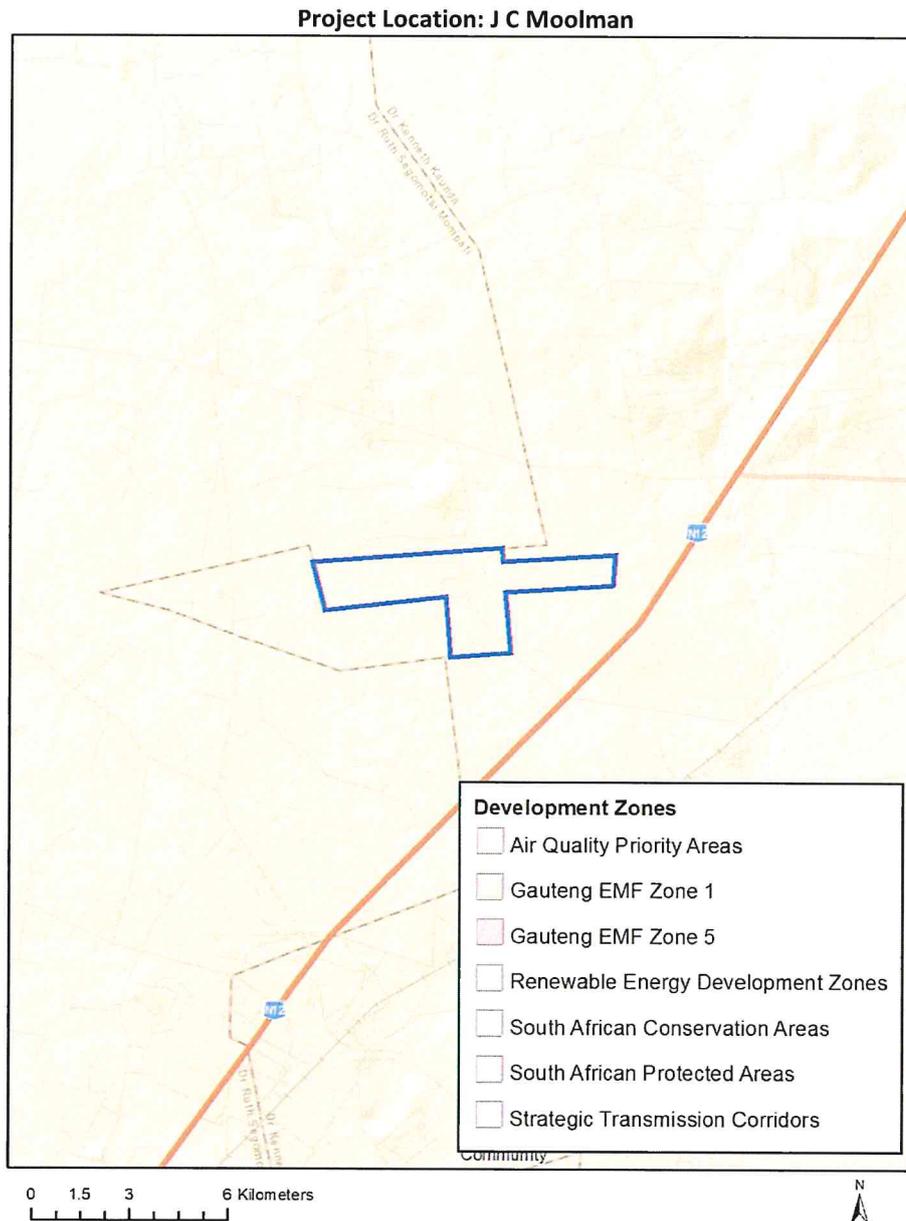
The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification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

