mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

and

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

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

NAME OF APPLICANT: **Onalenna Group (Pty) Ltd (PTY) Ltd**
TEL NO: **082 576 3659**
FAX NO: **-**
POSTAL ADDRESS: **1886 Pebble House, Cashan Ext 9, Rustenburg**
FILE REFERENCE NUMBER SAMRAD: **NW30/5/1/3/2/12234PR**

1. IMPORTANT NOTICE

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

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

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

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

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

2. OBJECTIVE OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

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

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

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

(c) identify the location of the development footprint within the preferred site based on an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects of the environment;

(d) determine the—

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

  (ii) degree to which these impacts—

    (aa) can be reversed;

    (bb) may cause irreplaceable loss of resources, and

    (cc) can be avoided, managed or mitigated;

(e) identify the most ideal location for the activity within the preferred site based on the lowest level of environmental sensitivity identified during the assessment;

(f) identify, assess, and rank the impacts the activity will impose on the preferred location through the life of the activity;

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

(h) identify residual risks that need to be managed and monitor

PART A

SCOPE OF ASSSSMENT AND ENVIRONMENTAL IMPACT ASSESSMENT REPORT

3. Contact Person and correspondence address

a) Details of

(i) Details of the EAP

Name of the Practitioner: **DERA Environmental Consultants** - Mr. Daan Erasmus
Tel No.:018 468 5355
Fax No.:018 468 4015
E-mail address:daane@dera.co.za

(ii) Expertise of the EAP.

(1) The qualifications of the EAP
(with evidence).

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

Figure 1 – Copy of Qualification

TECHNIKON PRETORIA

BACCALAUREUS TECHNOLOGIAE

LANDBOU: VOORLIGTING **AGRICULTURE: EXTENSION**

Toegeken aan Awarded to

DANIEL ELARDUS ERASMUS

91004437 1970-09-07

met ingang van with effect from

1997-01-01

Registrateur (Akademies)
Registrar (Academic)

Rektor/Rector

No. 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

Landbou-ekonomie I, II en III	Agricultural Economics I, II and III
Voorligtingsmetodiek I en II	Extension Method I and II
Akkerbou I, II en III	Field Husbandry I, II and III
Weidingkunde A	Pasture Science A
Bodembeplanning I en II	Land Use Planning I and II
Bodembewaring I	Soil Conservation I
Grondkunde I en II	Soil Science I and II
*Meganisasie	Mechanisation*
Fisiese Wetenskap	Physical Science
Melkproduksietegnologie	Milk Production Technology
Vleisbeesproduksietegnologie	Beefer Production Technology
Kleinveeproduksietegnologie	Small Stock Production Technology
Grondklassifikasie III	Soil Classification III

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Minimum Opleidingstydperk: 3 Jaar
Minimum Training Period : 3 Years

SERTEC
Uitvoerende Direkteur
Executive Director

Nr No ND1117/94

TECHNIKON
Rektor/Rector

(2) Summary of the EAP's past experience.
(In carrying out the Environmental Impact Assessment Procedure)

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

27 Lewis Street
Wilkoppies
Klerksdorp

Phone +2718-468-5355
Fax +2718-468-4015
E-mail: dera@xsinet.co.za

DAAN ERASMUS

Curriculum Vitae
Daniël Elardus Erasmus

February 2015

Personal Information

Name:	Daniël Elardus Erasmus
Date of Birth:	7 September 1970
Place of Birth:	Ottosdal, North West Province, South Africa
Marital Status:	Married with two children

Secondary & Post Secondary Education

1983-1988	Wolmaransstad High School, North West, SA Higher School Certificate – with Full Exemption	
Subjects:	English Mathematics Geography	Afrikaans Science Accounting
1989-1990	Military Service, Potchefstroom, SA Artillery Division **Officers Course: II Lieutenant**	
1991-1994	Technikon Pretoria, Pretoria, SA **National Diploma** Agriculture: Resource Utilization	
Subjects:	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	Technikon Pretoria, Pretoria, SA **Baccalaureus Technologiae** Agriculture: Extension	

