



## mineral resources

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

# **BASIC 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: C Scholtz**

**TEL NO: 079 786 5976**

**FAX NO: -**

**POSTAL ADDRESS: -**

**PHYSICAL ADDRESS: 1 Rowpark, Davis Street, Klerksdorp 2571**

**FILE REFERENCE NUMBER SAMRAD: FS 30/5/1/3/2/10324 MP**

## 1. IMPORTANT NOTICE

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

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

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

**It is therefore an instruction that** the prescribed report 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.

## 2. Objective of the basic assessment process

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

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

(b) identify the alternatives considered, including the activity, location, and technology alternatives;

(c) describe the need and desirability of the proposed alternatives,

(d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on these aspects to determine:

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

(ii) the degree to which these impacts—

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

(e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—

(i) identify and motivate a preferred site, activity and technology alternative;

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

identify residual risks that need to be managed and monitored.

**PART A**

**3. SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT**

**CONTACT PERSON AND CORRESPONDENCE ADDRESS**

**a) DETAILS OF -**

**(i) Details of the EAP how prepared the report**

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

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

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**

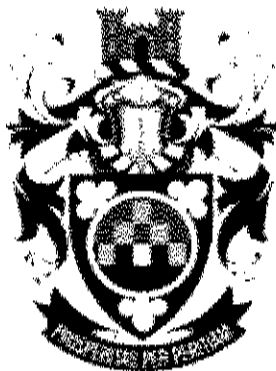
*In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 1 – 3. (1)(a)(ii)*

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

See next page for copy of qualification, Figure 1.

Figure 1 – Copy of Qualification

# TECHNIKON PRETORIA



## BACCALAUREUS TECHNOLOGIAE

LANBOU: VOORLICHTING

AGRICULTURE: EXTENSION

Toegeken aan

Awarded to

**DANIIL ELARDUS ERASMUS**

91061437

1978-09-07

met ingang van

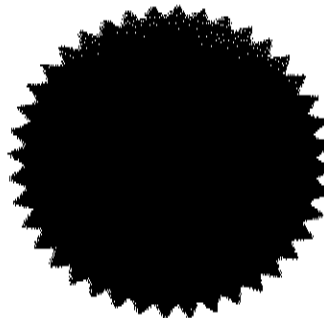
with effect from

1987-01-01

Registratour (Akademie)  
Registrar (Academic)

Rektor/Rector

N. 97/206



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

(Die onderstaande)

(The following)

Landbou-ekonomie I, II en III  
 Voorligtingsmetodiek I en II  
 Akkerbou I, II en III  
 Weidingkunde A  
 Bodembepanning I en II  
 Bodembewaring I  
 Grondkunde I en II  
 \*Meganisasie  
 Fisiese Wetenskap  
 Melkproduksietegnologie  
 Vleisheesproduksietegnologie  
 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

\*\*\*\*\*

Minimum Opleidingstydperk: 3 Jaar  
 Minimum Training Period : 3 Years

SERTEC  
 Uitvoerende Direkteur/  
 Executive Director

Nr /No. ND1117/94

TECHNIKON  
 Rektor/Rector


2) Summary of the EAP's past experience.

The EAP, Mr. Erasmus is involved in mining, environmental management, EMP & EMPR as well as Basic Assessments as from 1995. The EAP was involved in the NEMA Act through applications for chicken broilers where the Basic Assessments Report was also used to get to a ROD.

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


# DAAN ERASMUS


ENVIRONMENTAL PRACTITIONER




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### CONTACTS

 daane@dera.co.za

 +27 82 895 3516

 Klerksdorp, North-west Province, South Africa

### ABOUT ME

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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### SKILLS

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

### WORK EXPERIENCE

<p><u>JAN 1989</u> <u>SEPT 1990</u></p>	<p><b>MILITARY SERVICE</b> <i>National Defence Force</i></p> <p>Officers Course: II Lieutenant</p>
<p><u>JAN 1991</u> <u>FEB 2003</u></p>	<p><b>CHIEF RESOURCE CONSERVATION INSPECTOR</b> <i>National Department of Agriculture</i></p> <p>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.</p> <p>Other activities included discussions and lectures at farmers union meetings;</p> <p>municipalities and other institutions in order to promulgate the Act.</p> <p>Management of personnel and personnel related matters;</p> <p>management of budget of regional office in Potchefstroom;</p> <p>management and control of declared weeds and invader species.</p> <p>Evaluation of EMPR's and EIA's and monitoring mine rehabilitation and environmental management out of agricultural point of view</p> <p>Audit and compliance inspections of mining operations.</p>

Page 1

**WORK EXPERIENCE (Continues)**



MAR 2003  
PRESENT

**ENVIRONMENTAL PRACTITIONER**

*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**

*Walmaransstad 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 ACTIVITY**

**Table 1: Property Description**

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

(i) 21 digit Surveyor General Code for each farm portion	F03600000000046900000
(ii) Farm Name:	The farm 469 ✓ (a certain portion of the Remaining Extent)
(iii) Coordinates of the application area	Co-ordinates List WG 27 <sup>a</sup> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;"> <p>Co-ordinates:</p> <p>A: 26.65000 -27.04865                      B: 26.65130 -27.04990                      C: 26.64990 -27.05110                      D: 26.64809 -27.04902</p> <p>WGS 84/WGS 84</p> </div>
	5 hectares
Magisterial district:	Viljoenskroon is a maize and cattle farming town located in the Free State province of South Africa. The Viljoenskroon municipality and neighboring township of Rammulotsi were incorporated into the greater Moqhaka Local Municipality in 1996 and forms part of the Fezile Dabi District municipality. Total Area 17.9 km <sup>2</sup> & Total Population (2011) – 31,468. Course: <a href="https://en.wikipedia.org/wiki/Viljoenskroon">https://en.wikipedia.org/wiki/Viljoenskroon</a>
Distance and direction from nearest town	Although it falls within the district of Viljoenskroon (Free State) the site is actually closer to Klerksdorp, (North-West). Viljoenskroon is situated 46.1 km south east of the application area and Klerksdorp is situated 28.8 km north, north-west of this site.
Minerals applied for	Sand (General) (QY)

**c) LOCALITY MAP**

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

See Appendix 1(a) attached for Locality Map.

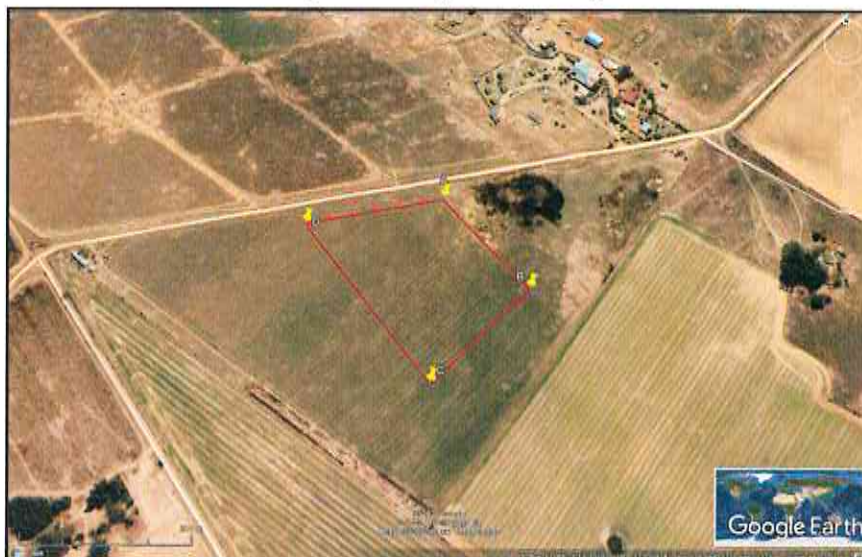
Appendix 1(a) – Locality Map

**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 1 – 3. (1)(d)*

This will be a very small project (only 5 ha). The application area is situated over an area that can be classified as cultivated field that was withdrawn from cultivation. Because of the size of the application area (only 5 ha), it falls within a bigger farm portion which is in total 74 ha. There are on infrastructure within the applied area. The application area was disturbed previously by sand mining activities. The site is situated next to the gravel road, which will give it easy access, but there is no other infrastructure on the application area. The area surrounding this application area can be classified as agricultural land used for cultivation and grazing. Access to the area is gained via existing gravel roads that turns off from the R30 between Klerksdorp and Bothaville. It will be an opencast Sand mining operation. The main mining activities will be opencast excavations, sifting of the sand and hauling it off site. There will be further no processing done on this site. See Figure 3 below for Google Erath Images of proposed area. The area will be mined and rehabilitated. The mining focus area will be clearly demarcated. The area applied for is over the whole of this area (5 ha) on the Farm 469. The vegetation cover is planted pastures over a cultivated field that was withdrawn form cultivation. Also see Appendix 1(b) for Infrastructure Plan.

Figure 3: Google Earth Images



**(i) Listed and specified activities**

**Table 2: Listed Activities**

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

NAME OF ACTIVITY	Aerial extent of the Activity (Ha or m <sup>2</sup> )	LISTED ACTIVITY	APPLICABLE LISTING
<p><b>Listing 1 – Activity 21:</b>                      Any activity including the operation of that activity which requires a mining permit in terms of section 27 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including —                      (a) associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource[.]; or [including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002)]                      (b) <u>the primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing,</u>                      but excluding the <u>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>	5 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—                      (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>	5 ha	X	327

**(ii) Description of the activities to be undertaken**

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

**Table 3: Description of Activities to be followed**

Activities	Description of phases	Associated structures and infrastructures
<b>The Mineral</b>	Mr. Scholtz intends to mine for sand (General) situated on a certain portion of the Farm 469, Vrijoenkroon district, 5 hectares in total. The sand will be used in different facets of the building industry.	
<b>The extend</b>	The sand is situated on this demarcated area on average 3 meters deep. The identified and demarcated which are 5 hectares in total includes the entire mining area of 4.7 ha will be used for mining and 0.6 ha for the stockpiling. The sand reserve on these 0.3 hectares is estimated at 108 000 tons.	
<b>Mining method</b>	The above area will be mined through opencast excavations where the sand will be removed with an excavator onto a stockpile and loaded by a front end loader on the trucks for transporting to the clients. The sand from the stockpile is transported at an average rate of 200 tons a day to the clients or as needed. The total estimated reserve of sand is 108 000 tons taken at a production rate of 4000 tons a month it will take 27 months to work this reserve. The sand which is 2 - 3 m thick and the relatively low production rate of this operation make this 5 hectare to be worked sustainable over a period of two years.	There will be a sifting plant area with abtution facilities and roads to the excavations.
<b>The grade</b>	The total cost of the operation is taken at R 37/ton and the total material moved monthly at 4 000 tons. The total monthly mining cost is then R 151 000.00 and the total monthly income is on average R 260 000.00. This operation can thus be economical viable.	

**e) POLICY AND LEGISLATIVE CONTEXT**

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

**Table 4: Policy & Legislative Context**

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT	REFERENCE WHERE APPLIED
(a) description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and aim to be considered in the assessment process;	
National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) Submitted for Environmental Authorizations in terms of the National Environmental Management Act, 1998 and the National Environmental Management Waste Act, 2008 in respect of Listed Activities that has been triggered by applications in terms of the Minerals and Petroleum Resources Development Act, 2002 (As mentioned).	Activity 21, listing 1 Activity 27, Listing 1
National Environmental Management Act, 1998 (Act 107 of 1998); Environmental Impact Assessment Regulations, 2014 (G38282 – R982-985) EA Authorization and EIA/EMP. Submit documents that will describe the impacts and sustainable mitigation thereof Compliance to Act and Regulations during course of activities. Show impacts and mitigation thereof	Regulation 21
National Water Act, 1998 (Act 36 of 1998) Application for Water abstraction for mining use	Section 21 (a)
Conservation of Agricultural Resources Act No 43 of 1983 Compliance to Act and Regulations during course of activities. Stabilization of soil after initial to be sustainable with no erosion. Erosion control of disturbed areas	Section 29
National Heritages Resources Act, 1999 (Act 25 of 1999) Compliance to Act and Regulation	Section 36

**f) NEED AND DESIRABILITY OF THE PROPOSED ACTIVITIES**

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

The applicant believes that the applied area has prospects for Sand as applied for. The desirability of this project can be motivated as the application area is not within or nearby a sensitive environmental area. The Vaal River runs some 5 km north of the application area and there are various other farms between die mining area and the river. There is also a soil dam 1.2 km west of the application are, on the neighbouring farm and on the opposite side of the gravel road. The sand mineral can be clearly seen by eye, thus it is a very good indication of the presence of the applied minerals. The impact that will be caused by the activity can be properly mitigated and rehabilitated. The specific activities as listed will be on this 5 ha application area specific according to the sketch plan. The duration of the activities will be 2 years.

**g) MOTIVATION FOR THE OVERALL PREFERRED SITE, ACTIVITIES AND TECHNOLOGY ALTERNATIVE**

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

The applicant envisaged that the applied mineral Sand (General) (QY) is present on this property and therefore the application for a mining permit.

**h) FULL DESCRIPTION OF THE PROCESS FOLLOWED TO REACH THE PROPOSED PREFERRED ALTERNATIVES WITHIN THE SITE**

**(i) Details of the development footprint alternatives considered**

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

Alternative is not applicable. The current land can be classified as planted pastures that were withdrawn form cultivation – there is no infrastructure over the applied area. Thus the option to mine the area will be a total alternative land use. The applicant, Mr. C. Scholtz, is not interested in any other alternative land use over this land aside for the mining of Sand (General) (QY), or any other activity, or method use other than mining for Sand (General) (QY) 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 5 hectare area only.

(b) the type of activity to be undertaken  
The type of activity is in line with the submitted Mining Plan.

(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.

(d) the technology to be used in the activity  
The technology used in the activity will as described in the Mining Plan and the best options will be determined by the applicant.

(e) the operational aspects of the activity, and  
The operational aspect is only the mining of Sand (General) (QY) 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**

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

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 landowner (Letsatsi La Africa Animal & Predator Park) and the direct neighbours will be consulted personally and through letters that was given to them by hand. An advertisement was placed in the local newspaper of Vista Newspaper of the 3 December 2020. A notice was put up at the entrance to the application area, where all passers-by are invited to give through their comments of objections toward the proposed application. See proof of consultation under **Appendix 2**.

**f) NEED AND DESIRABILITY OF THE PROPOSED ACTIVITIES**

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

The applicant believes that the applied area has prospects for Sand as applied for. The desirability of this project can be motivated as the application area is not within or nearby a sensitive environmental area. The Vaal River runs some 5 km north of the application area and there are various other farms between die mining area and the river. There is also a soil dam 1.2 km west of the application are, on the neighbouring farm and on the opposite side of the gravel road. The sand mineral can be clearly seen by eye, thus it is a very good indication of the presence of the applied minerals. The impact that will be caused by the activity can be properly mitigated and rehabilitated. The specific activities as listed will be on this 5 ha application area specific according to the sketch plan. The duration of the activities will be 2 years.

**g) MOTIVATION FOR THE OVERALL PREFERRED SITE, ACTIVITIES AND TECHNOLOGY ALTERNATIVE**

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

The applicant envisaged that the applied mineral Sand (General) (QY) is present on this property and therefore the application for a mining permit.

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The type of activity is in line with the submitted Mining Plan.

(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.

(d) the technology to be used in the activity  
The technology used in the activity will as described in the Mining Plan and the best options will be determined by the applicant.

(e) the operational aspects of the activity, and  
The operational aspect is only the mining of Sand (General) (QY) 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**

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

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Appendix 2 – Proof of consultation.

Table 5: Identification of Interested and Affected Parties to be consulted

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 neighbouring properties been identified?	X	
Will the local municipality be consulted?	X	
Will the Authority responsible for power lines within 100 metres of the area be consulted?		X
Will the Authorities responsible for public roads or railway lines within 100 metres of the area applied for be consulted?		X
Will the Authorities responsible for any other infrastructure within 100 metres 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/prospecting 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 mining project?	X	
Other, Specify		

a. Details of the Public Participation Process Followed

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

Table 6: Identification of Interested and Affected Parties to be consulted

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 neighbouring properties been identified?	X	
Will the local municipality be consulted?	X	
Will the Authority responsible for power lines within 100 metres of the area be consulted?		X
Will the Authorities responsible for public roads or railway lines within 100 metres of the area applied for be consulted?		X
Will the Authorities responsible for any other infrastructure within 100 metres 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/prospecting 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 mining project?	X	
Other, Specify		

Table 7: Furthermore the details of the engagement process to be followed are as reflected below.