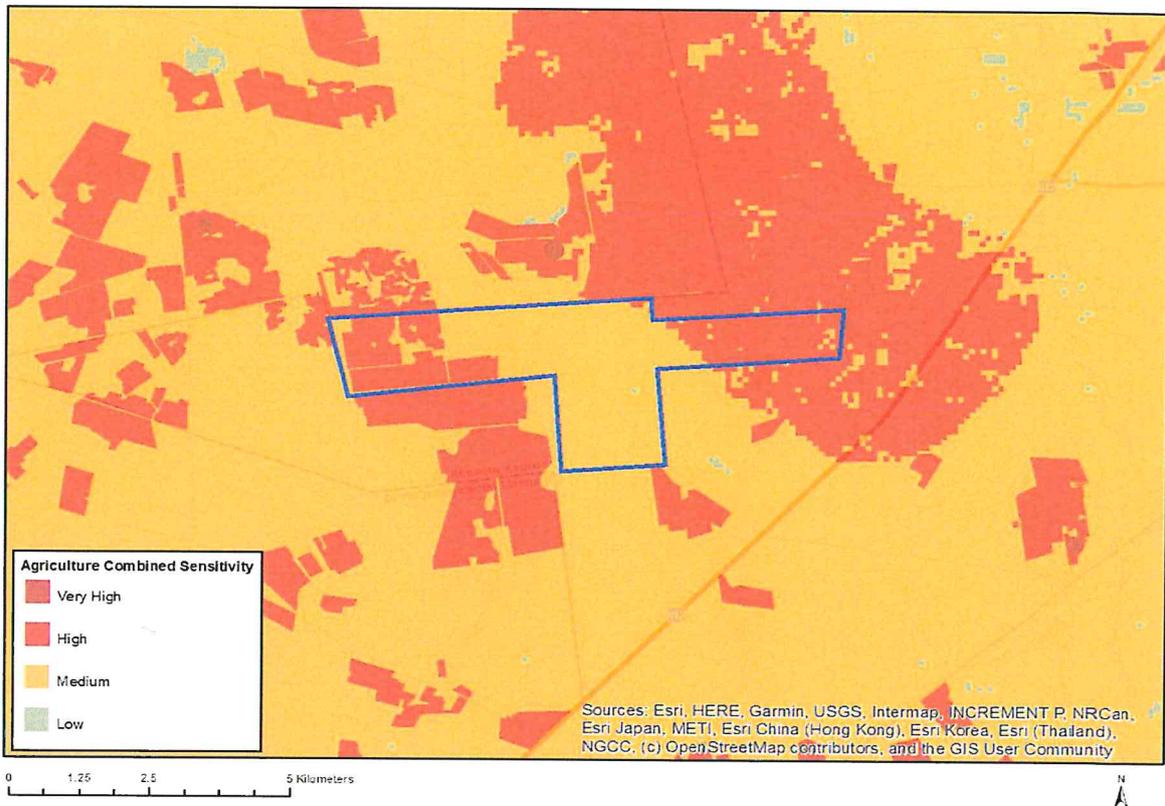
N o	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted Agriculture Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted Agriculture Assessment Protocols.pdf</a>
2	Archaeological and Cultural Heritage Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted General Requirement Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted General Requirement Assessment Protocols.pdf</a>
3	Paleontology Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted General Requirement Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted General Requirement Assessment Protocols.pdf</a>
4	Terrestrial Biodiversity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted Terrestrial Biodiversity Assessment Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted Terrestrial Biodiversity Assessment Protocols.pdf</a>
5	Aquatic Biodiversity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted Aquatic Biodiversity Assessment.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted Aquatic Biodiversity Assessment.pdf</a>
6	Noise Impact	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/</a>

	Assessment	<a href="#">DraftGazetted Noise Impacts Assessment Protocols.pdf</a>
7	Radioactivity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted%20General%20Requirement%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted General Requirement Assessment Protocols.pdf</a>
8	Plant Species Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted%20General%20Requirement%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted General Requirement Assessment Protocols.pdf</a>
9	Animal Species Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted%20General%20Requirement%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/DraftGazetted General Requirement Assessment Protocols.pdf</a>