Subjects:	Agricultural Communication I Agricultural Extension IV Crop Production IV Research Methodology
1998-1999	Orange Free State University, Bloemfontein, SA Completed all subjects as part of the **Masters Degree in Sustainable Agriculture**, but have not yet completed the script.
Subjects:	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
Courses	Computer training Dbase IV Seminar in public speaking Veld assessment course Resource Identification and utilization course ArcView GIS course Persuasion Skills course Wetlands identification course Rehabilitation of Wetlands course Management skills course Agricultural Law course

Professional Experience

1991-2002	Commenced professional career as resource conservation inspector at the National Department of Agriculture – Directorate: Land Resource Management in 1991. The main activities was veld inspecting in order to monitor correct utilization of natural resources and where necessary take steps according to Act. Day to day activities included discussions and lectures at farmers unions; municipalities and other institutions in order to promulgate the Act. During 1998, I was appointed as Chief Resource Conservation Inspector, with duties being: manage the administration of Act 43 of 1983, Agricultural Resource Conservation Act in the North West Province of SA; management of personnel and personnel related matters; management of budget of regional office in Potchefstroom; monitoring mine rehabilitation and environmental management out of agricultural point of view; management and control of declared weeds and invader species.
2003-Present	Began own company – DERA Environmental Consultants. Main scope of business: Compiling and submission of mining related applications; Manage and compile legal environmental documents. Further doing monitoring work to evaluated compliance to environmental legislation; evaluating outstanding rehabilitation liabilities for mining companies. Assist legal companies in determining environmental damage. Do assessment for closure applications. Give guidance in rehabilitation practices. Compile applications and basic assessment reports for chicken broilers and feed lots based on experience form management of the natural resources and the mitigation of impacts.

b) Location of the overall Activity

Farm Name:	Bokfontein 448 JQ ✓ **Portion 65;** ✓ **Portion 66;** ✓ **Portion 67;** ✓ **Portion 68**
Application area (Ha)	8.91 ha
Magisterial district:	Brits
Distance and direction from nearest town	Approximately 15 km west of Brits
21 digit Surveyor General Code for each farm portion	T0JQ00000000044800065 T0JQ00000000044800066 T0JQ00000000044800067 T0JQ00000000044800068

c) Locality map

(Show nearest town, scale not smaller than 1:250000).

Locality Map, see attached as Appendix 1(a).

d) Description of the scope of the proposed overall activity.

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

(i) Listed and specified activities

Appendix 1 – Infrastructure Map.

NAME OFACTIVITY (All activities including activities not listed) (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc..etc.)	Aerial extent of the Activity (Ha or m²)	LISTEDACTIVITY Mark with an 'X' where applicable or affected.	APPLICABLELISTING NOTICE(GNR544,GNR 546 or GNR546)/NOT LISTED
Bulk sampling (Activity 19, Listing 2)	1.5 ha	X	**GNR 325**
Prospecting including Washing and Processing (Activity 20, Listing 1)	0.5 ha	X	**GNR 327**
Clearing of an area 1ha and more (Activity 27, Listing 1)	1.5 ha	X	**GNR 327**

(ii) Description of the activities to be undertaken

(Describe Methodology or technology to be employed, including the type of commodity to be prospected/mined and for a linear activity, a description of the route of the activity)

ITEM	DESCRIPTION
Environmental attributes. Describe how the Environmental attributes associated with the development footprint will be determined.	The site was visited and a proper foot survey was conducted The activities that will be conducted by the applicant will be discussed on site as described in the Prospecting Works Programme. The environmental setting on site and surrounding with the experience of the EAP will give an idea and lead to environmental attributes.
Identification of impacts and risks. Describe the process that will be used to identify impacts and risks.	The activities will take place according to the Prospecting Works Programme will be discussed in detail with the applicant on site. With the specific environmental setting in mind and more specifically, the type of soil, soil depth, land use, vegetation type, and distances to open water and structures, the EAP will be able to identify potential impact areas where significant impacts might occur and the risks thereof. The methods of rehabilitation that need to be done, in order to meet the objective of the final land use will also be taken in consideration.
Consideration of alternatives. Describe how alternatives, and in particular the alternatives to the proposed site layout and possible alternative methods or technology to be applied will be determined.	The prospecting will be done in 3 phases namely: Phase 1- Geological surveys Phase 2 - Test pits Phase 3- Bulk sampling through trenching. The site will be visited before the EMP/EIA is compiled. The different site alternatives will be discussed with the applicant on site. The entire application area was visited and areas that might be environmentally sensitive were identified. The proposed impacts and mitigations will also be discussed.