Steps to be taken to notify interested and affected parties	<p><b>PROVIDE DESCRIPTION HERE</b></p> <p>The applicant does have consent from the landowner and the neighbours was informed personally consulted by the applicant and confirmed in the writing. A consultation letter was send to the Mochaka Local Municipality.</p> <p>An advertisement was placed in the local newspaper for comments.</p>
Information to be provided to Interested and Affected Parties.	<p><b>Compulsory</b></p> <p>The site plan.</p> <p>List of activities to be authorized</p> <p>Scale and extent of activities to be authorized</p> <p>Typical impacts of activities to be authorized (e.g. surface disturbance, dust, noise)</p> <p>The duration of the activity.</p> <p>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)</p> <p><b>Other, specify:</b> mining plan</p>
Information to be required from Interested and Affected Parties.	<p><b>Compulsory</b></p> <p>To provide information on how they consider that the proposed activities will impact on them or their socio-economic conditions</p> <p>To provide written responses stating their suggestions to mitigate the anticipated impacts of each activity</p> <p>To provide information on current land uses and their location within the area under consideration</p> <p>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</p> <p>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).</p> <p><b>Other, Specify</b></p>

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

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

See Appendix 2 for full detail on public participation.

Table 8: Summary of Identified I&AP's

Interested and Affected Parties <small>List the names of persons consulted in this column, and mark who as "X" where those who must be consulted were in fact consulted</small>	Date sent and/or Comments Received	Issues raised	EAP's response to the applicant
<b>AFFECTED PARTIES</b>  J.J. van der Westhuizen P.O. Box 7038, Flamwood, Klerksdorp, 2572 Cell: 072 215 2344 e-mail: info@iafrica.co.za {Landowner}	X 12 Nov 2020 12 Dec 2020	Consultation letter sent - no objection - awaiting written response	
<b>Lawful occupiers of the land</b>			
<b>Landowners or lawful occupiers on adjacent properties</b> (Neighbour)	X 12 Nov 2020	Consultation letter sent - awaiting written response	
<b>Municipal councillor</b> <b>Municipality</b>	X		
Maka Local Municipality Mr. Bolumelo Chris Makomeša Tel: 056 514 9200 Fax: 056 515 3922	12 Nov 2020 3 Dec 2020	Consultation letter sent to Mr. Bolumelo	
<b>Organs of state (Responsible for infrastructure that may be affected)</b> Roads Department, Eskom, Telkom, DWA.			
<b>Eskom</b>			
<b>Communities</b>			
<b>Dept. Land Affairs</b> Cindy Benyane E-mail: cindy.benyane@dla.gov.za Khosweiso Mahlaji E-mail: khosweiso.mahlaji@dla.gov.za	X 12 Nov 2020 3 Dec 2020	Request for verification on land claims sent to Ms Benyane	
<b>Traditional Leaders</b>			
<b>NIA</b>			
<b>Dept. Environmental Affairs &amp; Dept. Forestry and Fisheries</b> Grace Mkhosana Building 113, St Andrew Street, Bloemfontein, 9300 Tel: 051 400 4904 Cell: 056 487 2840 E-mail: Grace.Mkhosana@dedf.gov.za	X	BAR/EMPI sent with Fastway courier for comments	
<b>Dr. T. Nkomo</b> 2 <sup>nd</sup> floor, Bloem Plaza Building, Cnr East Burger & Charlotte Maxeke, Bloemfontein, 9300 Tel: 051 405 9109; E-mail: NkomoT@eas.gov.za	X	BAR/EMPI sent with Fastway couriers for comments	
<b>Other Competent Authorities</b>			

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OTHER AFFECTED PARTIES					
INTERESTED PARTIES					

Notice was published in the Vista Newspaper of the 3 December 2020



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

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

**1. Baseline Environment**

**Introduction:** The purpose of this section is to provide information on the environment in which the proposed mining 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 Farm 469 – certain portion**. This area can be described as planted pastures that was withdrawn from cultivation, see **Figure 3** Google Earth Images.

**Magisterial District:** Viljoenskroon is a maize and cattle farming town located in the Free State province of South Africa. The Viljoenskroon municipality and neighbouring township of Rammulotsi were incorporated into the greater **Moqhaka Local Municipality** in 1996 and forms part of the **Fezile Dabi District municipality**. Total Area 17.9 km<sup>2</sup> & Total Population (2011) 31,468. Course: <https://en.wikipedia.org/wiki/Viljoenskroon>

**Direction from neighbouring town:** Although the application area is situated in the district of Viljoenskroon, Free State Province, the nearest town is actually Klerksdorp, North West Province. Thus the directions from both towns will be given. From Viljoenskroon the site is situated 46.1 km via R76. Head northeast on Engelbrecht Street toward Kerk Street for 950 m. Turn left onto R76 and drive 31.9 km. Turn left onto R30 towards Orkney and continue for 2.8 km. Turn right on S950 gravel road drive for 3.8 km. Turn right at the fork in the road and continue for 6.3 km. Turn right the proposed site will be on your right after 300 m at -27.04902, 26.64809.

From Klerksdorp the site is situated 28.8 km via R30 from Klerksdorp. Head east on Church Street (R30) for 1.75 km. Continue to follow R30 out of Klerksdorp for 18.1 km. Turn right onto the gravel road S636 and drive for 4.4 km. Turn left drive for 3.2 km. See Location of proposed site on Locality Map **Appendix 1(b)**.

**Longitude (approximate center of mining site):** 26.64809 E

**Latitude (approximate center of mining site):** -27.04902 S

**Existing Surface Infrastructure:** The application area is situated over an area that can be classified as cultivated field that was withdrawn from cultivation. Because of the size of the application area (only 5 ha), it falls within a bigger farm portion which is in total 74 ha. There are no infrastructure within the applied area. The site is situated next to the gravel road, which will give it easy access, but there is no other infrastructure on the application area. The area surrounding this application area can be classified as agricultural land used for cultivation and grazing. Access to the area is gained via existing gravel roads that turns off from the R30 between Klerksdorp and Bothaville. It will be an opencast Sand mining operation. The main mining activities will be opencast excavations, sifting of the sand and hauling it off site. There will be further no processing done on this site. See **Figure 3** below for Google Earth Images of proposed area. The area will be mined and rehabilitated. The mining focus area will be clearly demarcated. The area applied for is over the whole of this area (5 ha) on the Farm 469. The vegetation cover is planted pastures over a cultivated field that was withdrawn from cultivation. Also see **Appendix 1(b)** for Infrastructure Plan.

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

VEGMAP (2006) classified this area as part of the (Gh 10) Vaa-Vet Sandy Grassland. VT 50 Dry Cymbopogon—Themeda Veld (47%) VT 48 Cymbopogon—Themeda Veld (sandy) (24%) (Acocks 1953). LR 37 Dry Sandy Highveld Grassland (74%) (Low & Rebelo 1996).

**Distribution:** North-West and Free State Provinces: South of Lichtenburg and Ventersdorp, stretching southwards to Klerksdorp, Leeudoringstad, Bothaville and to the Brandfort area north of Bloemfontein. Altitude 1 220-1 560 m, generally 1 260 -1 360 m. [See **Figure 5** below]

**Vegetation & Landscape Features:** Plains-dominated landscape with some scattered, slightly irregular undulating plains and hills. Mainly low-tussock grasslands with an abundant kar-roid element. Dominance of *Themeda triandra* is an important feature of this vegetation unit. Locally low cover of *T. triandra* and the associated increase in *Elionurus muticus*, *Cymbopogon pospischilii* and *Aristida congesta* is attributed to heavy grazing and/or erratic rainfall. [See **Figure 5** below] Furthermore according to the DEDACT's (Department of Economic Development, Environment, Conservation and Tourism's) new screening tool the footprint of this application area, although only small scale mining, are classified as per **Table 9** below.

According to the screening of *environmental sensitivity* of the proposed site it is indicated that *Aquatic Biodiversity Theme and Terrestrial Biodiversity Theme* was classified as being high sensitive. This could mainly be because of the presence of the soil dam 1.2 km west of the application are, on the neighbouring farm and on the opposite side of the gravel road. It is not foreseen that mining will have any great impact of this aquatic feature.

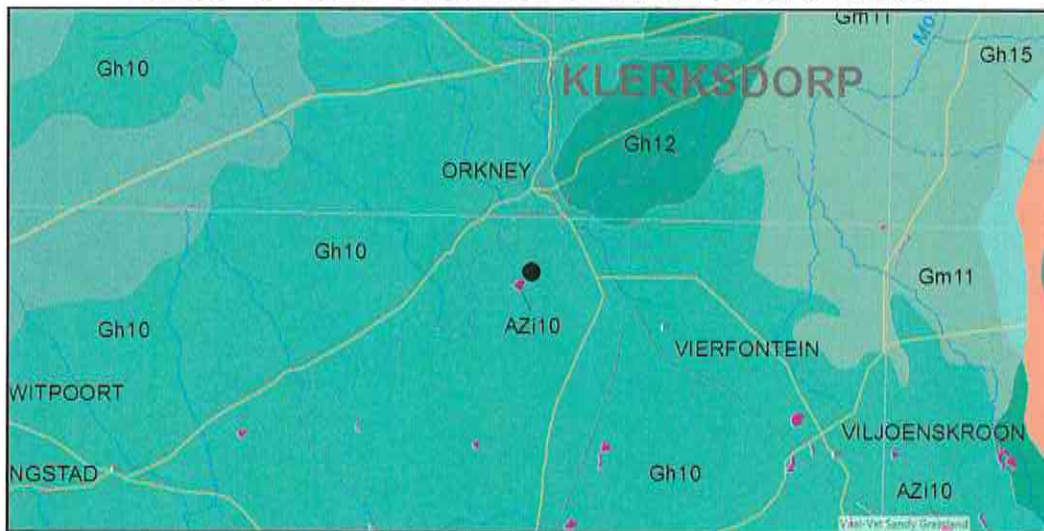
Table 9: DEDACT - Screening Report

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

**Climate:** Warm-temperate, summer-rainfall climate, with over-all MAP of 530 mm. High summer temperatures. Severe frost (37 days per year on average) occurs in winter.

**Geology & Soil:** Aeolian and colluvial sand overlying sand-stone, mudstone and shale of the Karoo Supergroup (mostly the Ecca Group) as well as older Ventersdorp Supergroup andesite and basement gneiss in the north. Soil forms are mostly Avalon, Westleigh and Clovelly. Dominant land type Bd, closely followed by Bc, Ae and Ba.

Figure 5: The VEGMAP classification: (Gh 10) Vaal-Vet Sandy Grassland



**Vegetation [Flora] and Landscape Features:** Graminoids: *Antheophora pubescens* (d), *Aristida congesta* (d), *Chloris virgata* (d), *Cymbopogon caesius* (d), *Cynodon dactylon* (d), *Digitaria argyrograpta* (d), *Ellionurus muticus* (d), *Eragrostis chloromelas* (d), *E. lehmanniana* (d), *E. plana* (d), *E. trichophora* (d), *Heteropogon contortus* (d), *Panicum gilvum* (d), *Setaria sphacelata* (d), *Themeda triandra* (d), *Tragus berteronianus* (d), *Brachiaria serrata*, *Cymbopogon pospischilii*, *Digitaria eriantha*, *Eragrostis curvula*, *E. obtusa*, *E. superba*, *Panicum coloratura*, *Pogonarthria squarrosa*, *Trichoneura grandiglumis*, *Triraphis andropogonoides*, **Herbs:** *Stachys spathulata* (d), *Barleria macrostegia*, *Berkheya onopordifolia* var. *onopordifolia*, *Chamaesyce inaequilatera*, *Geigeria aspera* var. *aspera*, *Helichrysum caespitium*, *Hermannia depressa*, *Hibiscus pusillus*, *Monsonia burkeana*, *Rhynchosia adenodes*, *Selago densiflora*, *Vernonia oligocephala*. **Geophytic Herbs:** *Bulbine narcissifolia*, *Ledebouria marginata*. **Succulent Herb:** *Tripteris aghillana* var. *integrifolia*. **Low Shrubs:** *Felicia muricata* (d), *Pentzia globosa* (d), *Anthospermum rigidum* subsp. *pumilum*, *Helichrysum dregeanum*, *H. paronychioides*, *Ziziphus zeyheriana*. **Endemic Taxon Herb:** *Lessertia phillipsiana*. **Conservation** Endangered. Target 24%. Only 0.3% statutorily conserved in the Bloemhof Dam, Schoonspruit, Sandveld, Faan Meintjies, Wolwespruit and Soetdoring Nature Reserves. More than 63% transformed for cultivation (ploughed for commercial crops) and the rest under strong grazing pressure from cattle and sheep. Erosion very low (85.3%) and low (11%). **References** Louw (1951), Morris (1973, 1976), Bredenkamp & Bezuidenhout (1990), Kooij et al. (1990b, 1992), Bezuidenhout et al. (1994a).

**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 are likely to occur here are: *Chlorocebus pygerythrus pygerythrus* (Vervet Monkey) (subspecies *pygerythrus*) (Cercopithecidae), *Cynictis penicillata* (Yellow Mongoose), *Herpestes sanguineus* (Slender Mongoose), *Xerus inauris* (South African Ground Squirrel), *Sylvicapra grimmia* (Bush Duiker), *Suricata suricatta* (Meerkat), *Raphicerus campestris* (Steenbok), *Canis mesomelas* (Black-backed Jackal).

**Topography:** Plains-dominated landscape with some scattered, slightly irregular undulating plains and hills. The slope varies around <0.1% to not more than 3%. The average elevation is between 1 260 - 1 360 m. The area is characterized by predominantly one-terrain unit that form part of the natural topography of the area. The application area is under planted pastures.

**Surface Water:** This application area fall within the water management area of the Middle Vaal (9) and secondary catchment area C24 and tertiary drainage region C24J. The Vaal River runs some 5 km north of the application area and there are various other farms between die mining area and the river. There is also a soil dam 1.2 km west of the application are, on the neighbouring farm and on the opposite side of the gravel road. There are further no standing water, dams or obvious depressions on the terrain where water can accumulate. All mining activities will be kept within the mining permit area and thus 100 m horizontally away from any surface water body. All precautions will have to be taken to prevent erosion during heavy storm events.

**Ground Water:** There are no boreholes on the application area. There are probably existing boreholes at the rest of the. When a surface lease agreement is reach between the applicant and surface owner, an agreement can be reach for the use of water from the existing boreholes for dust suppression and abution. The applicant intends to use water from these current boreholes only for domestic use and dust suppression. The water uses will be minimal for dust suppression on roads and abluion facilities. They will require about 2000 liters per day for dust suppression. There will be no mineral processing done that will require water.

**Air Quality:** With reference to the Scheduled processes under the Atmospheric Pollution Act, 1965 (Act No. 45 of 1965): No scheduled process relates to any proposed mining activity on this applied area. The current source of air pollution in the area stems from vehicles travelling on the gravel roads of the area and farming activities. The source of air pollution will be nuisance dust generated by the movement of excavators, hauling of raw mineral to and from excavations. There will be no processing done on this site only sifting of sand. Raw material will be hauled directly to clients. Gas emissions from vehicles will be within legal limits. The landowner and surrounding neighbours may from time to time be negatively impacted upon. It is however foreseen that the overall dust impact will be medium negative. The accumulative impact of dust generated by this mining operation with regards to agricultural activities will increase the effect on the local area.

**Noise:** The movement of heavy vehicles, as well as the sifting of sand during the operational and closure phase will have a low impact on the noise levels in the vicinity of the mine. There will be no processing done on site and the noise will be related to mining vehicles. The mining and transporting of the sand which is during normal office hours and will blend in with the daily noise impact of vehicles travelling roads in the vicinity. These noise levels will be continuous and the operators will be issued with earplugs. 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 and the influence on wild life.

**Sites of Archaeological and Cultural Interest:** There are no graves on the application area. As this area fall within a bigger part of a farm, there are no signs of any graveyard over this area.

**Sensitive Landscapes:** The Vaal River which runs some 5 km north of the application area and the soil dam 1.2 km west of the application are, on the neighbouring farm and on the opposite side of the gravel road can be classified as sensitive area but they are both situated outside the mining area and there are other farms between die mining area and these water sources. If is not foreseen that the proposed mining operation will have any impact on this surface water body/its banks/or associated wetland areas. As mining operation will be between 5 and 1.2 km south and east of these surface water bodies. In times of heavy rainfall events extra measures need to be taken to ensure soil erosion does not take place and that loose soil and pollutants such as lubricants for the mining terrain are washed in the direction of this water body.