## 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

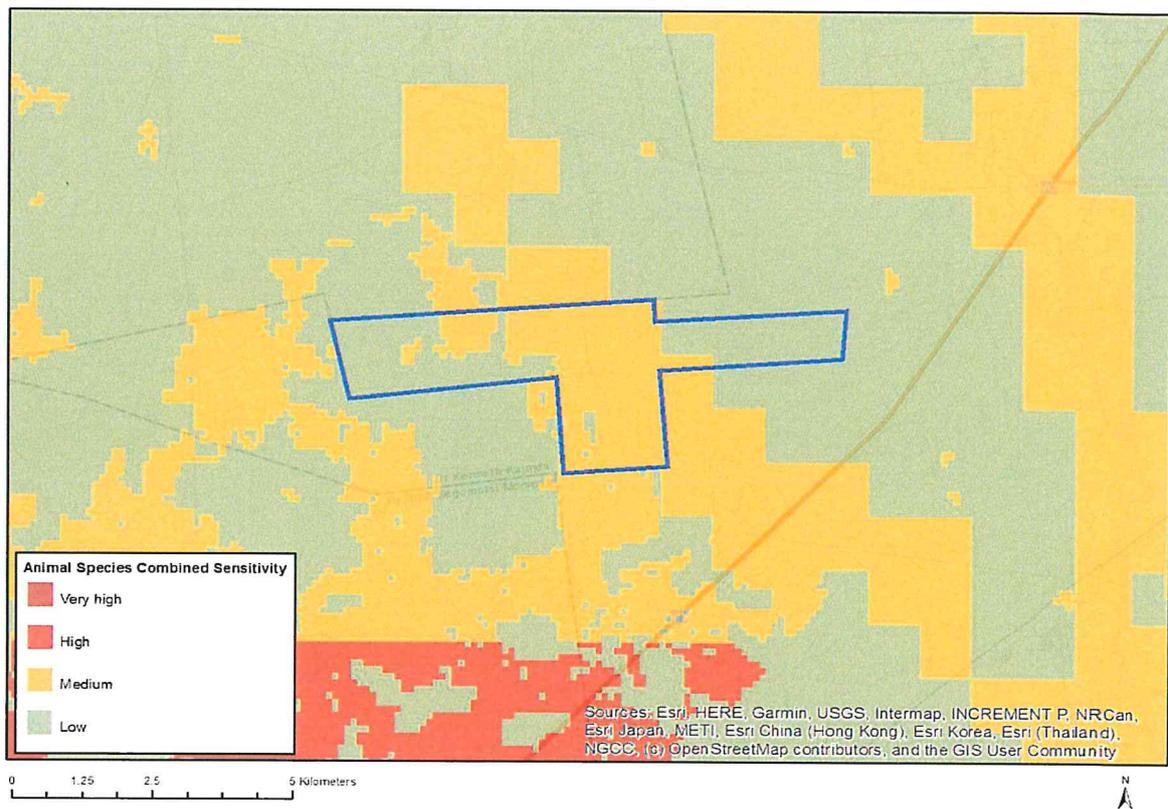


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

#### Sensitivity Features:

Sensitivity	Feature(s)
High	Land capability;09. Moderate-High/10. Moderate-High
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Annual Crop Cultivation / Planted Pastures Rotation;Land capability;09. Moderate-High/10. Moderate-High
High	Old Fields;Land capability;06. Low-Moderate/07. Low-Moderate/08. Moderate
High	Old Fields;Land capability;09. Moderate-High/10. Moderate-High
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