Process to assess and rank impacts. Describe the process to be undertaken to identify, assess and rank the impacts and risks each individual activity,	The site was visited before the EMP/EIA is compiled. The different site alternatives were discussed with the applicant on site. The entire application area was visited and areas that might be environmentally sensitive will be identified. The proposed impacts and mitigations will also be discussed. The EAP (with 21 years' experience in prospecting and mining activities) will assess the specific site for possible impacts. The assessment of impacts will be done according to a synthesis of the following assessment criteria: - Nature of the impact - Extent (spatial scale) - Duration - Magnitude or intensity of the impact (severity) - Probability The criteria that will be used to determine significance as described below. Nature of the impact: This is an appraisal of the type of effect the activity would have on the affected environment. The description includes how and what is being affected, whether it is positive or negative, as well as whether it is direct or indirect.
Contribution of specialist reports. Describe how specialist reports, if required, will be taken into consideration and inform the impact identification, assessment and remediation process.	No specialist reports required at this stage, unless specifically requested.
Determination of impact management objectives and outcomes. Describe how impact management objectives will be determined for each activity to address the potential impact at source, and how the impact management outcomes will be aligned with standards.	The Nature of the impact: This is an appraisal of the type of effect the activity would have on the affected environment. The description includes how and what is being affected, whether it is positive or negative, as well as whether it is direct or indirect. Each impact will be assessed and quantified, and management objectives according to the first two steps, will be set. The management of the objectives will be aligned with the significance of the impact, as well as to ensure a positive outcome. The outcomes will be aligned with standards on environmental management and rehabilitation of mining areas according to Department Mineral Resources.

A. DESCRIPTION OF PLANNED NON-INVASIVE ACTIVITIES:

(These activities do not disturb the land where prospecting will take place e.g. aerial photography, desktop studies, aeromagnetic surveys, etc)

The prospecting area was identified through aerial photographs. The extent of the prospecting area will be 8 hectares. Information from Geological surveys will be used in order to determine where the drilling and test pits will take place. This will in turn help to determine the boundaries of the proposed prospecting area for more detailed surveying. **See Appendix 1 (B) – Site Pan**

- **PHASE 1**

  Geological surveys will be undertaken by means of desktop studies and available geological maps. **6 months area needed for this phase.**

B. DESCRIPTION OF PLANNED INVASIVE ACTIVITIES:

(These activities result in land disturbances e.g. sampling, drilling, bulk sampling, etc)

TECHNICAL DETAIL REGARDING THE PROSPECTING METHODS

- **PHASE 2**

  Diamond Drilling Method:

  Phase 2 consists of reconnaissance drilling. The proposed drilling program consisting of 6 holes. Using a variety of drilling rigs, rods and bits, the ore body can be evaluated by drilling intersecting holes at locations predetermined by the Geologist. Drilling is done in phases, over anomalous target areas, using reconnaissance lines or a grid of 250x250m depending on the level of confidence in the targets and the level of information required. The holes will be approximately 30 metres deep depending on local depth to bedrock. The core will be drilled using a Diamond drilling rig, with a rotating diamond cutting head that will cut the core. The core will be drilled with NQ rods, and will be extracted every 3m. Water will be pumped into the core barrel to ensure the quality of the recovery of the core. Thereafter it will be packed out in core trays, marked and sampled to retrieve the necessary information. The ore body model will be generated in Surpac or Minesight software – further prospecting requirements and sampling will be based on this model. The drilling will take 12 months. In Phase 2 test pits will be made (3 m x 3 m x ± 10m deep), on a grid of 100 x 100meters and where necessary on a 50 x 50 meters grid where the gravel outcrops. This test pits are made with a 30 ton excavator, to determine if any ore does occur. This test pits will be closed up immediately before the excavator move on to the next one. It is envisaged that at least 40 test pits will be excavated. **12 Months are needed for Phase 2.**

- **PHASE 3**

  Bulk sampling through trenching:

  In order to determine the grade of the sample the ore needs to be taken out and tested, by putting it through the washing plant process. Trenching will be used to open the ore in order to get a representative sample for testing. The trenches will be 10 x 40 x ± 10 m (deep). **In one trench ± 4000m³ (8000ton) ore will be exposed, thus 12 trenches(0.48 hectares to be exposed)** and tested with a plant at a rate of 6m³ (10 ton) an hour. The total prospecting area is 534 hectares, thus it is anticipated that a total of 50 000m³ (100 000ton) will be tested by making trenches on different locations over the whole prospecting area, where the possibility of ore were identified with the test pits. Taken at an 8 hour working day, 5 days a week and 20 days a month, the applicant will be able to process 960m³ a month. **The processing of 50 000m³ will take about 42 months for Phase 3.**

e) Policy and Legislative Context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process	REFERENCE WHERE APPLIED	HOW DOES THIS DEVELOPMENT COMPLIY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT. (E.g. In terms of the National Water Act a Water Use License has/ has not been applied for)
Mineral and Petroleum Resources Development Act, 2004 (Act 28 of 2004) (MPRD)	Mineral and Petroleum Resources Development Act, 2004 (Act 28 of 2004) (MPRD)	Application for prospecting right
National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA)	National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA)	Application for Environmental Authorization
National Environmental Management Act, 1998 (Act 107 of 1998): Environmental Impact Assessment Regulations, 2014 (G38282 – R982-985)	National Environmental Management Act, 1998 (Act 107 of 1998): Environmental Impact Assessment Regulations, 2014 (G38282 – R982-985)	Submitting of scoping report and EIA/EMP
National Water Act, 1998 (Act 36 of 1998)	National Water Act, 1998 (Act 36 of 1998)	Submitting of water license.

f) Need and desirability of the proposed activities.

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

The areas applied for is believed has prospects for mineral (**various minerlas: Cobalt; Copper; Nickel; PGM's; Gold; Silver; Iron; Zink; Vanadium; Lithium; Uranium; Sample**) exploration on the applied ***Portion 65, 66, 67 & 68 of the farm Bokfontein 448 JQ*** . The applicant is only interested in these portions. The farm portions over which the application was applied for are already under pre-existing mining infrastructure and development. The entire area is already disturbed and very few areas are left where natural vegetation still exists. See **Figure 3** for Google Earth Images of existing development and infrastructure. There are sign of previous mining activities. The structures found on site are an entrance road mine associated infrastructure like workshop, ect. Access to the application area is gained by an existing road from the R512. The entire application area can already be classified as mining area more than natural areas. The main focus area is the area on the northern side of the application area. The area will be bulk sampled and rehabilitated. The area applied for is over the entire portions. After prospecting the land can be returned to natural grazing with the correct mitigation and rehabilitation. The site will be visited before the EMP/EIA is compiled. The different site alternatives will be discussed with the applicant on site. The entire application area will be visited and areas that might be environmentally sensitive will be identified. The proposed impacts and mitigations will also be discussed.

Figure 3: Google Earth Images

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

NB!! — This section is about the determination of the specific site layout and the location of infrastructure and activities on site, having taken into consideration the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout.

The application area shows potential for the applied minerals thus these specific areas need to be prospected. The farm portions over which the application was applied for are already under pre-existing mining infrastructure and development. The entire area is already disturbed and very few areas are left where natural vegetation still exists. Most of these disturbances are vegetated, stable and safe which will only rehabilitated when new trenching is going through the old disturbances. The structures found on site are an entrance road mine associated infrastructure like workshop, ect. Access to the application area is gained by an existing road from the R512.

The area will be bulk sampled and rehabilitated. The prospecting focus area will be clearly demarcated. The area applied for is over the entire portions but the main prospecting focus area will probably over already disturbed area. After prospecting the land will be used for agricultural practices again.

i. Details of the development footprint alternatives considered.

With reference to the site plan provided as **Appendix 1** and the location of the individual activities on site, provide details of the alternatives considered with respect to:

Alternative is not applicable. This will not be an alternative land use, as can be seen on Figure 3. The current land is use is mining infrastructure and development. The option to explore the possibility for mining is not an alternative land use. The applicant, ***Onalenna Group (Pty) Ltd (Pty) Ltd*** is not interested in any other alternative land use over this land aside of the exploration of ***Cobalt; Copper; Nickel; PGM's; Gold; Silver; Iron; Zink; Vanadium; Lithium; Uranium; Sample***, or any other activity, or method use other than mining for sand 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 farm portion.

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

(c) the design or layout of the activity
The layout of the activity will and can only be on the application area as per sketch plan.