**Visual Aspects:** The area, over which this application area falls, looks to be rural farming land. The two nearest farmsteads are the first east (500m) within the rest of this farm portion over which the application area falls and the other north-east 330m

on the opposite side of the gravel road. The operation will not really be shielded by the natural vegetation, as the whole area surrounding this application area are either under natural vegetation or cultivated fields. The mining site will be visible to the land owner and neighbours living and traveling in the area. The negative visual impact associated with the stockpiling of sand dumps to be transported are not seen to be a high visual impact since this infrastructure will only be part of the topography for two years. The mitigation of this impact will be done concurrent with operations as mining progresses, the stockpile dumps will get smaller and eventually diminish and in the long term this site will be sloped and rehabilitated back to natural grazing use again.

**Social:**

The proposed activity will employ 3 people, of which are resident from Viljoenskroon/Klerksdorp area. Various social amenities are available close to the operation. These include schools, hospitals, churches, recreation facilities as well as a Police Station at Viljoenskroon/Klerksdorp, which is located approximately between 28 Km north, north-east and 46 km south-east of the operation.

**(a) Description of the current land uses.**

The application area is situated over an area that can be classified as planted pastures (cultivated fields that was withdrawn from cultivation). The area surrounding this application area can be classified as agricultural grazing and cultivated fields. There are no infrastructure within the applied area. The application area is situated next to a gravel road from which access to the area can be gained, but beside for that there is no other infrastructure. Access to the area is gained via existing gravel roads from the R30 between Klerksdorp and Bothaville.

**(b) 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 mining activity. There are no infrastructure within the applied area. See Figure 3 of existing infrastructure.

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

Current land use of the application area is natural vegetation. The area surrounding this application area can be classified as agricultural grazing and cultivated fields. See Appendix 1(b) [Infrastructure Map] and Figure 3 [Images of existing infrastructure] 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 1 – 3. (1)(h)(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 Basic Assessment Report is to identify and evaluate the significance of these potential impacts and determine how they can be minimized or mitigated.

It should be noted that a comprehensive Environmental Management Program (EMPr) will be developed and implemented to regulate and minimize the direct, indirect and cumulative impacts during the construction and operational phases. The potential environmental impacts identified, which will be investigated further in the Impact Assessment Phase of the project, are summarized in Table 10 on next page.

Table 10: Impact significance identification matrix for The farm 469

PHASE	Components																
	ABiotic																
	A	B	C	D	E	F	G	H	I	J	K	L	M	N			
	Geology	Topography	Soil	Land	Land	Surface	Ground	Air	Noise	Vegetati	Wildlife	Sensitve	Visual	Archaeological &	Socio-economic	Affected	
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
11																	
13																	
14																	
15																	
16																	

**(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 1 – 3. (1)(h)(vi)*

**Introduction:**

This section below describes and evaluates the effects of the different mining 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         | 9. Ground Water                       |
| 2. Topography      | 10. Air Quality                       |
| 3. Soil            | 11. Noise                             |
| 4. Land Capability | 12. Archaeological and Cultural sites |
| 5. Land Use        | 13. Sensitive Landscapes              |
| 6. Vegetation      | 14. Visual Aspects                    |
| 7. Wildlife        | 15. Socio-economic Structure          |
| 8. Surface Water   | 16. Interested and Affected Parties   |

**IMPACT ASSESSMENT**

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

**ACTIVITIES:**

1. Access Roads (Existing roads to be upgraded)
2. Temporary office, workshops, ablution facility, water tanks, diesel tanks and other temporary buildings
3. Mining equipment conveyor, sieves/sifters, generator)
4. Stockpiles
5. Opencast trenches

**Environmental Impact Assessment Summary:**

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

Environmental aspect	Affected		Not affected
	Negligible	Substantial	
1. GEOLOGY		X	
2. TOPOGRAPHY	X		
3. SOIL		X	
4. LAND CAPABILITY		X	
5. LAND USE	X		
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**

Mining will be a new land use over this area, but the area looks to be already disturbed. The site that is earmarked for mining represents ± 100 % of the total area applied for. And it is further not foreseen that mining activities would disturbed an area of more than 0.5 ha at any given time. The entire of the 5 ha area will be under mining associated infrastructure or activities.

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

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

*Explanation of probability of impact occurrence*

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

*Explanation of extend 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 Vrijoenkraan.
Regional	Direct and indirect impacts affecting environmental elements within Free State 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.

**(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 1 – 3. (1)(h)(vii)*

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

However, for this specific project, no alternatives have been investigated, with the exception of the no-go alternative. The reason for this being that the mining permit is being applied for the sole purpose of Mining for Sand. The no-go option entails the continuation of the current land use (natural grazing) on the study site. The project will contribute towards providing continued jobs. Should the proposed project therefore not be authorized to proceed, it is anticipated that proposed employment opportunities will not realize.

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

The site layout will be only the excavation, plant area and office container. The stockpiles of the topsoil will be placed next to the side walls of the excavation on the outside. This will have the advantage to be nearby available to be used for rehabilitation. The stockpiles for the Sand (product) and the screening/crushing plant will be placed just outside the excavation within the mining area which will have the advantage that the loading of trucks can proceed without hampering the mining process and will be a safer mining environment.

**(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 1 – 3. (1)(h)(viii)*

Refer to the results of consultation contained in Table 10 for the issues that were raised by I&AP's and stakeholders during the review period of the Consultation phase of the BAR/EMPr report, 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. Please see section below for more detail.

**Table 11: Assessment of the nature, extent, duration, probability and significance of the potential environmental, social and cultural impacts of the proposed mining operation, including the cumulative environmental impacts**

ASPECT	IMPACTS				CUMULATIVE IMPACTS
<b>1. GEOLOGY</b>					
Nature of the impact	The geology will be destroyed during the opencast mining operation. During operation which will be for the next 2 years, the mineral resource <u>Sand (General) (QY)</u> will be extracted. Waste material/overburden material is disposed off/backfilled in existing excavations as part of the mining process.				
Extent	Site				Activity causing the impact
Duration	Permanent				An opencast mining method will be used to extract mineral deposits. Therefore the original geology will be totally destroyed.
Probability	Definite				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X			

ASPECT	IMPACTS				CUMULATIVE IMPACTS
<b>2. TOPOGRAPHY</b>					
Nature of the impact	<ul style="list-style-type: none"> <li>* <b>Change in landform :</b></li> <li>* Plains-dominated landscape with some scattered, slightly irregular undulating plains and hills.</li> <li>* <b>Disturbance of the surface drainage:</b></li> <li>The mining of the mineral deposits will result in the creation of quarries (30 x 20m x 3 m or less), that act as depressions in the environment that captures run-off. Mining activities will be concentrated as indicated on Appendix 3 on the application area (approximately 2 m depth).</li> <li>Normal surface drainage will be disturbed at a given point.</li> <li>Run-off if any will be diverted away from the specific site.</li> </ul>				
Extent	Site				Activity causing the impact
Duration	Very long to Permanent				Creation of quarries
Probability	Definite				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X		X	

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



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3. SOIL		IMPACTS	CUMULATIVE IMPACTS		
Nature of the impact	The establishment, construction, operation and eventually rehabilitation (demolition) of listed structures such as the access roads, stockpiles, cause compaction of soil. All mining activities will be concentrated on the identified mining focus area where mineral deposits could be found. In the same time a certain surface area is therefore alienated. The active mining surface area (alienated) would be restricted within the 5 ha at any given time for 2 years.				
Extent	Site			Activity causing the impact	
Duration	Long			Site preparation for additional mining sites and the construction, operation of listed infrastructure.	
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X		X	

ASPECT		IMPACTS	CUMULATIVE IMPACTS		
3. SOIL					
Nature of the impact	Soil erosion: The surface area is characterized by various soil depths as the area was disturbed before. Any construction of infrastructure should be preceded by the removal of all available topsoil where available.				
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	Phase 1	Phase 2	Phase 3	Closure	
	X	X		X	

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

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

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

ASPECT		IMPACTS	CUMULATIVE IMPACTS		
4. LAND CAPABILITY					
Nature of the impact	Temporary loss of land capability to support grazing. The small area (0.5 ha) where the active mining activities occur (excavations, stock piles, mining equipment) etc. will thus be temporary alienated, until the area is rehabilitated. All excavations would be rehabilitated as part of the mining process during which excavations are sloped. 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 mining sites and the construction, operation of listed infrastructure, the land	
Probability	Definite				

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Significance	Moderate				capability of the active mining area will be totally destroyed.
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X		X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
<b>5. LAND USE</b>					
Nature of the impact	This is a new mining operation and therefore will lose its land use to support grazing on the 5 ha during the next 2 years. Only a small portions of land (0.5 ha at a time) would be affected by the mining operation relation to the total mining right application area of 5 ha. All excavations would be rehabilitated as part of the mining process during which excavations are sloped.				
Extent	Site				Activity causing the impact
Duration	Long to permanent				Site preparation for mining and the construction, operation of listed infrastructure
Probability	Definite				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
	X	X			

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 site preparation for new sites, construction of listed infrastructure will cause destruction of habitats for vegetation. Due to a disturbed ecosystem, bare ground and invasion of exotics could further spread. The vegetation needs to be cleared to remove the topsoil.
Probability	Definite				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	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	Phase 3	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	Phase 3	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	Phase 3	Closure	
	X	X			

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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	Phase 3	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	Phase 3	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 mining area.
Probability	Moderate				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	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 mining excavations could end-up in the excavations creating problems regarding water quality and hindering the mining process. Surface run-off from active mining sites 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, mining 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	Phase 3	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 Vaal</b> <b>The mine falls under the primary drainage region 24 and in quaternary sub-catchment C24J.</b> Notwithstanding the above-mentioned facts, it is not expected that mining operations will have any effect on the boundaries or the general water flow of the catchment. The Vaal River runs some 5 km north of the application area and there are various other farms between the mining area and the river. There is also a soil dam 1.2 km west of the application area, on the neighbouring farm and on the opposite side of the gravel road. There are further no other standing water, dams or obvious depressions on the terrain where water can accumulate. Standing water in excavations 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 mining 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	Phase 3	Closure	
	X	X			

ASPECT	IMPACTS	CUMULATIVE IMPACTS								
<b>9. GROUND WATER</b>										
Nature of the impact	Reduction of groundwater quality There will be no water required for mineral processing. Mining activities are not likely to impact on local ground-water quality. No chemicals area used during the mining 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	<table border="1"> <tr> <td>Phase 1</td> <td>Phase 2</td> <td>Phase 3</td> <td>Closure</td> </tr> <tr> <td align="center">X</td> <td align="center">X</td> <td></td> <td align="center">X</td> </tr> </table>	Phase 1	Phase 2	Phase 3	Closure	X	X		X	
Phase 1	Phase 2	Phase 3	Closure							
X	X		X							

<b>9. GROUND WATER</b>										
Nature of the impact	Even though abstraction is likely to have a minimal effect on the surrounding groundwater users, this is a new use, and groundwater levels are expected to continue current trends. Groundwater will be abstracted for potable water supply and dust suppression. The volume of water needed is small (2 000 Lit/day) in comparison to other water use and will have a small impact on the surrounding aquifer.									
Extent	Site	Activity causing the impact								
Duration	Long	Opencast mining operation.								
Probability	Low									
Significance	High									
Phase responsible for the impact	<table border="1"> <tr> <td>Phase 1</td> <td>Phase 2</td> <td>Phase 3</td> <td>Closure</td> </tr> <tr> <td align="center">X</td> <td align="center">X</td> <td></td> <td align="center">X</td> </tr> </table>	Phase 1	Phase 2	Phase 3	Closure	X	X		X	
Phase 1	Phase 2	Phase 3	Closure							
X	X		X							

ASPECT	IMPACTS	CUMULATIVE IMPACTS								
<b>10. AIR QUALITY</b>										
Nature of the impact	Dust will be generated during the mining operation (loading with an excavator on to a dump truck) and transportation it off site on gravel/dirt/farm roads. No processing will be done on this site.									
Extent	Site	Activity causing the impact								
Duration	Long	Initial construction work with regard to infrastructure (roads) that involves earth moving equipment. During the mining phase, dust could be generated as indicated during mining.								
Probability	Moderate									
Significance	Moderate									
Phase responsible for the impact	<table border="1"> <tr> <td>Phase 1</td> <td>Phase 2</td> <td>Phase 3</td> <td>Closure</td> </tr> <tr> <td align="center">X</td> <td align="center">X</td> <td></td> <td align="center">X</td> </tr> </table>	Phase 1	Phase 2	Phase 3	Closure	X	X		X	
Phase 1	Phase 2	Phase 3	Closure							
X	X		X							

ASPECT	IMPACTS	CUMULATIVE IMPACTS								
<b>11. NOISE POLLUTION</b>										
Nature of the impact	Noise will be generated during the mining operation (loading with an excavator on to a dump truck) and transportation it off site. 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	<table border="1"> <tr> <td>Phase 1</td> <td>Phase 2</td> <td>Phase 3</td> <td>Closure</td> </tr> <tr> <td align="center">X</td> <td align="center">X</td> <td></td> <td align="center">X</td> </tr> </table>	Phase 1	Phase 2	Phase 3	Closure	X	X		X	
Phase 1	Phase 2	Phase 3	Closure							
X	X		X							

ASPECT	IMPACTS	CUMULATIVE IMPACTS								
<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 site.									
Extent	Site	Activity causing the impact								
Duration	Permanent									
Probability	Definite									
Significance	High									
Phase responsible for the impact	<table border="1"> <tr> <td>Phase 1</td> <td>Phase 2</td> <td>Phase 3</td> <td>Closure</td> </tr> <tr> <td align="center">X</td> <td align="center">X</td> <td></td> <td></td> </tr> </table>	Phase 1	Phase 2	Phase 3	Closure	X	X			
Phase 1	Phase 2	Phase 3	Closure							
X	X									

ASPECT	IMPACTS	CUMULATIVE IMPACTS
<b>13. SENSITIVE LANDSCAPE</b>		
Nature of the impact	The Vaal River which runs some 5 km north of the application area and the soil dam 1,2 km west of the application are, on the neighbouring farm and on the opposite side of the gravel road can be classified as sensitive area, but they are both situated <u>outside</u> the mining area and there are other farms between the mining area and these water sources. It is not foreseen that the proposed mining operation will have any impact on this surface water body/its banks/or associated wetland areas.	
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      Phase 3      Closure	

ASPECT	IMPACTS	CUMULATIVE IMPACTS
<b>14. VISUAL ASPECTS</b>		
Nature of the impact	Mining will be visible to the neighbours living there. The operation is not visible to any tourist traveling on the main tourist roads.	
Extent	Site	Activity causing the impact
Duration	Long	Mining operation.
Probability	Definite	
Significance	Low	
Phase responsible for the impact	Phase 1      Phase 2      Phase 3      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 3 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 Viljoenskroon/Klerksdorp district. Once all mining 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 Viljoenskroon/Klerksdorp already created by industry and mining.
Extent	Local	Activity causing the impact
Duration	Long	Additional employment opportunities created.
Probability	Definite	
Significance	High	
Phase responsible for the impact	Phase 1      Phase 2      Phase 3      Closure	
	X                      X                                      X	

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 0.5 ha that will not be available for agricultural activities at any given time for 2 years.	The economic benefits in terms of investment and the delivery of services in the Free State province will get an additional benefit from the project.
Extent	Regional	Activity causing the impact
Duration	Very Long	
Probability	High	
Significance	Moderate	
Phase responsible for the impact	Phase 1      Phase 2      Phase 3      Closure	
	X                      X                                      X	

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

**(ix) Outcome of site section matrix**

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

Alternative is not applicable. The current land use is planted pastures (cultivated fields that was withdrawn from cultivation). The option to explore the possibility for mining is an alternative land use. The applicant, Mr. C. Scholtz is not interested in any other alternative land use over this land aside of mining of Sand mining or any other activity, or method use other than mining for the aforementioned minerals in the conversional way, which is the most cost effective. Please note that no additional infrastructure will be established, and therefore no alternatives for the location of infrastructure were identified

**(x) 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 1 – 3. (1)(h)(x)*

The application area applied for is only 5 hectares thus the development location is limited to this area and the area where the mineral deposits occur. The occurrence of economical viable Sand was identified over this specific area, thus this site selection.

**i) FULL DESCRIPTION OF THE PROCESS UNDERTKEN TO IDENTIFY, ASSESS AND RANK THE IMPACTS AND RISKS THE ACTIVITY WILL IMPOSE ON THE PREFERRED SITE (IN RESPECT OF THE FINAL SITE LAYOUT PLAN) THROUGH THE LIFE OF THE ACTIVITY**

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

See Table 12 below

**Table 12: Technical & Management Action Plans**

Environmental Component	Geology
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<ul style="list-style-type: none"> <li>No mitigation exists except to slope the excavations.</li> <li>As mining progressed and the excavation has been sloped, 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 mining of the mineral resource (<u>Sand (General) (QY)</u>) should take place.</li> <li>Optimal utilization of the mineral resource should take place within the boundaries of the mining 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 mining 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 mining 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 sands 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.	