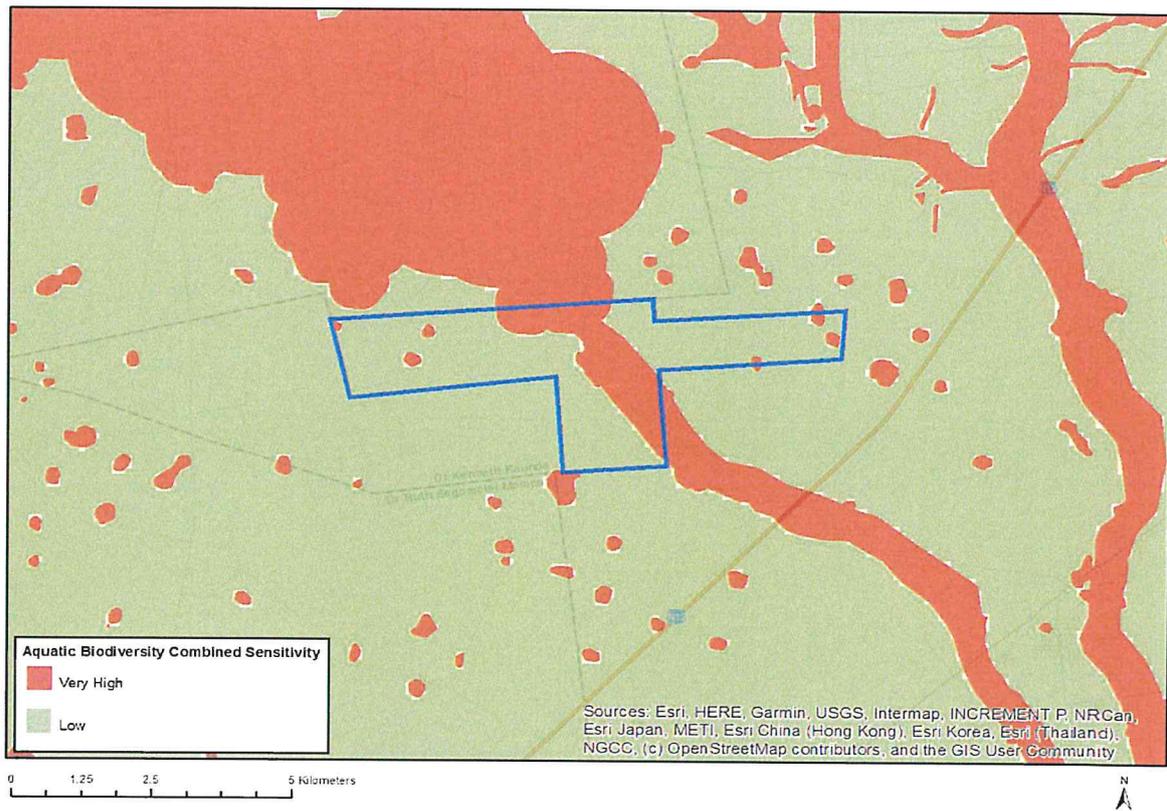


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity
Medium	Mammalia-Hydrictis maculicollis
Medium	Aves-Sagittarius serpentarius

## MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

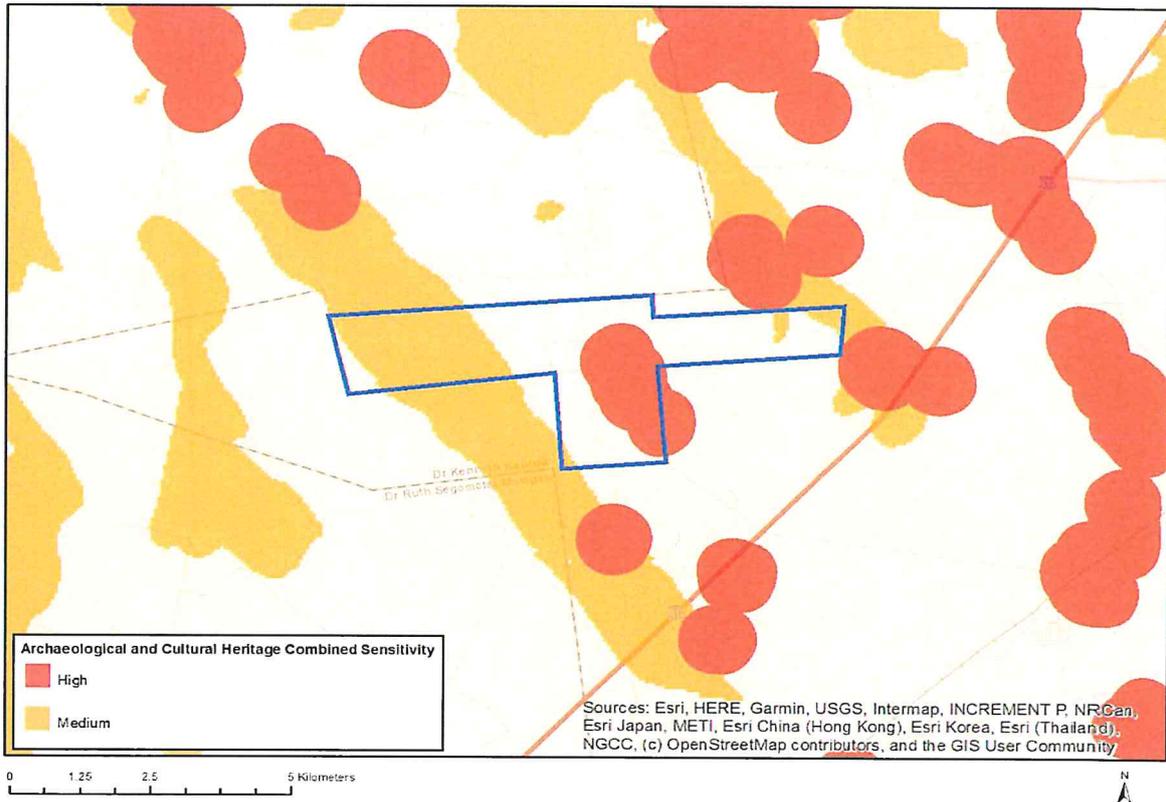


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

### 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

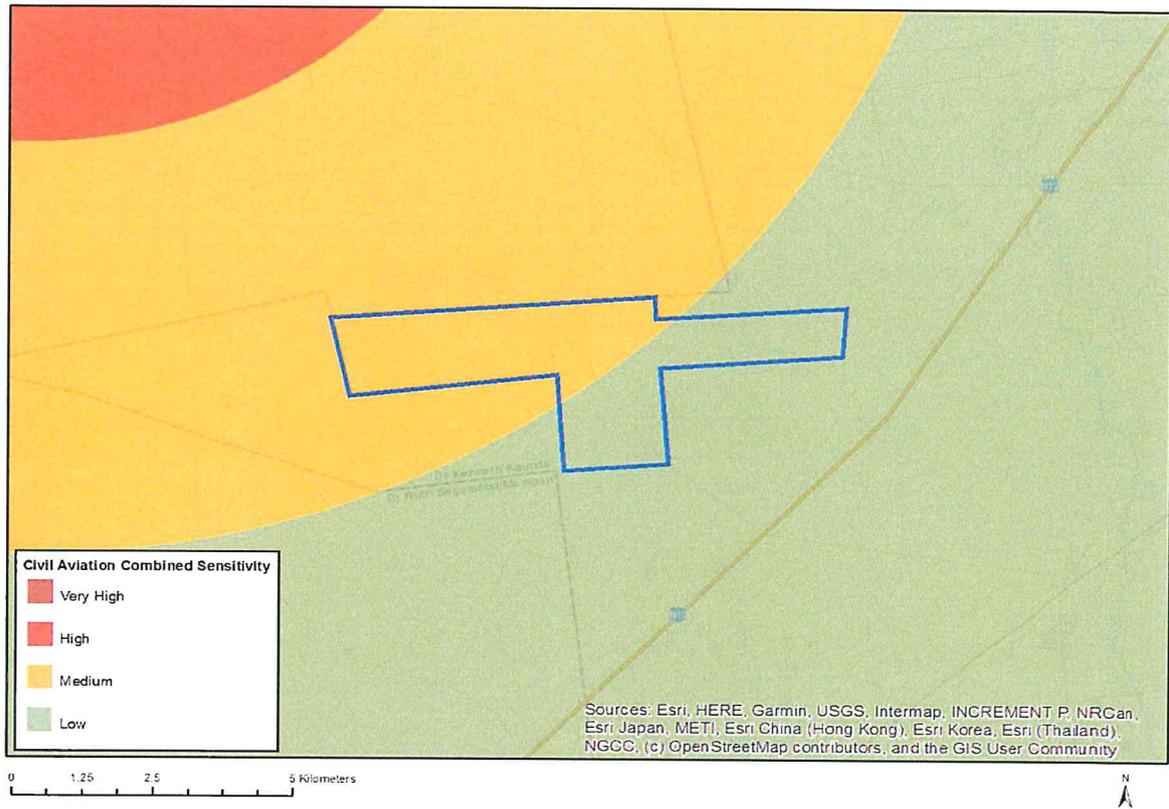


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

### Sensitivity Features:

Sensitivity	Feature(s)
High	Within an important wetland
High	Within 500 m of an important wetland
Medium	Mountain or ridge

## MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

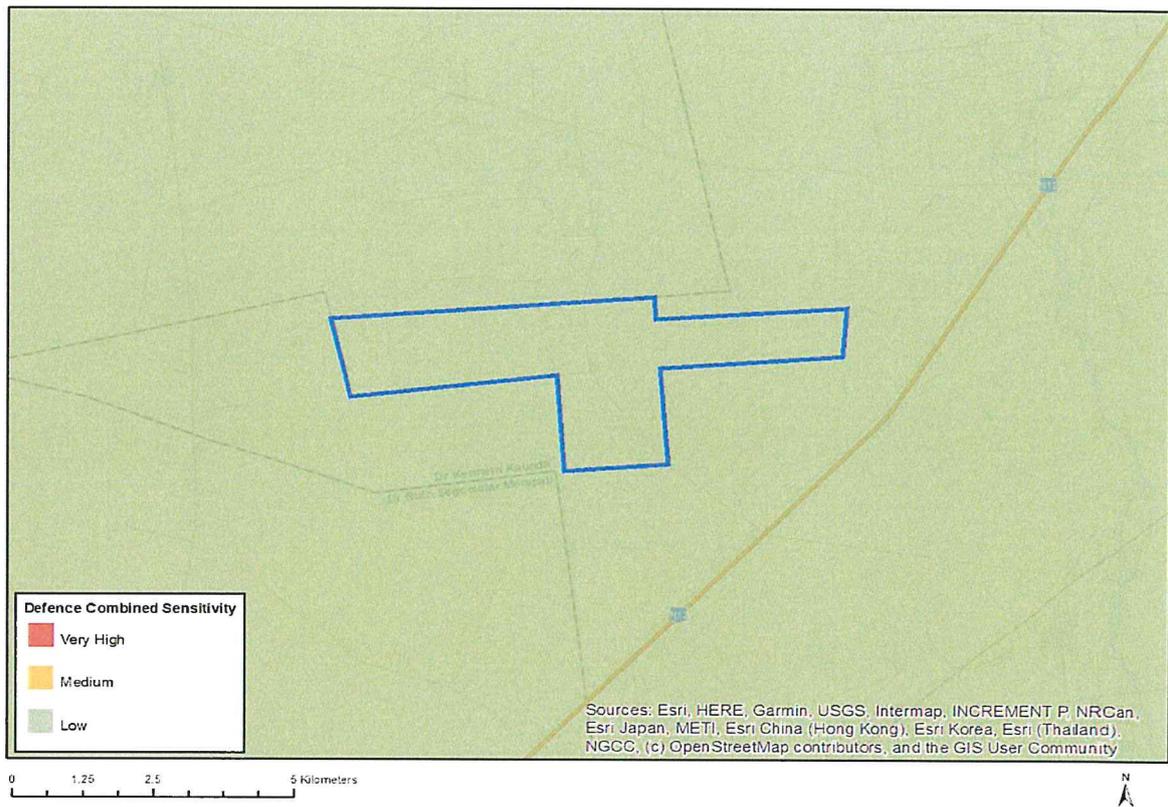


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

### Sensitivity Features:

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

## MAP OF RELATIVE DEFENCE THEME SENSITIVITY

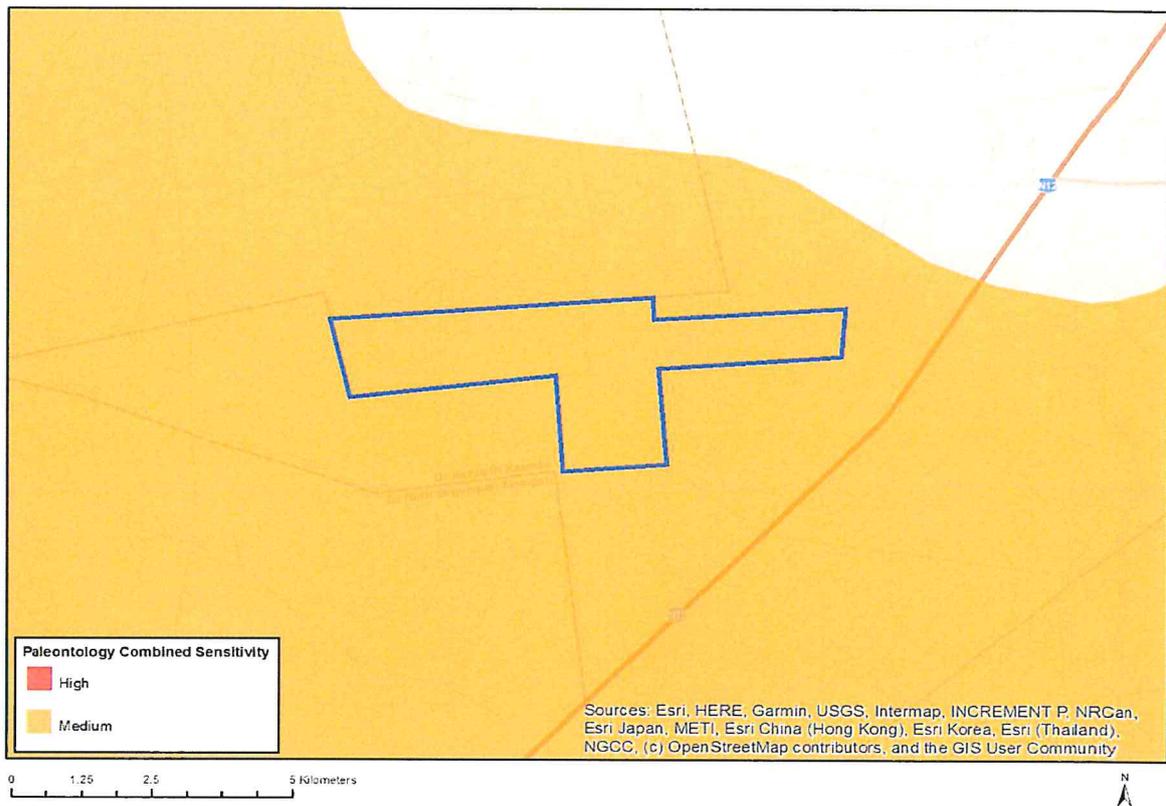