(d) the technology to be used in the activity
The technology used in the activity will as described in the Prospecting Programme 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 diamonds 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

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

The process as described by NEMA for Environmental Authorization was followed. See Table 3 & 4 below for the identification of Interested and Affected Parties to be consulted with. The landowner (Chemstof (Pty) Ltd), and the direct neighbours were consulted personally and through a letter that was given to them by hand. A meeting was held at Bokfontein on the 11th of January 2018; see minutes of the meeting and letter from Chemstof (Pty) Ltd attached as **Appendix 2**. A site notice will be placed at the entrance gate of the farm. With this site notice all passers-by are requested to submit any written comments to be forwarded to the consultant (still awaiting response). See proof of consultation under **Appendix 2**.

Appendix 2 – Proof of consultation.

Table 3: Description of process to be undertaken to consult interested and affected parties

IDENTIFICATION CRITERIA	Mark with an X where applicable	
	YES	NO
Will the landowner be specifically consulted?	X	
Will the lawful occupier on the property other than the Landowner be consulted?	X	
Will a tribal authority or host community that may be affected be consulted?		X
Will recipients of land claims in respect of the area be consulted?	X	
Will the landowners or lawful occupiers of neighbouring properties been identified?	X	
Will the local municipality be consulted?	X	
Will the Authority responsible for power lines within 100 meters of the area be consulted?		X
Will Authorities responsible for public roads or railway lines within 100 meters of the area applied for be consulted?		X
Will authorities responsible for any other infrastructure within 100 meters of the area applied for be consulted? (Specify)		X
Will the Provincial Department responsible for the environment be consulted?	X	
Will all of the parties identified above be provided with a description of the proposed mining /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 4: Furthermore the details of the engagement process to be followed are as reflected below.

Steps to be taken to notify interested and affected parties (Describe the process to be undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. Photographs of notice and copies of advertisements and notices notifying potentially interested and affected parties of the proposed application are attached as **Appendix 2**).	**PROVIDE DESCRIPTION HERE** The landowner will be consulted with in person and a surface lease agreement will be signed between the applicant and parties to set the terms of reference. The neighbours will be informed personally, consulted by the applicant and confirmed in the writing. A consultation letter will be sent to the Local Municipality.
Information to be provided to Interested and Affected Parties.	**Compulsory** The site plan. List of activities to be authorized Scale and extent of activities to be authorized Typical impacts of activities to be authorized (e.g. surface disturbance, dust, noise, drainage, fly rock etc.) The duration of the activity. 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)
	Other, specify: a prospecting works programme

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

iii) Summary of issues raised by I&Aps

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

Interested and Affected Parties List the names of persons consulted in this column, and Mark with an "X" where those who must be consulted were in fact consulted.		Date sent and/or Comments Received	Issues raised	EAP's response to the applicant
AFFECTED PARTIES				
Chemstof (Pty) Ltd. Represented by Mynie Stoffberg (CEO) P.O. Box 2076, Protea Park, 0305 Tel: 082 809 8415 E-mail: admin@chemstof.com	X	24 Nov 2017 11 Jan 2017	Consultation letter Confirmation that letter was received. Meeting was held at Bokfontein, see minutes of the meeting attached.	
Lawful occupier/s of the land				
Landowners or lawful occupiers on adjacent properties	X			
(Neighbours)		24 Nov 2017 11 Jan 2018	Community meeting will be held on 20 January 2018, and Onalenna Group was invited to the meeting	
Municipal councilor				
Municipality	X			
Madibeng Local Municipality LED Manager: Johanna Motswatswe Fax: 012 318 9203		27 Nov 2017 11 Dec 2017	No response	
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA.				
Eskom				
Communities				
Dept. Land Affairs	X			
Mr. KeatbesweMothupi, Office of the Regional Land Claims Commissioner, N W Province; Private Bag X08, Mmabatho, 2735; Fax: 018 389 9641		24 Nov 2017 11 Dec 2017	E-mail sent	Comments received 13 Dec 2017. No land claim
Traditional Leaders				
N/A				
Dept. Rural, Environment and Agricultural Development	X			
Ourna Skosana Agricentre Building, Cnr James Moroka & Stadium Road, Mmabatho, 2735 E-mail: oskosana@nwpg.gov.za		12 Dec 2017 April 2018	Scoping Report was sent with Fastway couriers for comments EMPr&EIA sent with Fastway Couriers for comments	No objection – Comments received 5 March 2018
Dept. Water and Sanitation	X			
Cornia Theunissen Private Bag X357, Hartebeespoort, 0216 Tel: 012 253 1026 E-mail: theunissenc@dwa.gov.za		12 Dec 2017 April 2018	Scoping Report was sent with registered post for comments. EMPr&EIA sent with Fastway Couriers for comments	Acknowledgement received 22 Jan 2018
Dept. Agriculture, Forestry and Fisheries	X			
Maurice Vuyega Louis le Grange Building, Cnr Peter Mokaba & Wolmarans street,3rd Floor, Office nr 318, Potchefstroom, 2520		12 Dec 2017 April 2018	Scoping Report was sent with Fastway couriers for comments. EMPr&EIA sent with Fastway Couriers for comments	No comments received