Environmental Component	Topography
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
<ul style="list-style-type: none"> <li>All trenches should be partly back-filled where possible with waste and eventually sloped and covered with a shallow layer of topsoil (if available).</li> <li>Access to all active mining excavation areas should be controlled. The active mining area should be fenced off. The necessary warning signs should be put in place. All mining 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>Mining would be done according to a definite Mining Plan (only disturbing an area that is really necessary). As part of the Mining Plan the handling of 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 mining 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 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 mining operation should only be restricted to what is really required (demarcated area of exploitation) within the fenced-off area. <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.                  Mining &amp; rehabilitation should be done in a well-planned manner (according to a MP) and in the process ensuring that activities are only restricted to surface areas really required.                  Compaction of soil surface areas would be alleviated once rehabilitation of certain area starts. Certain roads would probably remain for access (in consultation with the surface owner). Those that would not be required would be ripped and rehabilitated.</p>	
<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 mining 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.  <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>	
Closure can only be given once all soil contamination measures have been conducted to prevent and remediate any incidences.	

Environmental Component	Soil (Soil structure)
<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 sloping is done.                      No unnecessary driving outside the active mining 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.	

Environmental Component	Soil (Soil fertility)
<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.	

Environmental Component	Land Capability
<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 mining site only. Remove topsoil where it is available. Take care that roads needed are restricted to one entry to the area for mining 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>	
<p>The disturbance of land must be restricted (kept to a minimum) to the planned active, fenced-off mining site only. Remove topsoil where it is available.                      Take care that roads are the only areas used to enter the area for mining 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.</p>	
<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.	



<b>Environmental Component</b>	<b>Vegetation</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
No mitigation exists except to replace the vegetation by reseeding of grasses and natural growth. Mining should be done in a well-planned manner (according to a MP) 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 mining site exposed surfaces, tailings dumps, etc.).	

<b>Environmental Component</b>	<b>Vegetation</b>
<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 reseeding of grasses. Mining should be done in a well-planned manner (according to a MP) 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.	

<b>Environmental Component</b>	<b>Vegetation</b>
<b>Environmental Management/Mitigation Measures/Action Plans/Commitments</b>	
Ensure that all roads on the mining site (utilized by mining 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 mining 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 mining. 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>	
<p>Make game catching, traps, snares, poaching and any other unnecessary disturbance of animals a disciplinary offence.</p> <p>All staff must undergo basic environmental awareness lecture during induction training.</p> <p>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.</p> <p>Introduce the actions as listed above into disciplinary code as offence.</p>	
<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>	
<p><b>Change in surface water quality:</b></p> <p>Storm water control measures must be implemented to divert clean water away from the active mining site and keep contaminated water contained. Water control structures must be well designed and constructed to ensure a minimum down wash of topsoil.</p> <p>Vegetation disturbance must be as little as possible.</p> <p>The Mining Plan must be strictly adhered to.</p> <p>Re-vegetation to be done as quickly as possible. Final re-vegetation to be done as per rehabilitation plan.</p>	
<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>	
<p><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.</p> <p>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. The depth of the operation of maximum of 2m will not intersect the groundwater table thus no negative impact</p>	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
Ultimately rehabilitation of the disturbed mining site and the construction of run-off control structures in a planned and phased manner would ensure normal drainage and stability of rehabilitated site. The drainage must be away from the gravel road.	

<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 most likely contaminants is 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>	
Reduction of groundwater quantity, lowering of groundwater level: Water levels in the boreholes that are used for mining activities should be recorded monthly. Water volumes should be recorded continuously to ensure compliance with the water use authorization for abstraction.	
<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>	
Dust: The mining method will serve as mitigation measure because mining will limit dust to the active mining area (area where the excavator and the trucks are operating). Daily spraying of roads with water. Inspection should be done on a daily basis. If new roads are constructed, in coordination with surface owner, dust pollution must be mitigated by means of spraying the roads with water.	
<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 mining. 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>	
Ensure the required silencers are placed on all engines and compressors. No mitigation to reverse hoolers is allowed due to safety standards. Inspection of vehicles and machinery to ensure silencers are fitted. Ensure that a complaints register is created, managed and maintained. Vehicles and earthmoving equipment should be equipped with the necessary silencers and regularly maintained in a good working condition.	
<b>EMP Performance Assessment &amp; Monitoring Reporting</b>	
To be included in EMP/EIA.	
<b>Closure Objective</b>	
No noise attributed to mining 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>	
There are no graveyards over the area. 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>	
No sensitive landscapes on the application area	
<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 mining 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 mining 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 mining 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 mining 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.	

**j) ASSESSMENT OF EACH IDENTIFIED POTENTIALLY SIGNIFICANT IMPACT AND RISK**

In term of NEMA – EIA Regulations No. 326 of 7 April 2017 – Reg. 21, Appendix 1 – 3. (1)(j)(i)(ii)(iii)(iv)(v)(vi)(vii)

**Table 13: Identified Potentially Significant Impacts & Risks**

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 TO WHICH IMPACT/RISK CAN BE MITIGATED
Excavations for Sand	1.1 Removal of the Sand up to 3m. Disturbance of 0.5 hectare at any given time. 1.2 Change in landforms. The entire mining area will be lowered by 3 m and normal surface drainage will be disturbed at this specific point. The pit will be sloped	None Topography on adjacent area if prospecting is also practised	High - Moderate -	At open excavations 2 years 2 years	High Moderate	Impossible Possible	Not reversible at all Partly reversible	Not mitigated Fully Mitigated
	1.3 Stripping of all available topsoil and stockpiled. Stockpile area of 1.4 hectare at any given time. 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	Localized Localized	Low - Low-	2 years 2 years	High Low	Impossible Possible	Partly reversible Reversible	Fully Mitigated Fully mitigated
	1.5 Land capability and land use. Loss of land to support grazing. 1.6 Generation of dust by excavating and vehicle movement	If old disturbances not rehabilitated. Air quality	Low- Low -	2 years 2 years	High Low	Possible Possible	Reversible Reversible	Fully mitigated Fully mitigated.

**k) SUMMARY OF SPECIALIST REPORTS**

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

**Table 14: Specialist Reports**

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
None			

There were no specialist studies done as this area was disturbed by mining activities before and the impacts will be very small. This will only be sifting, load and hauled with no processing.

## I) ENVIRONMENTAL IMPACT STATEMENT

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

### i) Summary of the key findings of the environmental impact assessment;

The small scale Sand mining 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 Sand resource will be mined over a period of 2 years or less. The existing land-use is planted pastured that was withdrawn from cultivation. This is a small operation and for the next 2 years only a small portion of the town lands 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 5 ha, the top at least 30-50 cm topsoil where available needs to be removed prior to mining of the underlying Sand (up to 2 m depth). This will be used again as growth medium during the rehabilitation phase. Topsoil will be stored in berm walls 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

See Appendix 1(b).

### iii) Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives

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 use there off again. The rest of the area will still be continued to be used for grazing fields.

Although this is small Sand mining operation it would also add to the increased economic activity within the farming and exiting mining community around The Farm 469. Jobs for 3 permanent labourers 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 Sand deposit dictates the selection of the specific mining site.

## m) Proposed impact management objectives and the impact management outcomes for inclusion in the EMP

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

The main closure objective of the applicant is to rehabilitate the entire mining site in such a way to ensure that the man-made topographical landscape would be rehabilitated toward agricultural use and to blend in with the surrounding landscape and 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) Aspects for Inclusion as Conditions of Authorisation.**

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

None

**o) Description of Any Assumptions, Uncertainties and Gaps in Knowledge.**

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

None

**p) Reasoned Opinion As To Whether The Proposed Activity Should Or Should Not Be Authorised**

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

**(i) 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 mining activities will have no significant impacts on them or their surrounding environment.

**(ii) Conditions that must be included in the authorisation**

None

**q) Period for which the environmental authorisation is required.**

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

24 months for initial permit period, thus 24 months in total.

**r) UNDERTAKING**

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

**UNDERTAKING**

I, D.E. Erasmus, the undersigned and duly authorised thereto by DERA Omgewingskonsultante (PTY) Ltd hereby confirm:

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

Signed at Klerksdorp on this day 10<sup>th</sup> January 2021.

.....  
Signature of EAP

**s) FINANCIAL PROVISION**

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

The total application area is 5 hectares but only 0.4 hectares will be disturbed by opencast excavations and 0.1 hectares by surface disturbance to be used for the stockpile at any given time. These figures were used for the calculation of the quantum, thus a total of R95 917 is needed for the rehabilitation guarantees. R 95 917.00 for rehabilitation. See quantum attached as Appendix 3.

**(i) Explain how the aforesaid amount was derived.**

The amount was determined through the quantum tables provided by DMR.

**(ii) Confirm that this amount can be provided for from operating expenditure**

Yes, it is hereby confirmed that the amount will be provided from operating expenditure.

**t) SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY**

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

**(i) Compliance with the provisions of sections 24(4)(a) and (b) read with section 24 (3) (a) and (7) of the National Environmental Management Act (Act 107 of 1998). the EIA report must include the:-**

**1. Impact on the socio-economic conditions of any directly affected person.**

The applicant has an agreement with the landowner and the landowner will be paid for the land used by mining when the activity starts. No other person will be directly affected by this activity.

**2. Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act**

This activity will have no impact on archaeological structures.

**u) 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 1 – 3. (1)(u)*

None



## PART B

### ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

#### 1. DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME.

##### A) DETAILS OF THE EAP

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

Yes see Part A.

##### C) COMPOSITE MAP

See Appendix 1(b).

##### D) DESCRIPTION OF IMPACT MANAGEMENT OBJECTIVES INCLUDING MANAGEMENT STATEMENTS

###### (i) Determination of closure objectives

The main closure objective of the applicant is to rehabilitate the entire mining site in such a way to ensure that the 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.

**Mr. C. Scholtz** 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. C. Scholtz** 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 (Sand);
- ensure that the mining 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) Volumes and rate of water use required for the operation**

2000 litres a day will be used for dust suppression.

**(iii) Has a water use licence been applied for?**

N/A

(iv) Impacts to be mitigated in their respective phases

Table 15: 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. Excavations	Operational	0.4 hectares at any stage	Concurrent rehabilitation by sloping the sides of the excavation to be stable/sustainable and covered with topsoil and vegetation.	Sloping of sides	As part of concurrent rehabilitation.
2. Sand Stockpile area/plant 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 mining

E) IMPACT MANAGEMENT OUTCOMES

ACTIVITY	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE	MITIGATION TYPE	STANDARD TO BE ACHIEVED
1. Excavations of sand	1.1 Removal of the Sand up to 3 m.	Geology & soil	Operational	The impact will be mitigated by sloping the sides of the excavation and stabilizing the soil to prevent soil erosion.	A stable levelled area that can sustain vegetation without excessive erosion.
	1.2 Change in landform. The excavation will be sloped	Topography	Operational and closure	A surface water cut-off trench should be put in place around the active mining site in order to prevent surface water on the mining site. Rehabilitation of the new rehabilitated landscape in such a way that it would blend in with the surrounding landscape.	If not complete backfilled it must be gentle stable slopes
	1.3 Stripping of all available topsoil and stockpiled	Soil	Construction and 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	Construction and operational	To take preventive steps against erosion. Implement and maintain cut-off trenches and or berms around the mining 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 5 hectares, the impact is low. As the sides will be sloped and vegetated, the rehabilitated area must be treated as sensitive.	Sustainable rehabilitated area.
	1.6 Generation of dust by excavating, crushing/screening and vehicle movement	Air quality	Operational	The generation of dust will only be localized at the mining site. Daily spraying of roads with water	No excessive dust that can be harmful to the environment and humans.

**F) IMPACT MANAGEMENT ACTIONS**

ACTIVITY	POTENTIAL IMPACT	MITIGATION TYPE	TIME PERIOD FOR IMPLEMENTATION	COMPLIANCE WITH STANDARDS
Excavations for sand	1.1 Removal of the Sand up to 3 m	The impact will be mitigated by backfilling the excavation and stabilizing the soil to prevent soil erosion.		
	1.2 Change in landform. The excavation will be sloped.	The side of pit will be sloped and the soil stabilized to prevent erosion. A surface water cut-off trench should be put in place around the active mining site in order to prevent surface water on the mining site.		
	1.3 Stripping of all available topsoil and stockpiled	Rehabilitation of the new sloped landscape in such a way that it would blend in with the surrounding landscape. 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		
	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.	To take preventative steps against erosion, implement and maintain cut-off trenches and or berms around the mining area to prevent water entering that can cause excessive erosion.		
	1.5 Loss of Land capability & land use	As this is only a very small area of 5 hectares, the impact is low. As the excavations will be backfilled and levelled and must be treated as sensitive till soil has settled to ground level.		
	1.6 Generation of dust by excavating, crushing/screening and vehicle movement	The generation of dust will only be localized at the mining site. Daily spraying of roads with water		

## G) FINANCIAL PROVISION

### 1. Determination of the amount of Financial Provision

#### A. Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation

The main closure objective of the applicant is to rehabilitate the entire mining 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.

**Mr. C. Scholtz** 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. C. Scholtz** 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 (SAND);
- ensure that the mining 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.

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

Yes, the disturbance that will take place and the rehabilitation thereof were discussed on the site visit with the landowner.

#### C. Provide a rehabilitation plan that describes and shows the scale and aerial extent of the main mining activities, including the anticipated mining area at the time of closures.

##### Rehabilitation:

The clearing of soil surface areas would be restricted to what is really necessary for the construction of infrastructure/crushing plant. During rehabilitation of these sites, or where vegetation is lacking or compacted, the areas would be ripped or ploughed and levelled in order to re-establish a growth medium and if necessary

appropriately fertilised to ensure the regrowth of vegetation and the soil ameliorated based on a fertilizer recommendation (soil sample analysed).

#### **Rehabilitation of access roads**

- Whenever a mining permit is suspended, cancelled or abandoned or if it lapses and the holder does not wish to renew the permit or right, any access road or portions thereof, constructed by the holder and which will no longer be required by the landowner/tenant, shall be removed and/or rehabilitated to the satisfaction of the Regional Manager.
- Any gate or fence erected by the holder which is not required by the landowner/tenant, shall be removed and the situation restored to the pre-mining situation.
- Roads shall be ripped or ploughed, and if necessary, appropriately fertilised (based on a soil analysis) to ensure the regrowth of vegetation. Imported road construction materials which may hamper regrowth of vegetation must be removed and disposed of in an approved manner prior to rehabilitation.
- If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining operation, be corrected and the area be seeded with a seed mix to the Regional Manager's specification.

#### **Rehabilitation of the surface mining site**

On completion of operations, all buildings, structures or objects on the camp/office site shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), which states:

*(1) When a prospecting right, mining right, retention permit or mining permit lapses, is cancelled or is abandoned or when any prospecting or mining operation comes to an end, the holder of any such right or permit may not demolish or remove any building, structure, object -*

*(A & B) which may not be demolished in terms of any other law;*

*(C) which has been identified in writing by the Minister for purposes of this section; or*

*(c) which is to be retained in terms of an agreement between the holder and the owner or occupier of the land, which agreement has been approved by the Minister in writing.*

*(2) The provision of subsection (1) does not apply to bona fide mining equipment which may be removed*  
The surface area shall be ripped or ploughed to a depth of at least 300mm and the topsoil previously stored adjacent the site, shall be spread evenly to its original depth over the whole area.

**After all the foreign matter has been removed from the mining sites, the side slopes and the final void area will be sloped and levelled and the previously stored topsoil replaced.**

The area shall then be fertilised if necessary (based on a soil analysis). The site shall be seeded with a vegetation seed mix (section C) adapted to reflect the local indigenous flora. Where the site has been rendered devoid of vegetation/grass or where soils have been compacted owing to traffic, the surface shall be scarified or ripped. Photographs of the site, before and during the mining operation and after rehabilitation, shall be taken at selected fixed points and kept on record for the information of the Regional Manager.

Rehabilitation of the new topographical landscape in such a way that it would blend in with the surrounding landscape and allow normal (controlled) surface drainage to continue.

Implement water control systems in order to prevent erosion. Seed the area (see C. (below) for recommended seed mixture).

Visual impact would be addressed by means of;

- revegetation (grasses);

- removal of any building, scrap, domestic waste, etc. that would otherwise contribute to a negative visual impact.