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

## MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

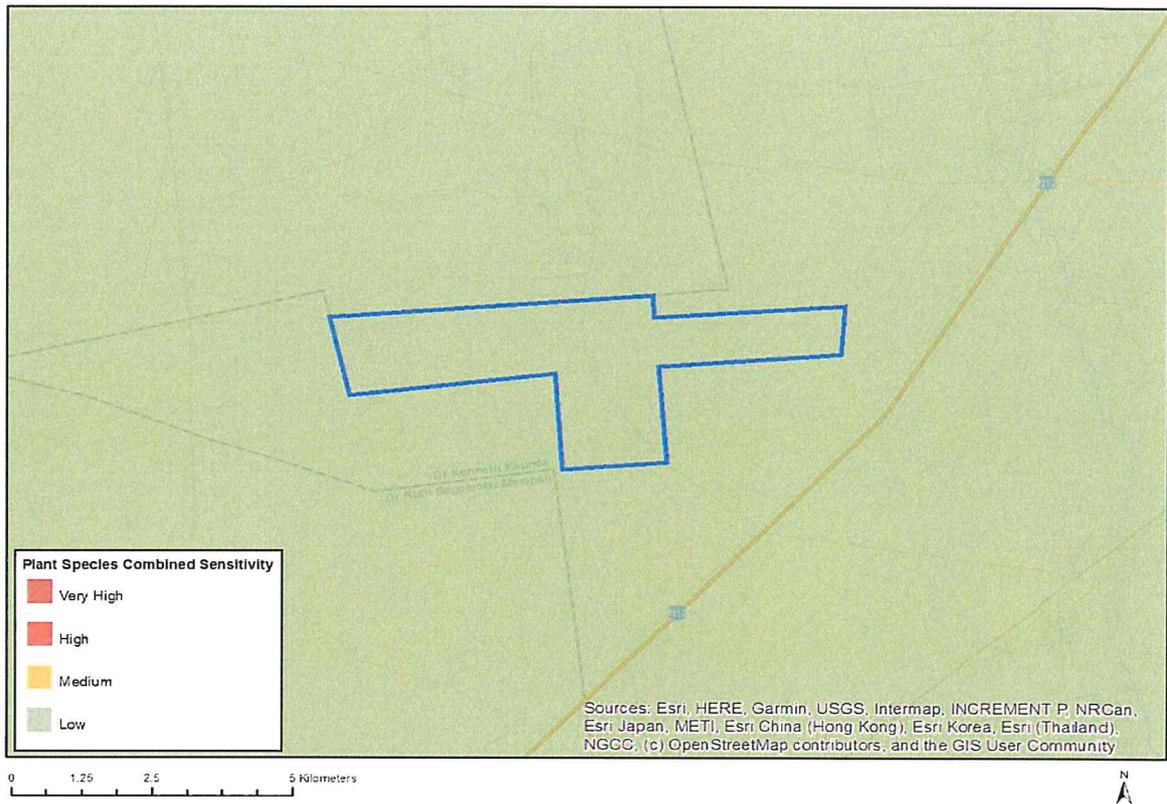


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

### Sensitivity Features:

Sensitivity	Feature(s)
Medium	Rock units with a medium paleontological sensitivity

# MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY

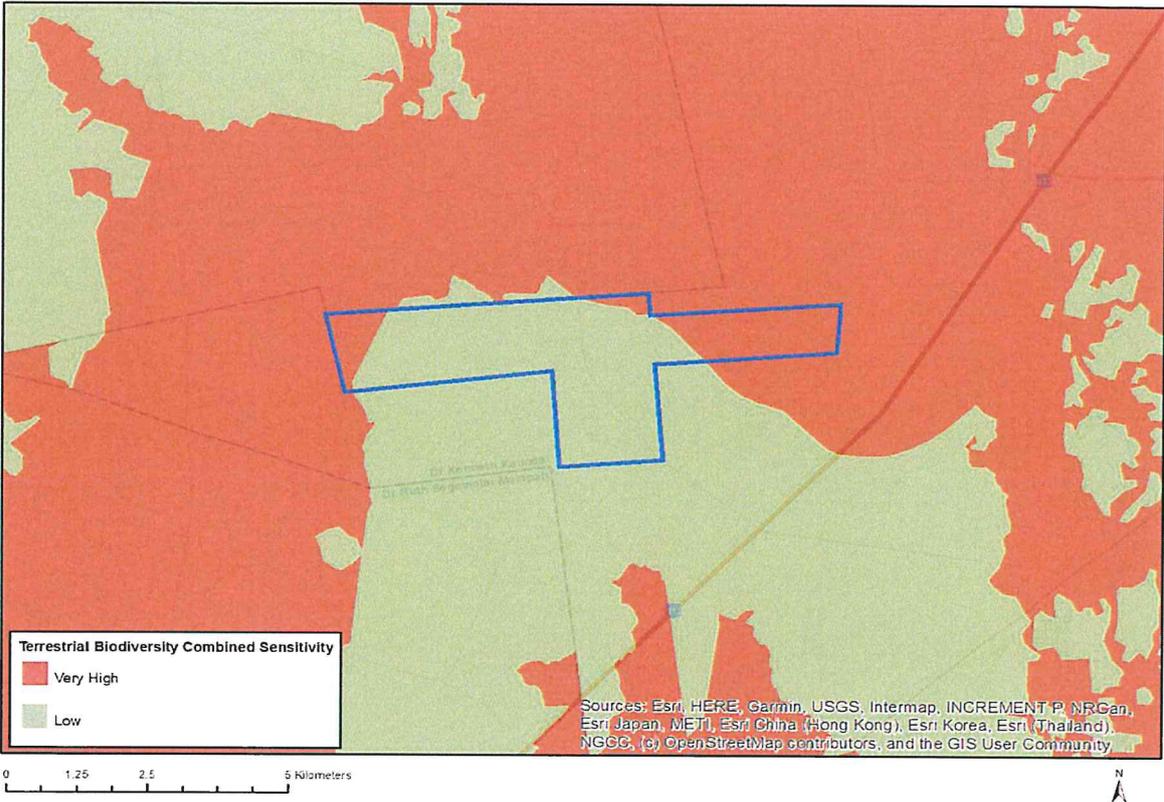


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

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	Ecological Support Area 1
Very High	Ecological Support Area 2
Very High	Critically endangered ecosystem