Dept. Rural Development and Landform				
Other Competent Authorities	X			
Provincial Heritage Resources Agency J.Dipale Corner Tillard & Warren Street, Mafikeng, 2745 Tel: 018 381 2032 E-mail: jdipale@nh.sahra.org.za		12 Dec 2017	Scoping Report was sent with Fastway couriers for comments.	No comments received.
OTHER AFFECTED PARTIES				
SAHRIS P.O .Box 4637, Cape Town. 8000 Tel: 021 202 8643 E-mail: info@sahra.org.za		May 2018	Case ID	
INTERESTED PARTIES				

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

(environmental attributed described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects)

(1) Baseline Environment

Introduction:

The purpose of this section is to provide information on the environment in which the proposed prospecting activities will take place, with a view to identify sensitive issues/areas, which need to be considered when conducting the impact assessment. The application is over the: ***Portion 65, 66, 67 & 68 of the farm Bokfontein 448 JQ***. This area consists of existing mining development and infrastructure and patches of natural areas.

Magisterial District:

Brits.

Direction from neighbouring town:

The driving direction and distance to proposed application area are 15 min (7.8 km) via R512 from the Saps – Britscells, Kerk Street, Brits, 0250. Head southwest on Kerk Street toward Murray Avenue for 750 m. Turn left onto Rutgers Street drive for 1.5 km. Continue onto R512 for 4.3 km. Turn right continue for 1.1 km. Turn right and drive for 240 m, the proposed application area will be on the right.

Longitude (approximate center of mining site):

25.594772 E

Latitude (approximate center of mining site):

-25.741795 S

Existing Surface Infrastructure:

The farm portions over which the application was applied for are already under pre-existing mining infrastructure and development. The structures found on site are an entrance road mine associated infrastructure like workshop, ect. Access to the application area is gained by an existing road from the R512.

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

(its current geographical, physical, biological, socio- economic, and cultural character).

Climate:

Summer rainfall with very dry winters. MAP between about 600 and 700 mm. Frost fairly frequent in winter. Mean monthly maximum and minimum temperatures for Brits-Agr 35.3°C and —3.3°C for January and June, respectively. Corresponding values are 35.3°C and —1.4°C for Rustenberg (November and July) and 32.8°C and —1.0°C for Pretoria University Experimental Farm (January and July). This unit has a relatively more temperate climate than the SVcb 1 Dwaalboom Thornveld.

Geology & Soil:

Most of the area is underlain by the mafic intrusive rocks of the Rustenburg Layered Suite of the Bushveld Igneous Complex. Rocks include gabbro, norite, pyroxenite and anorthosite. The shales and quartzites of the Pretoria Group (Transvaal Supergroup) also contribute. Mainly vertic melanic clays with some dystrophic or mesotrophic plinthic catenas and some freely drained, deep soils. Land types mainly Ea, Ba and Ae.