#### **Fertilising of Areas to be Rehabilitated**

If a reasonable assessment indicates that the re-establishment of vegetation is unacceptably slow, the Regional Manager may require that the soil be analysed and any deleterious effects on the soil arising from the mining operation be corrected and the area be seeded with a seed mix to his or her specification.

**Seeding of Grass Seed Mixture and planting of Woody Species**

The eventual seed mixture takes into account the availability of seed, different soil situations and the prevailing climatic conditions of the area. The following mixture will be applicable to the mining permit site:

- Cenchrusciliaris*
- Cynodondactylon*
- Digitariaeriantha*
- Heteropogoncontortus*
- Panicum maximum*

**a. Demolition of infrastructure/buildings**

On completion of operations, all buildings, structures or other on the mining terrain shall be dealt with in accordance with section 44 of the Mineral and Petroleum Resources Development Act,2002 (Act No. 28 of 2002). There will be no permanent buildings.

**b. Invasive and alien control programme**

Develop and implement an invasive and alien control programme to control the spread of weeds and other invasive species. 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.

**D. Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives**

All the mined areas will be rehabilitated by sloping the sides in order to have sustainable vegetation, thus no after mining impacts or residues.

**E. Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline**

The total application area is 5 hectares but only 0.4 hectares will be disturbed by opencast excavations and 0.1 hectares by surface disturbance to be used for the plant area at any given time. These figures were used for the calculation of the quantum, thus a total of R95 917.00 needed for the rehabilitation guarantees. R 95 917.00 for rehabilitation. See quantum attached as Appendix 3.

**F. Confirm that the financial provision will be provided as determined**

The financing for this project will be done from the account Mr. C. Scholtz the applicant himself out of own funds. The guarantee will be provided in the form of Bank Guarantee after confirmation of the amount.

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

vii. Monitoring of Impact Management Actions

viii. Monitoring and reporting frequency

vx. Responsible persons

x. Time period for implementing impact management actions

xi. Mechanism for monitoring compliance

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
Mining site/Soil	Possible spillages of petrochemicals. Stripping of topsoil	Checking for spillages on daily basis. Checking correct stripping and stockpiling of topsoil	Manager and Applicant	Daily checking and reporting with Performance Assessment
Mining site/ Topography	Concurrent backfilling of the excavations	Checking stability of slope and erosion preventive measures	Manager and applicant	Quarterly
Mining site/Air quality	Dust pollution from mining activities.	Regular wetting of roads and stockpile area where loading take place.	Manager and applicant	Daily
Mining site	Chemical toilet	Make sure that it is used and hygienic.	Manager and Applicant	Weekly.

**H) INDICATE THE FREQUENCY OF THE SUBMISSION OF THE PERFORMANCE ASSESSMENT/ ENVIRONMENTAL AUDIT REPORT.**

Annually

**I) ENVIRONMENTAL AWARENESS PLAN**

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

Mr. C. Scholtz 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).

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

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

**J) SPECIFIC INFORMATION REQUIRED BY THE COMPETENT AUTHORITY**

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

**2. UNDERTAKING**

The EAP herewith confirms

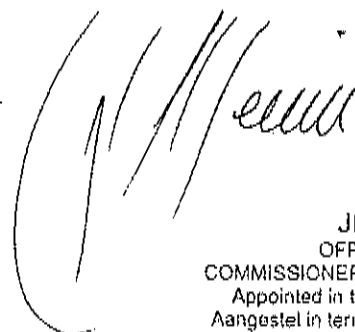
- (i) The correctness of the information provided in the reports;**
- (ii) The inclusion of comments and inputs from stakeholders and I&APs;**
- (iii) The inclusion of inputs and recommendations from the specialist reports where relevant; and**
- (iv) That the information provided by the EAP to interested 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:



-END-

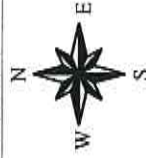
JERRY DEAN MENIN  
OFFICE MANAGER / AUDITOR  
COMMISSIONER OF OATHS / KOMMISSARIS VAN E  
Appointed in terms of Section 5(1) of Act 16 of 1963  
Aangestel in terme van Artikel 5(1) van Wet 16 van 1963  
Centrallaan 32 Central Avenue, Flamwood, Klerksdor  
Appointed/Aangestel: 23 Oktober 2012  
Reference/Verwysing: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



LOCALITY MAP

Co-ordinates:

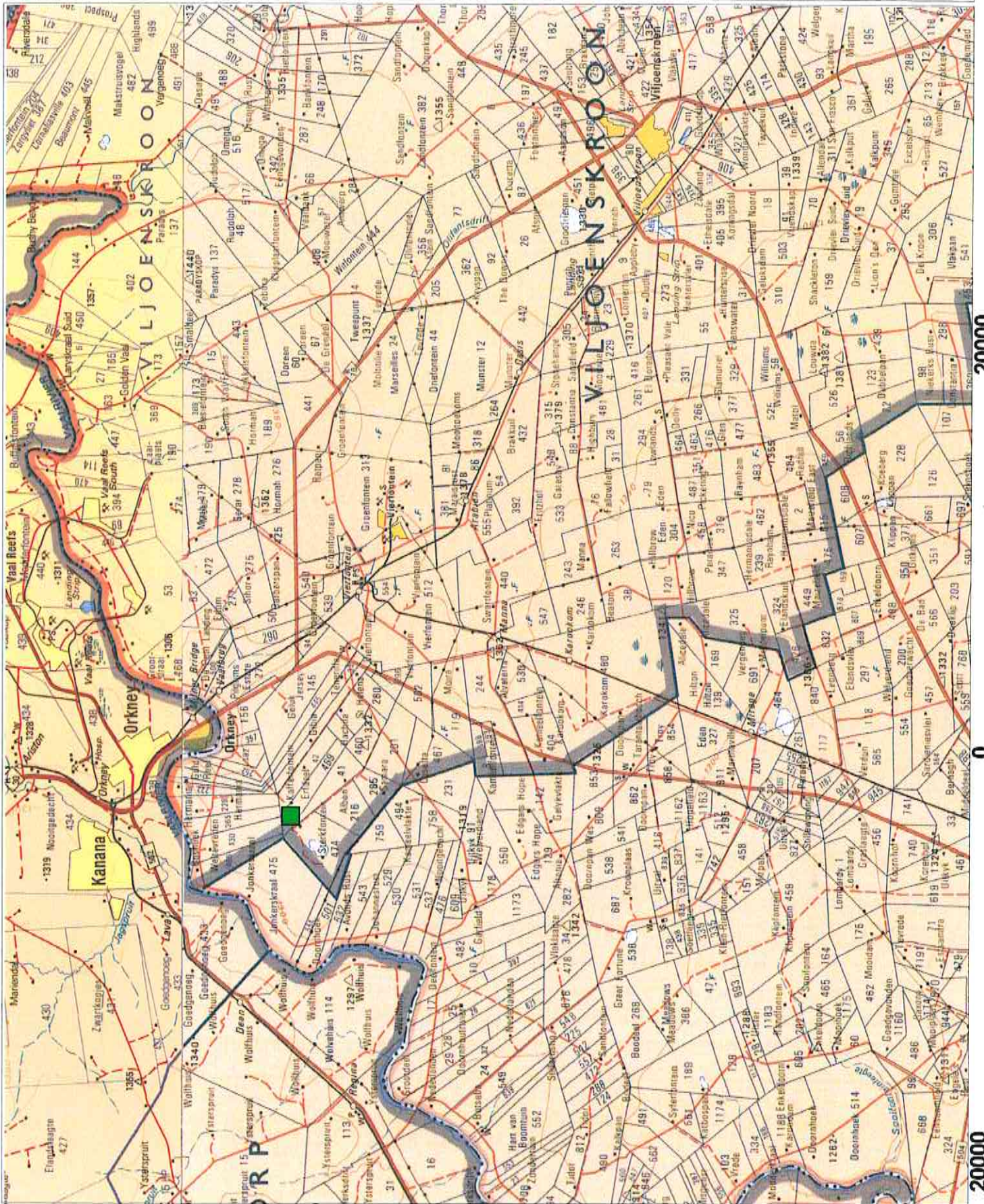
WGS 84/WGS 84



Scale 1:250000

Legend:

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



20000

0

20000

40000 Meters

**SKETCH PLAN OVER A CERTAIN PORTION OF THE REMAINING EXTENT OF THE FARM 469**

**Co-ordinates:**

- A: 26.65009 -27.04865
- B: 26.65130 -27.04990
- C: 26.64990 -27.05110
- D: 26.64809 -27.04902

WGS 84/WGS 84



**Scale: 1:10000**

Extent: 5 ha

Figure ABCDA represent the Mining Permit area in terms of Section 27(2) of the MPRDA, (Act 28 of 2002), over a certain portion of the Remaining Extent of The Farm 469, in the district of Viljoenskroon

Applicant: .....

C. Scholtz

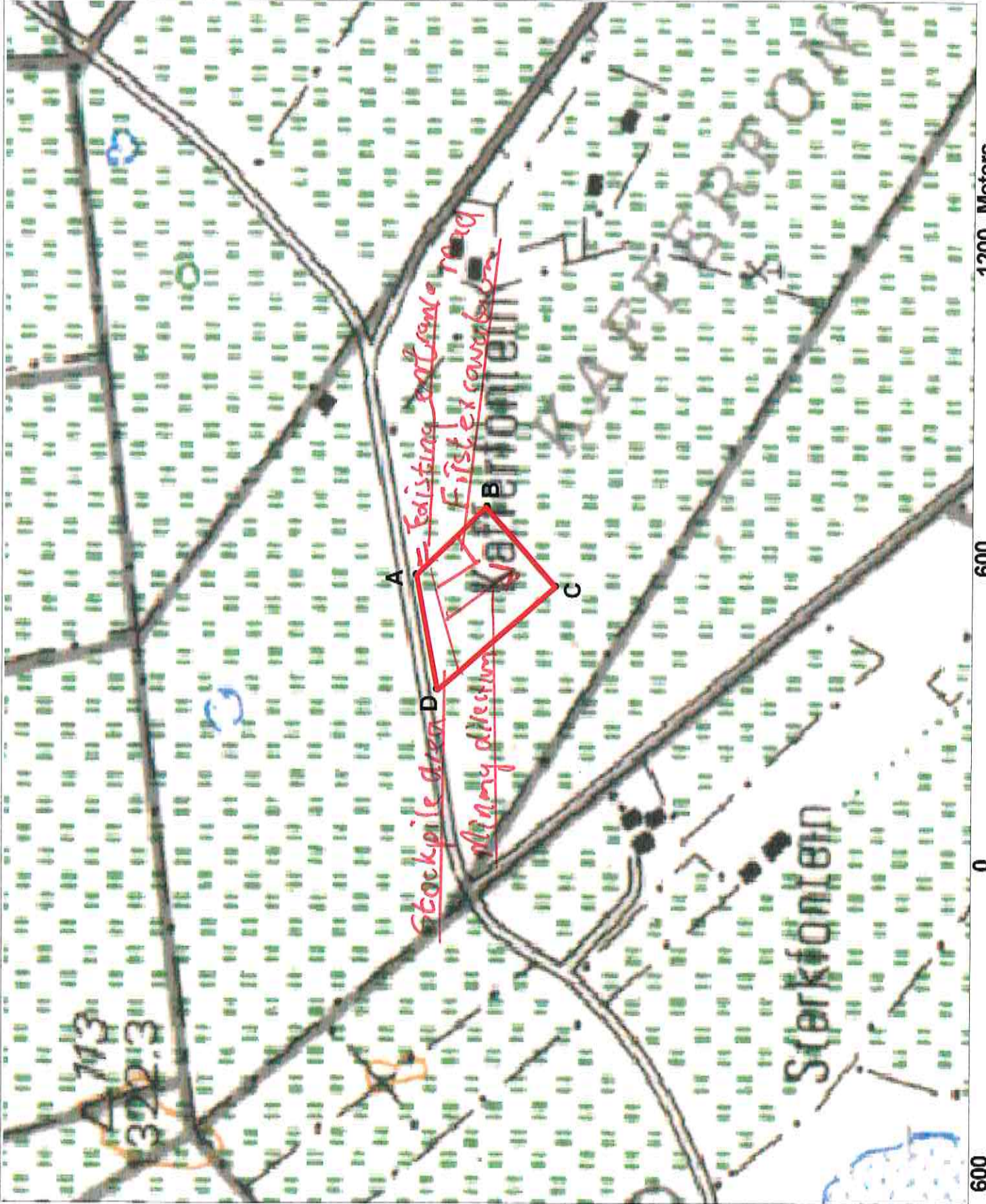
ID. no: 861129 5069 088

Date: 09/03/2020

Approved: .....

Regional Manager  
Free State Region

Date: .....



1200 Meters

600

0

600

# 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>			
J.J. van der Westhuizen P.O. Box 7038, Flamwood, Klerksdorp, 2572 Cell: 072 215 2344 e-mail: info@iafrica.co.za (Landowner)	X 12 Nov 2020 12 Dec 2020	Consultation letter sent - no objection - awaiting written response	
<b>Lawful occupier/s of the land</b>			
<b>Landowners or lawful occupiers on adjacent properties</b>	X		
(Neighbour)	12 Nov 2020	Consultation letter sent to neighbours - awaiting written response	
<b>Municipal councilor</b>			
<b>Municipality</b>	X		
Mala Local Municipality Mr. Botumelo Chris Mokomela Tel: 056 514 9200 Fax: 056 515 3922	12 Nov 2020 3 Dec 2020	Consultation letter sent to Mr. Botumelo	
<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>	X		
Cindy Benyane <a href="mailto:cindy.benyane@drdlr.gov.za">cindy.benyane@drdlr.gov.za</a> Khomoliso Mahlatji e-mail: khomoliso.mahlatji@drdlr.gov.za	12 Nov 2020 3 Dec 2020 10 Dec 2020	Request for verification on land claims sent to Ms Benyane Response letter received	No land claims in respect of the property
<b>Traditional Leaders</b>			
<b>NIA</b>			
<b>Dept. Environmental Affairs &amp; Dept, Forestry and Fisheries</b>	X		
Grace Mkhosana Building 113, St Andrew Street, Bloemfontein, 9300 Tel: 051 400 4904 Cell: 066 487 2840 E-mail: Grace.Mkhosana@defea.gov.za	12 Nov 2020	BAR/EMPr sent with Fastway courier for comments	
<b>Dept. Water and Sanitation</b>	X		
Dr. T. Ntuli 2 <sup>nd</sup> floor, Bloem Plaza Building, Cnr East Burger & Charlotte Maxeke, Bloemfontein, 9300 Tel: 051 405 9109; E-mail: Ntuli.T@dws.gov.za	12 Nov 2020	BAR/EMPr sent with Fastway couriers for comments	

# APPENDIX 2 – PROOF OF CONSULTATION

Other Competent Authorities				
OTHER AFFECTED PARTIES				
INTERESTED PARTIES				

Notice published in the Vista of 3 December 2020

## Gerda

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**From:** Gerda <dera.office@dera.co.za>  
**Sent:** Thursday, 03 December 2020 10:03  
**To:** 'scholtzchristo8@gmail.com'  
**Subject:** FW: Konsultasie briewe - C. Scholtz  
**Attachments:** Acceptance letter - Norman Phemula.pdf; Konsultasie briewe - C. Scholtz.pdf

Goeie dag Christo

Aangeheg is die aanvaardingsbrief en die konsultasiebriewe wat die grondeienaar moet teken en die aangrensende bure.

Sal jy asseblief vir my so spoedig moontlik kan terug stuur sodat ons dit in die Omgewingsdokument kan insluit.

Ons het reeds geadverteer in die Vista koerant.

Kontak gerus ons kantoor of vir Daan indien enige navrae.

Groete.

Gerda Els  
Cell: 083 225 1593

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

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

Konsultasie briewe - C. Scholtz

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

.....

P O Box 6499  
Flamwood  
2572  
Fax: 018 011 3760  
Mobile: 082 895 3516  
E-mail: [dera\\_office@dera.co.za](mailto:dera_office@dera.co.za)  
[daane@dera.co.za](mailto:daane@dera.co.za)

# DERA

12 November 2020

## Environmental Consultants

To whom it may concern

**CONSULTATION WITH INTERESTED AND AFFECTED PARTIES WITH REGARD TO AN APPLICATION FOR A MINING PERMIT IN TERMS SECTION 27(2) OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) AND NEMA, EIA 2014: THE PROPOSED MINING AREA IS OVER A CERTAIN PORTION OF THE FARM KAFFERFONTEIN 469, IN THE DISTRICT OF BOTHAVILLE.**

You are herewith informed that **Mr. C. Scholtz** has submitted an application in terms of Section 27(2) of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002), and NEMA, EIA 2014 to the Regional Manager: Mineral Regulation, Free State Region in respect of **Sand (general)** in the magisterial district of Bothaville.


**Mr. C. Scholtz** is in the process of compiling the Basic Assessment Report, which needs to be submitted at the Regional Office of DMR and will be available for I&AP's for comments. See attached the Sketch plan and Environmental Authorisation.

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

**Mr. C. Scholtz** deem it necessary to consult with inter alia yourself / your company/ your organization, and you are therefore kindly requested to comment very clearly and unambiguously with regard to the proposed mining project. You are requested to put in writing any interest/ objection and/or comments you may have and send it back to the appointed consultants (**Reference no. FS30/5/1/3/2/10324MP**) within 30 days from the date of receipt of this letter. If no correspondence is received from you within the mentioned period, the applicant shall accept that you have no objection in the proposed mining activities.

Please call me if any further information is needed.

Your co-operation will be appreciated.

Yours faithfully  
P.P. 

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

.....

REGISTRATION FORM AND COMMENT FOR THE PUBLIC PARTICIPATION PROCESS  
PROPOSED MINING PERMIT APPLICATION OVER A PORTION OF THE FARM KAFFERFONTEIN 469,  
MAGISTERIAL DISTRICT OF BOTHAVILLE.

Daan Erasmus  
P.O. Box 6499  
KLERKSDORP  
2572

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

**PERSONAL INFORMATION:**

Title/Titel: *Mr* Initials/Voorletters: *JJ* First Name/Eerste naam: *Johannes*  
Surname/Van: *van der Westhuizen*  
E-mail/E-pos: *info@11africa.co.za*  
Telephone/Telefoon: *0722152433* Fax/Faks: *---*  
Organisation (if applicable)/Organisasie (indien van toepassing): *N.V.*  
Capacity (member, etc.)/Kapasiteit (lid ens):  
Landowner/Grondeienaar/Buurman/Neighbour/Interested and/or affected parties on the farm/op die plaas:  
Postal Address/ Posadres: *Box 7038 Flarwood Herbyr*  
Town/City/Dorp/Stad: *Klerksdorp* Code/Kode: *2572*

**COMMENT/OBJECTION:**

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

*I am interested in the project*

2. Do you have any ground for objection towards the proposed project/Het u enige gronde tot beswaar t.o.v. bogenoemde projek?

*No*

**YES/NO JA/NEE**

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

*NO*

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

**YES/NO JA/NEE**

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

*No*

Filled in/on/Ingevol op... *14* day of /dag van... *12 October* (month)/(maand) 2020

*Daan Erasmus*

Name and Surname/ Company

Signature/Handtekening

Naam en Van/Maatskappy

:

**REGISTRATION FORM AND COMMENT FOR THE PUBLIC PARTICIPATION PROCESS  
PROPOSED MINING PERMIT APPLICATION OVER A PORTION OF THE FARM KAFFERFONTEIN 469,  
MAGISTERIAL DISTRICT OF BOTHAVILLE.**

:

Daan Erasmus  
P.O. Box 6499  
KLERKSDORP  
2572

Tel. 018-468 5355  
Fax: 018-011 3760  
Mobile: 082 895 3516  
E-mail: [dera.office@dera.co.za](mailto:dera.office@dera.co.za) or [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/Buurman/Neighbour/Interested and/or affected parties 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 towards the proposed project/Het u enige gronde tot beswaar t.o.v.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/Ingevu op..... day of /dag van..... (month)/(maand) 2020

**Name and Surname/ Company**

**Signature/Handtekening**

**Naam en Van/Maatskappy**

.....





Ministry of  
Energy  
Department  
Mineral Resources and Energy  
REPUBLIC OF SOUTH AFRICA

Private Bag X33, Welkom, 9460, Tel: (057) 391 1300, Fax: (057) 357 6003  
314 Stateway, The Strip Building, Second Floor, Welkom, 9460  
Enquiries: N. Phemula Ref: FS 30/5/1/3/2/10324 MP  
Email-Address: norman.phemula@dmr.gov.za

**REGISTERED MAIL**

**Mr Christo Scholtz**  
**P.O. Box 6499**  
**Flamwood**  
**2572**

**Fax: 018 011 3760**

**Sir**

**NOTICE OF ACCEPTANCE OF AN APPLICATION FOR A MINING PERMIT IN  
TERMS OF SECTION 27 OF THE MINERAL AND PETROLEUM RESOURCES  
DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) (AS AMENDED)  
[HEREINAFTER REFERRED TO AS THE MPRDA]**

1. Please be informed that your application for a mining permit to mine **Sand (General)**, on a Portion of the Remaining Extent of the farm **Kafferfontein 469**, situated in the Magisterial District of **Bothaville** is hereby accepted in terms of section 27(3) of the **MPRDA**.
2. In light of the minimum requirements as stipulated in section 16 (1) and 16 (2) of the EIA Regulations, your application for an Environmental Authorization was incomplete as it was not accompanied by this acceptance letter as per sub section 16 (1) (ix) and considering that it is now completed by this

acceptance letter, you are hereby required to submit the documents as stipulated in section 19 (1) to (8) of the EIA Regulations.

3. Please take note that the acceptance of your application does not accord to you the right to mine the mineral applied for on the area of application, but simply refers to the further processing of your application by this office.
4. Further note that should this office discover at a later stage the existence of a right or permit issued in respect of the property forming the subject of this application, further processing of this application shall discontinue.

Yours faithfully



K KEWUTI

REGIONAL MANAGER: MINERAL REGULATION

FREE STATE REGION

DATE: 12/11/2020

## Gerda

---

**From:** Gerda <dera.office@dera.co.za>  
**Sent:** Thursday, 03 December 2020 10:07  
**To:** '0565153922@faxsend.co.za'  
**Subject:** Consultation letter for mining permit - C. Scholtz  
**Attachments:** Consultation letter for mining permit - C. Scholtz.pdf

Good day

Please see attached the consultation letter for as I&AP for a new mining permit application in the Bothaville district.

It will be appreciated if you can complete the attached form and return to [dera.office@dera.co.za](mailto:dera.office@dera.co.za)

Regards.

Gerda Els  
Cell: 083 225 1593

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

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

Consultation letter for mining permit - C. Scholtz

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

.....  
**DERA**

12 November 2020

## Environmental Consultants

**Nala Local Municipality**

**Attention: Mr. Boitumelo Chris Mokomela**

**Fax: 056 515 3922**

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

It is hereby confirmed that Mr. C. Scholtz has applied for a Mining Permit application on a certain Portion of the farm Kafferfontein 469, magisterial district of Bothaville.

The Department of Mineral Resources has requested that the Nala Local Municipality must be informed about the proposed Mining Permit application.

Please find attached the consultation letter with the information regarding the proposed mining permit 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

P.P. 

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](mailto:dera_office@dera.co.za)  
[daane@dera.co.za](mailto:daane@dera.co.za)

# DERA

12 November 2020

## Environmental Consultants

To whom it may concern

**CONSULTATION WITH INTERESTED AND AFFECTED PARTIES WITH REGARD TO AN APPLICATION FOR A MINING PERMIT IN TERMS SECTION 27(2) OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) AND NEMA, EIA 2014: THE PROPOSED MINING AREA IS OVER A CERTAIN PORTION OF THE FARM KAFFERFONTEIN 469, IN THE DISTRICT OF BOTHAVILLE.**

You are herewith informed that **Mr. C. Scholtz** has submitted an application in terms of Section 27(2) of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002), and NEMA, EIA 2014 to the Regional Manager: Mineral Regulation, Free State Region in respect of **Sand (general)** in the magisterial district of Bothaville.

**Mr. C. Scholtz** is in the process of compiling the Basic Assessment Report, which needs to be submitted at the Regional Office of DMR and will be available for I&AP's for comments. See attached the Sketch plan and Environmental Authorisation.

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

**Mr. C. Scholtz** deem it necessary to consult with inter alia yourself / your company/ your organization, and you are therefore kindly requested to comment very clearly and unambiguously with regard to the proposed mining project. You are requested to put in writing any interest/ objection and/or comments you may have and send it back to the appointed consultants (**Reference no. FS30/5/1/3/2/10324MP**) within 30 days from the date of receipt of this letter. If no correspondence is received from you within the mentioned period, the applicant shall accept that you have no objection in the proposed mining 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 MINING PERMIT APPLICATION OVER A PORTION OF THE FARM KAFFERFONTEIN 469,**
  
**MAGISTERIAL DISTRICT OF BOTHAVILLE.**
  
 :

Daan Erasmus  
 P.O. Box 6499  
 KLERKSDORP  
 2572

Tel. 018-468 5355  
 Fax: 018-011 3760  
 Mobile: 082 895 3516  
 E-mail: [dera.office@dera.co.za](mailto:dera.office@dera.co.za) or [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/Buurman/Neighbour/Interested and/or affected parties 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 towards the proposed project/Het u enige gronde tot beswaar t.o.v.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**

.....

## Gerda

---

**From:** Gerda <dera.office@dera.co.za>  
**Sent:** Thursday, 03 December 2020 10:27  
**To:** Cindy Benyane  
**Subject:** Verification of land claims - Kafferfontein 469  
**Attachments:** Verification of land claims - Kafferfontein 469.pdf

Good day Cindy

Please see attached our request for verification of land claims on the farm Kafferfontein 469 in the Bothaville district.

Kind regards.

Gerda Els  
Cell: 083 225 1593

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

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

Verification of land claims - Kafferfontein 469

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

.....

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

# DERA

12 November 2020

## Environmental Consultants

**Department of Land Affairs & Rural Development**

**Attention: Ms. Cindy Benyane**

**Re: Verification of Land Claims**

We are Environmental Consultants situated in Klerksdorp and has applied on behalf of Mr. **C. Scholtz** for a mining permit on the following farm in the **Bothaville district**.

**Nala Local Municipality**

➤ **A certain portion of the Kafferfontein 469**

Could you please be so kind to verify if there are any land claims over the farm 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,

P.P. 

Daan Erasmus

.....





OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: FREE STATE  
Ground floor, Post Bank Building, cnr Selbourne and East Burger Street, Bloemfontein, 9300  
Tel: (051) 430 0423/25/29

Enquiries: Lefa Thabane

You Ref: Daan Erasmus

**DERA ENVIRONMENTAL CONSULTANTS**

PO Box 6499  
Flamwood  
2572

Email: [daane@dera.co.za](mailto:daane@dera.co.za)

Dear Sir/Madam

**LAND CLAIMS ENQUIRY –THE FARM KAFFERFONTEIN 469, DISTRICT BOTHAVILLE, PROVINCE FREE STATE**

We refer to your letter dated 12 November 2020.

We confirm that as at the date of this letter no land claims appear on our database in respect of the Property. 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 lodged but not yet been 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 a further search.

Yours faithfully

  
\_\_\_\_\_

M.M. DU TOIT (Ms)

CHIEF DIRECTOR: LAND RESTITUTION SUPPORT

OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: FREE STATE

DATE: 10/12/2020

## PUBLIC NOTICE

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

Notice is given for the following application:

1) Environmental authorization application for mining.

- **Proponent:** The applicant is C. Scholtz
- **Ref. no:** FS30/5/1/3/2/10324MP
- **Property description:** The proposed mining area is over a certain Portion of the farm Kafferfontein 469, in the district of Bothaville. The total extent of the mining area is 5 hectares. (21 SG digital codes: F00100000000046900000)
- **Location:** The property is situated ±31 km north of Bothaville.
- **Project description:** The purpose of the application is to obtain the required authorisation from the Department to successfully undertake opencast mining.
- **Process of Basic Assessment 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 21 (Listing Notice 1) – GNR 327 & Activity 27 (Listing Notice 1) – GNR 327
- **Minerals applied for:** Sand (General)
- **Date submitted:** 10 November 2020
- **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 BAR/EMPr. 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: Thursday 3 December 2020

Date and venue of meeting: Tuesday 8 December 2020 on site  
coordinates 26.65009 -27.04865

Time: 9H00


**AGENDA OF PUBLIC MEETING**

C. Scholtz  
Mining Permit over a certain Portion of the farm Kafferfontein 469, District of Bothaville.

Venue: On site: coordinates 26.65009 -27.04865

Date: Tuesday 8 December 2020  
Time: 9H00

1. Welcome
2. Background of proposed Mining Permit
3. Open discussion on impacts and mitigation measures
4. Closure

ATTENDANCE REGISTER OF PUBLIC MEETING					
	Name	Capacity	Cell No.	Email address	Signature
1	Daan Erasmus	DERA Environmental Consultants	0828953516	daane@dera.co.za	
2					
3					
4					
5					
6					

Comments: .....

Date: 8 December 2020

Signature: .....






**AGENDA OF PUBLIC MEETING**

C. Scholtz  
Mining Permit over a certain Portion of the farm Kafferfontein 469, District of Bothaville.

Venue: On site: coordinates 26.65009 -27.04865

Date: Tuesday 8 December 2020  
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2. Background of proposed Mining Permit
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4. Closure

ATTENDANCE REGISTER OF PUBLIC MEETING				
Name	Capacity	Cell No.	e-mail address	Signature
1 Daan Erasmus	DERA Environmental Consultants	0828953516	daane@dera.co.za	
2				
3				
4				
5				
6				

Comments: .....

Date: 8 December 2020

Signature: .....



## SITE NOTICE

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

Notice is given for the following application:

- 1) Environmental authorization application for mining.

- **Proponent:** The applicant is C. Scholtz
- **Ref. no:** FS30/5/1/3/2/10324MP
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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: Thursday 3 December 2020

Date and venue of meeting: Tuesday 8 December 2020 on site  
coordinates 26.65009 -27.04865

Time: 9H00





.....  
**DERA**

↑  
Lift & Peel

**fastway**  
couriers

Customer Copy

VA0013046853



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

13 November 2020

## Environmental Consultants

**Department of Environmental Affairs &  
Department of Forestry & Fisheries  
1<sup>st</sup> Floor Omni Building  
Aliwal North Street  
Bloemfontein  
9300**

**Attention: Grace Mkhosana**

**RE: Basic Assessment Report Report (BAR) & EMP report**

**Reference number: FS30/5/1/3/2/10324MP**

It is hereby confirmed that Mr. C. Scholtz has applied for a mining permit over a certain area of the Remaining extent of the farm 469, situated in the district of Bothaville, Free State Province.

The application was accepted by the Department of Mineral Resources and they have requested that the Department of Environmental Affairs and Department Agriculture, Forestry and Fisheries (Free State Regional Office) must be consulted about the proposed mining permit. See attached the BAR & EMP report 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

.....

**To**

Company Name:

**Department of Environmental Affairs  
Building 113  
St Andrew Street  
Bloemfontein  
9301**

**Contact: Grace Mkhosana Tel: 066 487 2840**

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:

**[Handwritten Signature]**

↑ Lift & Peel  
  
Pickup  
VA0013046853

↑ Lift & Peel  
  
Delivery  
VA0013046853

VA0013046853





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

# DERA

13 November 2020

## Environmental Consultants

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

**Attention: Dr. T. Ntll**

**RE: Basic Assessment Report (BAR) & EMP report**

**Reference number: FS30/5/1/3/2/FS30/5/1/3/2/10324MP**

It is hereby confirmed that Mr. C. Scholtz has applied for a mining permit over a certain area of the Remaining extent of the farm 469, situated in the district of Bothaville, Free State Province.