Vegetation [Flora] and Landscape Features:

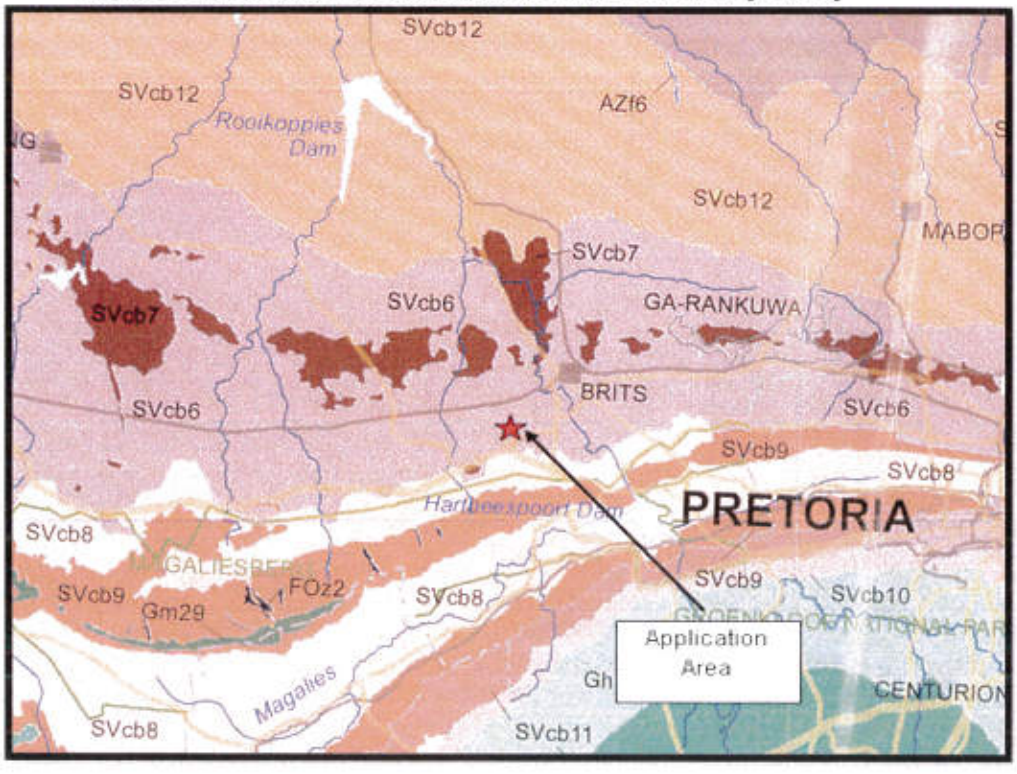
VEGMAP (2006) classified this area as part of the (SVcb 6) Marikana Thornveld. VT 19 Sourish Mixed Bushveld (46%), VT 13 Other Turf Thornveld (34%) (Acocks 1953). LR 14 Clay Thorn Bushveld (60%) (Low & Rebelo 1996).

Distribution: Distribution North-West and Gauteng Provinces: Occurs on plains from the Rustenburg area in the west, through Marikana and Brits to the Pretoria area in the east. Altitude about 1 050— 1 450 m. [See **Figure 4** below]. Open *Acacia karroo* woodland, occurring in valleys and slightly undulating plains, and some lowland hills. Shrubs are more dense along drain-age lines, on termitaria and rocky outcrops or in other habitat protected from fire. [See **Figure 5** below].

Important Taxa- Tall Tree: *Acacia burkei.* Small Trees: *Acacia caffra* (d), *A. gerrardii* (d), *A. karroo* (d), *Combretum molle* (d), *Rhos lancea* (d), *Ziziphus mucronata* (d), *Acacia nitotica, A. tortills* subsp. *heteracantha, Celtis africana, Dombeya rotundifo-lia, Pappea capensis, Peltophorum africanum, Terminalia seri-cea.* Tall Shrubs: *Euclea crispa* subsp. *crispa* (d), *Olea europaea* subsp. *africana* (d), *Rhus pyroides* var. *pyroides* (d), *Diospyros lycioides* subsp. *guerkei, Ehretia rigida* subsp. *rigida, Euclea undulata, Grewia flava, Pavetta gardeniifolia.* Low Shrubs: *Asparagus cooperi* (d), *Rhynchosia nitens* (d), *Indigofera zeyheri, Justicia* flava. Woody Climbers: *Clematis brachiata* (d), *Helinus integrifolius.* Herbaceous Climbers: *Pentarrhinum insipidum* (d), *Cyphostemma cirrhosum.* Graminoids: *Elionurus muticus* (d), *Eragrostis lehmanniana* (d), *Setaria sphacelata* (d), *Themeda triandra* (d), *Aristida scabrivalvis* subsp. *scabrivalvis, Fingerhuthia africana, Heteropogon contortus, Hyperthelia dissoluta, Mefinis nerviglumis, Pogonarthria squarrosa.* Herbs: *Hermannia depressa* (d), *Ipomoea obscura* (d), *Barieria macrostegia, Dianthus mooiensis* subsp. *mooiensis,* Ipomoea *oblongata, Vemonia oligocephala.* Geophytic Herbs: *Ledebouria revoluta, Omithogalum tenuifolium, Sansevieria aethlopica.*