The application was accepted by the Department of Mineral Resources and they have requested that the Department of Water and Sanitation (Free State Regional Office) must be consulted about the proposed mining permit. See attached the BAR & EMP report 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



C. Scholtz BAR AS 10524 PNF

**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. Ntuli

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: [Handwritten Signature]

▲ Lift & Peel  
Pickup  
VA0013046855

▲ Lift & Peel  
Delivery  
VA0013046855

VA0013046855  
[Barcode]

CALCULATION OF THE QUANTUM

Applicant:  
Evaluators:

C Scholtz  
DERA

10324MP  
Nov-20

No	Description	Unit	A		B	C	D	E=A*B*C*D
			Quantity	Master Rate				
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	16	1	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	195.76	1	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	288.49	1	1	1	0
3	Rehabilitation of access roads	m2	0	41	1	1	1	0
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	340.01	1	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	185.46	1	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	391.53	1	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0.4	238697	0.52	1	1	49648.976
7	Sealing of shafts adits and inclines	m3	0	105.09	1	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	136828.1	1	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-potential potential)	ha	0	170416.93	1	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (potential potential)	ha	0	494971.55	1	1	1	0
9	Rehabilitation of subsided areas	ha	0	114572.93	1	1	1	0
10	General surface rehabilitation	ha	0.1	126059	1	1	1	12605.9
11	River diversions	ha	0	106390.94	1	1	1	0
12	Fencing	m	0	123.64	1	1	1	0
13	Water management	ha	0	41213.28	1	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0.4	16776	1	1	1	6710.4
15 (A)	Specialist study	Sum	0					0
15 (B)	Specialist study	Sum						0
			Sub Total 1					68965.276

1	Preliminary and General	8275.83312	weighting factor 2	8275.83312
2	Contingencies	6896.5276	1	6896.5276
		Subtotal 2		84137.64

VAT (15%)	11779.27
-----------	----------

Grand Total	95917
-------------	-------

**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:** C Scholtz

**Project title:** Farm 469

**Date screening report generated:** 10/11/2020 09:54:09

**Applicant:** C Scholtz

**Compiler:** DERA

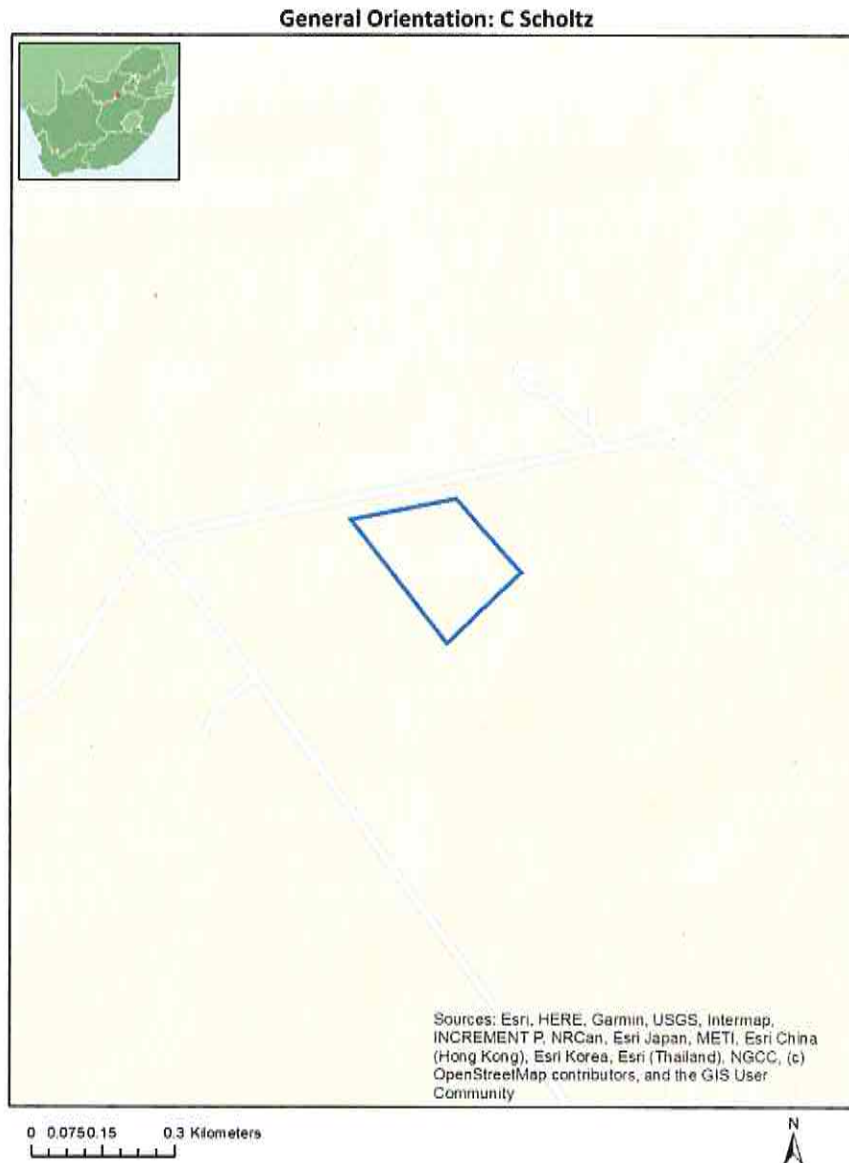
**Compiler signature:**  
.....

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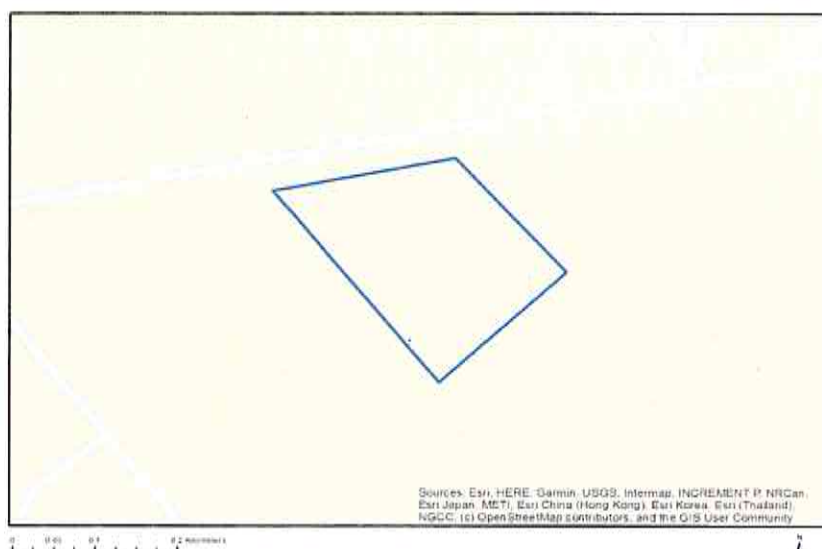
# Proposed Project Location

## 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		469	0	27°3'18.76S	26°39'29.54E	Farm
2		469	0	27°2'54.55S	26°38'53.53E	Farm Portion

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

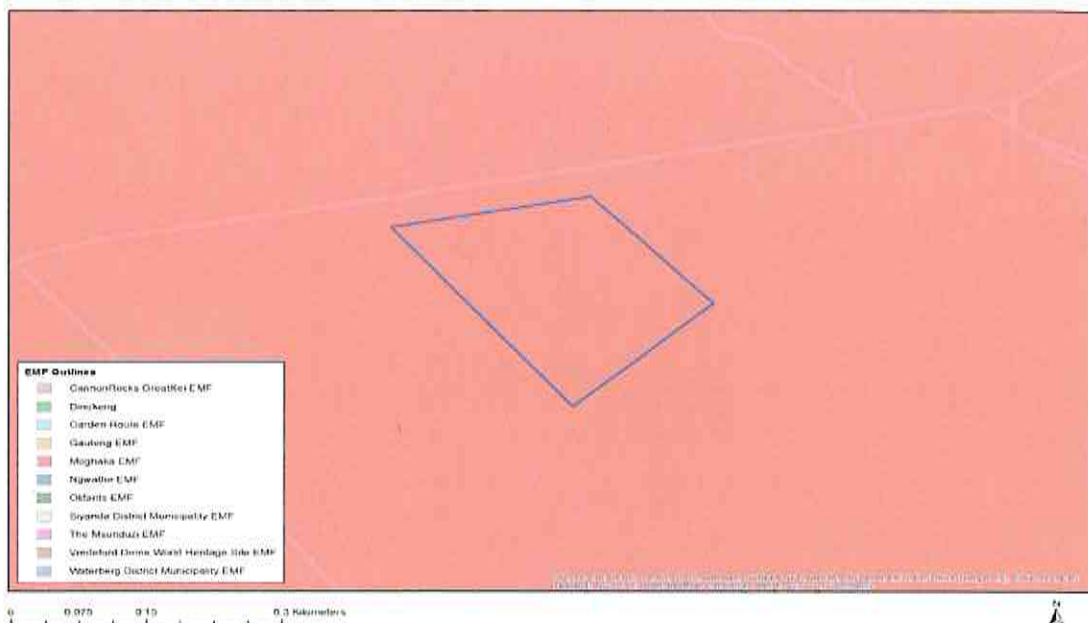
No development footprint(s) specified.

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

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2513/3	Solar PV	Approved	10.7
2	12/12/20/2513/2	Solar PV	Approved	15.4
3	12/12/20/2513/4	Solar PV	Approved	10.7
4	12/12/20/2513/1	Solar PV	Approved	10.7
5	14/12/16/3/3/2/777	Solar PV	Approved	25.6

<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.

## Environmental Management Frameworks relevant to the application



Environment al Management Framework	LINK
Moghaka EMF	<a href="https://screening.environment.gov.za/ScreeningDownloads/EMF/Moghaka_LM_EMF - Final EMF Report Rev2013-06.pdf">https://screening.environment.gov.za/ScreeningDownloads/EMF/Moghaka_LM_EMF - Final EMF Report Rev2013-06.pdf</a>

## Environmental screening results and assessment outcomes

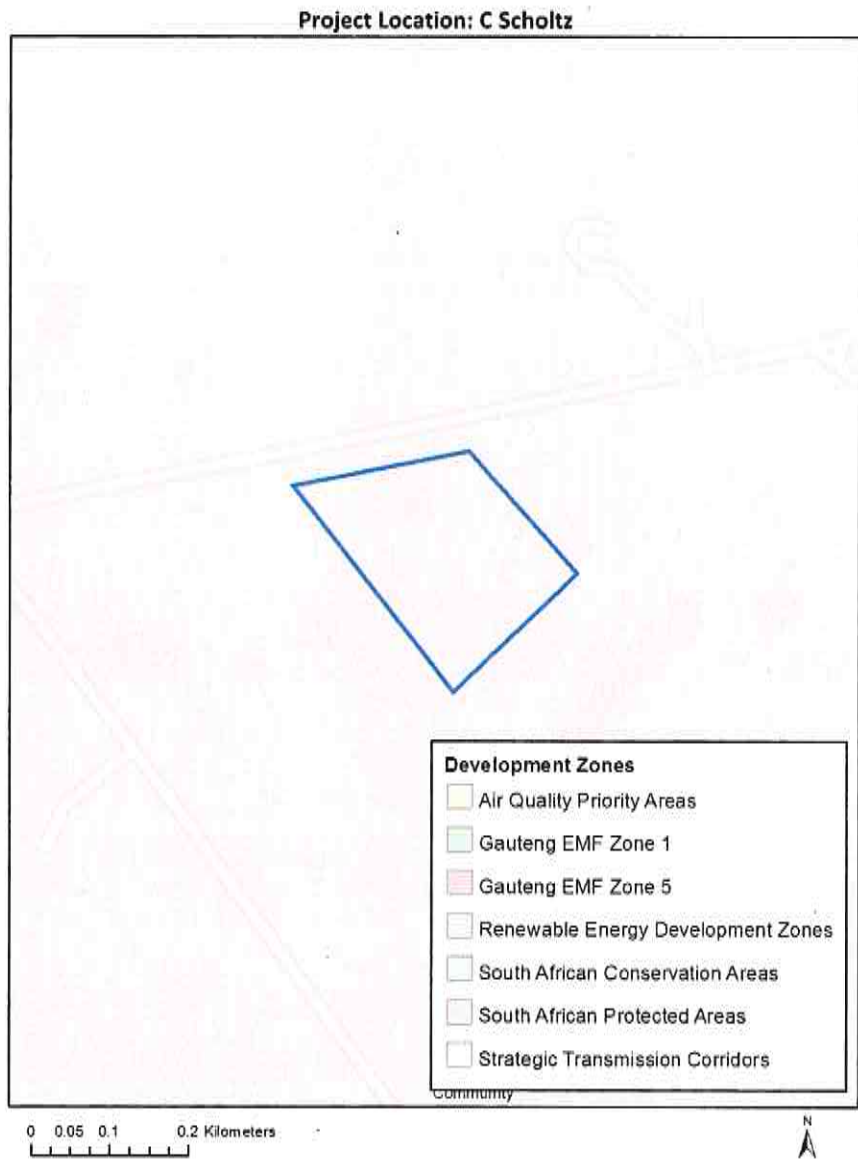
The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification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

### 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.

Incentive, restriction or prohibitio n	Implication
Strategic Transmission Corridor- Central	<a href="https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/GN 113 16 February 2018.pdf">https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/GN 113 16 February 2018.pdf</a>

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	High	Medium	Low
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	sensitivity	sensitivity	sensitivity	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
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.

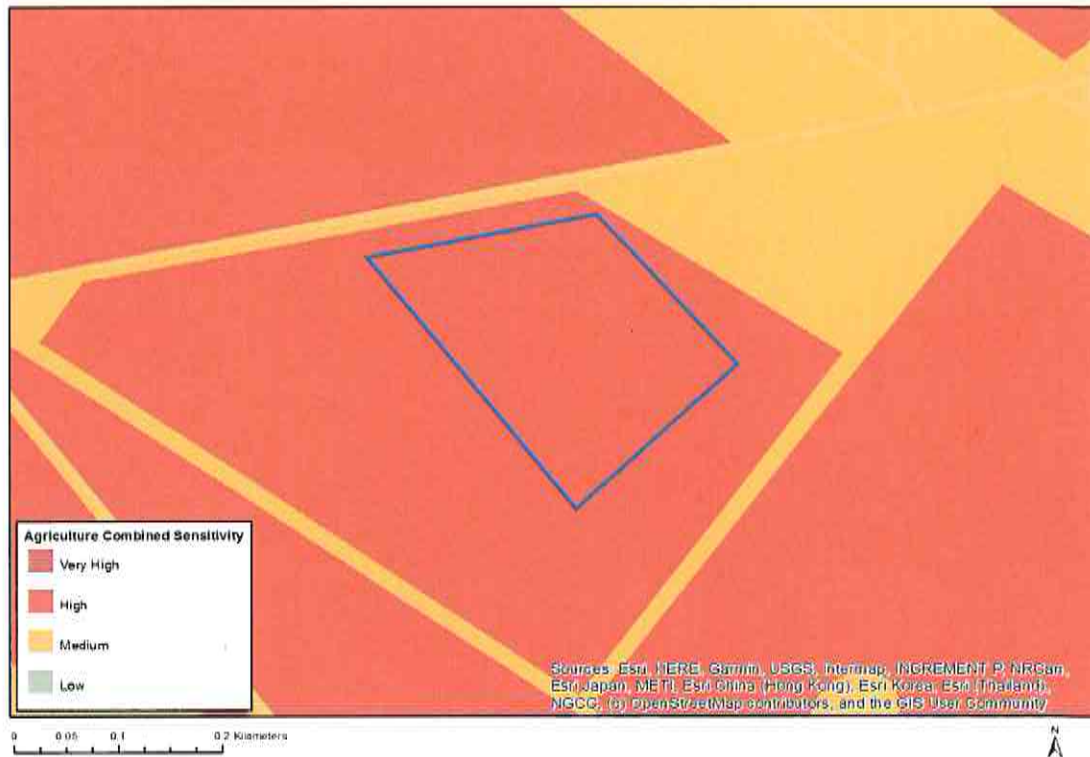
N o	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20General%20Agriculture%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Agriculture Assessment Protocols.pdf</a>
2	Archaeological and Cultural Heritage Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20General%20Requirement%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
3	Palaeontology Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20General%20Requirement%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
4	Terrestrial Biodiversity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20Terrestrial%20Biodiversity%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Terrestrial Biodiversity Assessment Protocols.pdf</a>
5	Aquatic Biodiversity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20Aquatic%20Biodiversity%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Aquatic Biodiversity Assessment Protocols.pdf</a>

6	Hydrology Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20General%20Requirement%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
7	Noise Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20Noise%20Impacts%20Assessment%20Protocol.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Noise Impacts Assessment Protocol.pdf</a>
8	Radioactivity Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20General%20Requirement%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
9	Traffic Impact Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20General%20Requirement%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
10	Geotechnical Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20General%20Requirement%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
11	Socio-Economic Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20General%20Requirement%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted General Requirement Assessment Protocols.pdf</a>
12	Plant Species Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20Plant%20Species%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Plant Species Assessment Protocols.pdf</a>
13	Animal Species Assessment	<a href="https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted%20Animal%20Species%20Assessment%20Protocols.pdf">https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted Animal Species 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	Annual Crop Cultivation / Planted Pastures Rotation; Land capability; 06. Low-Moderate/07. Low-Moderate/08. Moderate

## MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY

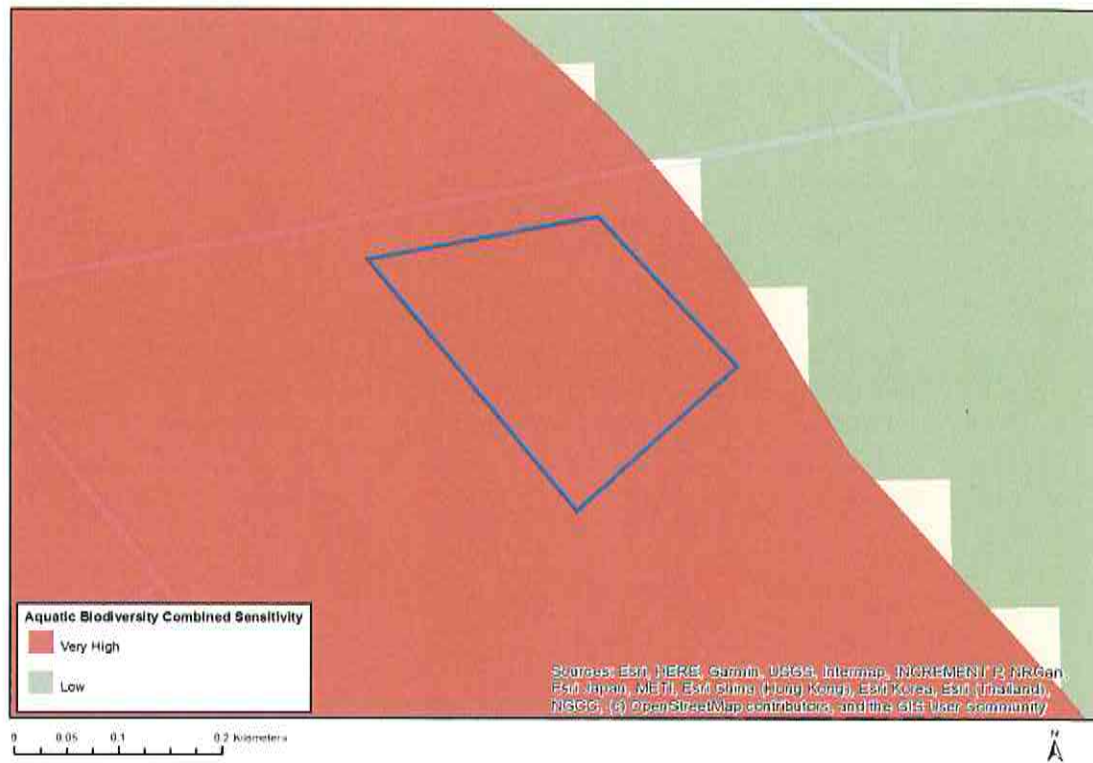


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

## MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY



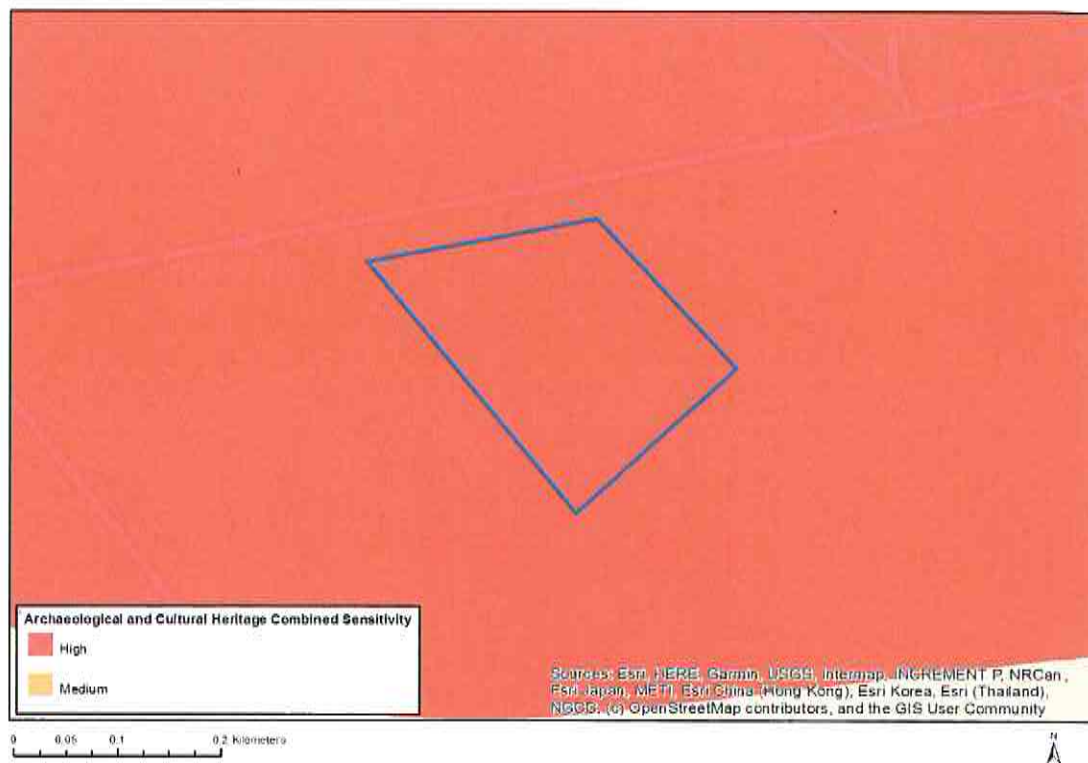
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

### Sensitivity Features:

Sensitivity	Feature(s)
Very High	Aquatic CBAs



## MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

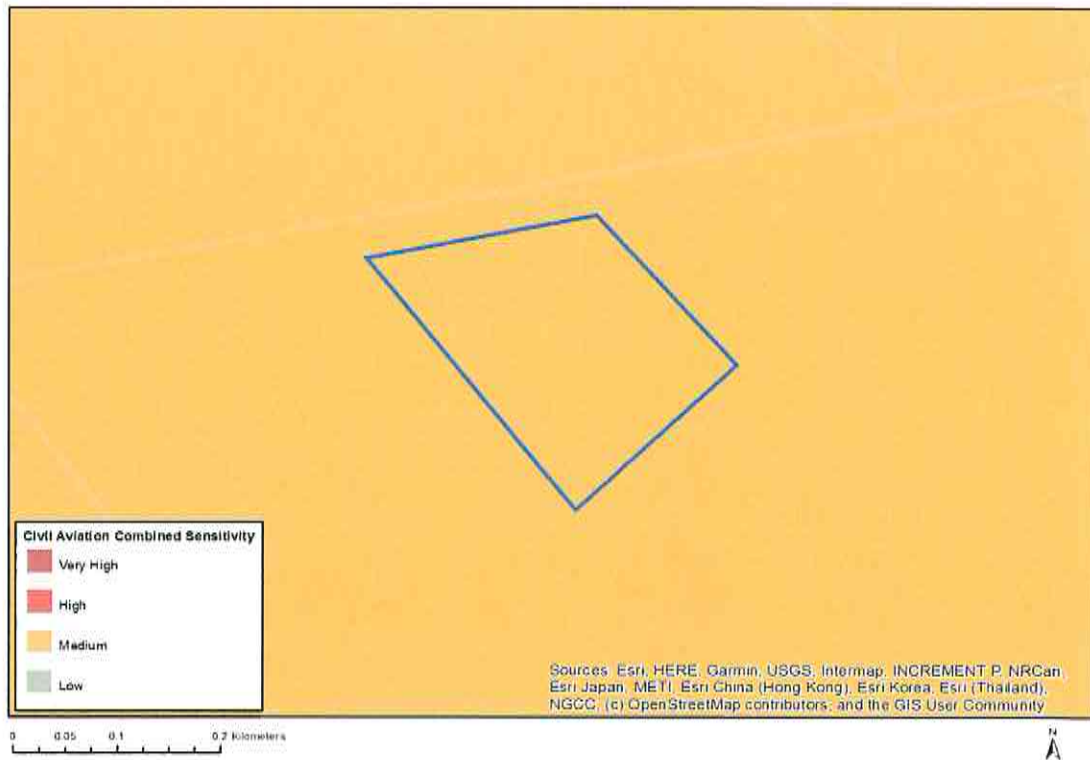


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

### Sensitivity Features:

Sensitivity	Feature(s)
High	Within 1 km of a protected area

## MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

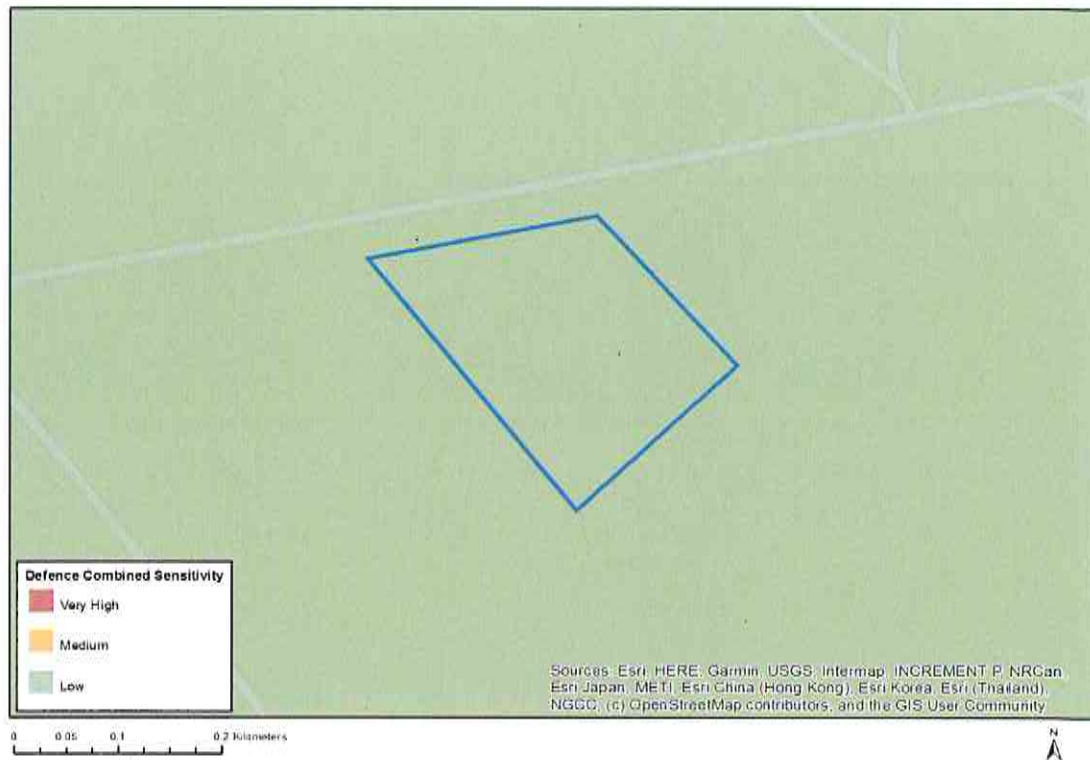


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

### Sensitivity Features:

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

## MAP OF RELATIVE DEFENCE THEME SENSITIVITY

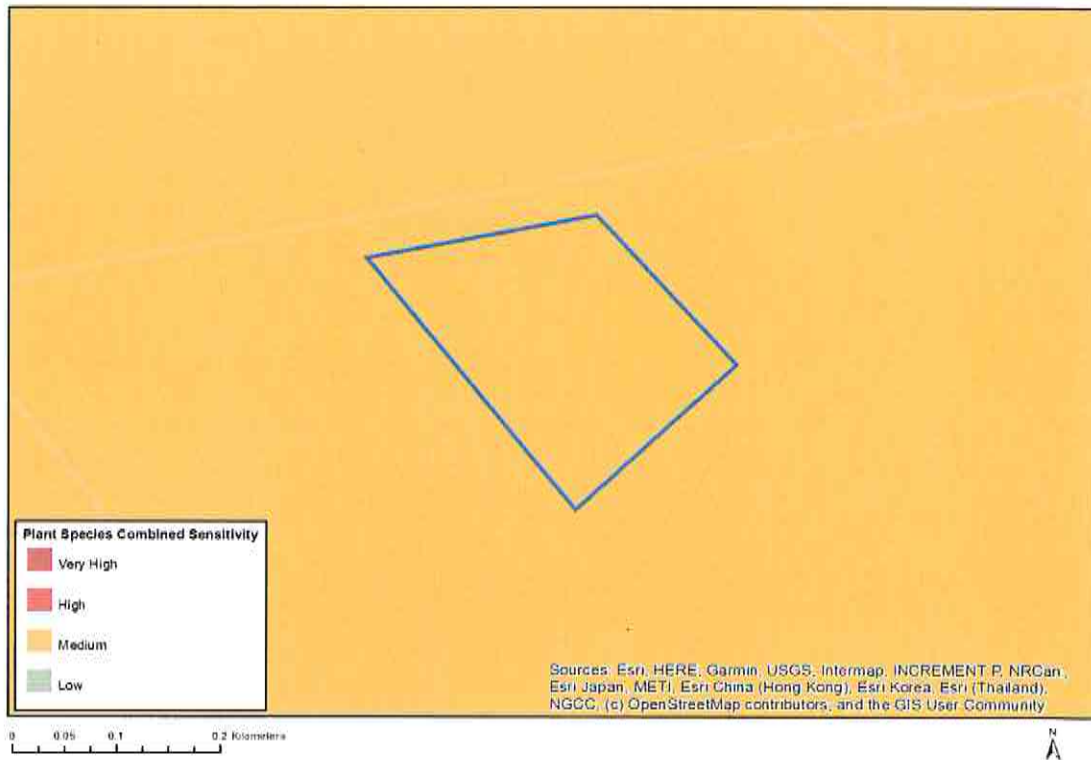


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

### Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

## MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY

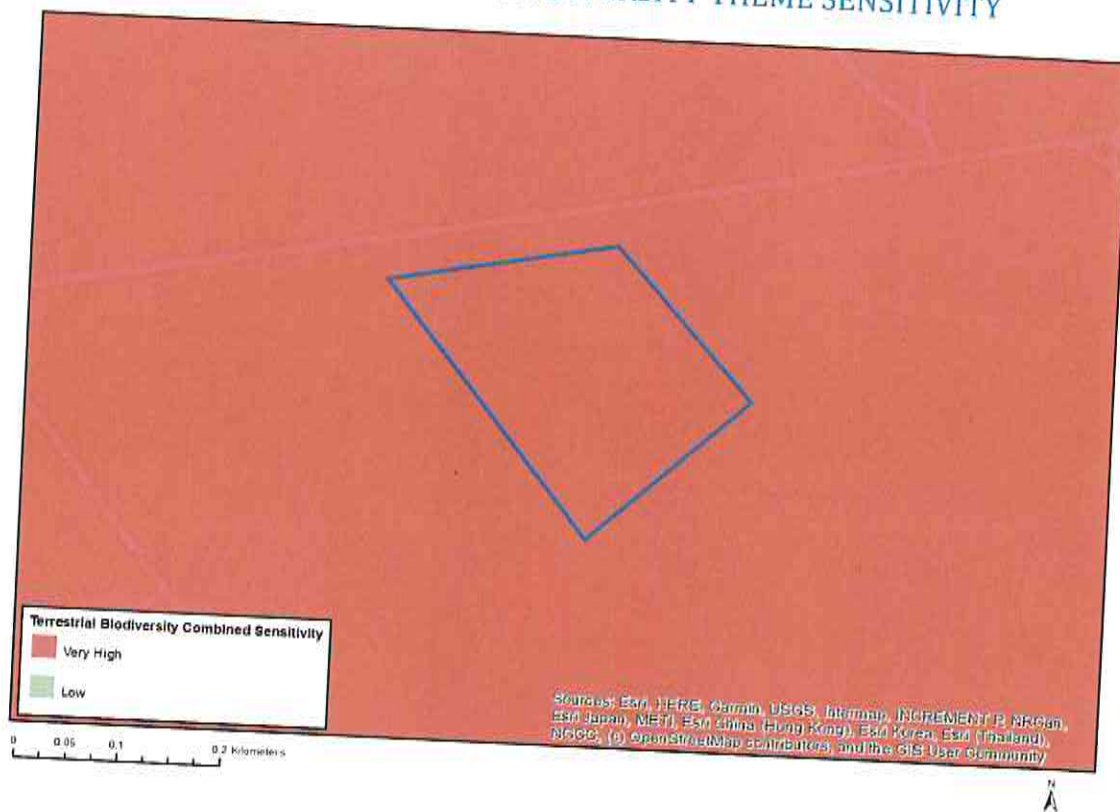


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

### Sensitivity Features:

Sensitivity	Feature(s)
Medium	Sensitive species 120

# MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

### Sensitivity Features:

Sensitivity	Feature(s)
Very High	Ecological Support Area 2
Very High	Endangered ecosystem