Conservation status: Endangered. Target 19%. Less than 1% statutorily conserved in, for example, Magaliesberg Nature Area. More conserved in addition in other reserves, mainly in De Onderstepoort Nature Reserve. Considerably impacted, with 48% transformed, mainly cultivated and urban or built-up areas. Most agricultural development of this unit is in the western regions towards Rustenburg, while in the east (near Pretoria) industrial development is a greater threat of land transformation. Erosion is very low to moderate. Alien invasive plants occur localised in high densities, especially along the drainage lines. Remark: A few small ridges of SVcb 9 Gold Reef Mountain Bushveld in the Pretoria area have not been mapped separately from this unit. **References Van der Meulen (1979), Van Rooyen (1983, 1984), Panagos et al, (1998).**

Figure 5: The VEGMAP classification: Marikana Thornveld [SVcb 6]



Animal Life [Fauna]:
Small animals common in this area are: Steenbuck, Duiker, Jackal and Meer cats.

Topography:
The site has one terrain type, which is characterized as valleys and slightly undulating plains, and some lowland hills. The slope varies around <0.1% to not more than 3%.

Surface Water:
This application area fall within the water management area of the **Crocodile (West) and Marico [3]** and secondary catchment area A21 and tertiary drainage region A21J. A tributary of the Krokodil River flow along the western boundary of the application area. This stream area however only seems to have water flow or standing water during the rainfall periods. There are further four open mining pits filled with water on the neighbouring portions (not part of this application).

Ground Water:
There are boreholes on the application area used mining purposes and domestic use. The applicant intends to use water from these current boreholes. The water uses will be 100m³ a day for the primary processing in the bulk sampling phase.

Air Quality:
There are already an existing accumulative impact on air quality because of pre-existing mining activities in this area, see **Figure 3**. The impact on air quality because of these prospecting activities will be minimal in relation to bigger mining operations surrounding it. This impact will be low and will be monitored and mitigated trough wetting of the roads.

Noise:
The impact of noise will only start with the bulk sample where noise from the mining equipment will be generated. This operation will only be in day time working hours and will have a low impact on current surroundings. The impact on noise because of these prospecting activities will be minimal in relation to bigger mining operations surrounding it.

Sites of Archaeological and Cultural Interest:
No graveyards.

According to Section 36(3) of the National Heritage Resources Act 25 of 1999 no person may, without a permit issued by SAHRA or a provincial heritage resources authority—

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

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

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

It is recommended that the graveyard is included in the overall management plan of the mine development. Preservation of the site will require that the area is properly demarcated with at least a 20m buffer zone placed around the graveyard in order to avoid potential damage during mining activities. It will be necessary to ensure that the graveyard is accessible to the relatives of the

deceased. There are no major archaeological grounds to halt the proposed development. However, the potential occurrence of unmarked graves or subsurface finds not recorded during this survey can never be excluded, so it is advised that SAHRA and a qualified archaeologist are informed immediately if archaeological objects are uncovered.

Sensitive Landscapes:

The dry tributary running along the western boundary fence may be seen as sensitive landscape, and all prospecting activities should be kept 100m horizontally away for its banks and associated wetland areas.

Visual Aspects:

These prospecting activities will be visible to the neighbours and motorist travelling on the N4, but will be a small impact in relation to surrounding big mining operations.

Social:

The proposed activity will employ 7 people, of which a few are resident around the operation. Various social amenities are available close to the operation. These include schools, hospitals churches, recreation facilities as well as a Police Station at Brits, which is located approximate 8km north-east of the operation.

(b) Description of the current land uses.

The current land use is pre-existing mining. The majority of the application area is used for under existing mining infrastructure of disturbance.

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

Please refer to Section 2 (d)(ii)Table 2 for a description of the activities and the infrastructure which are foreseen to form part of the proposed activity. The structures found on site are an entrance road mine associated infrastructure like workshop, ect.

(d) Environmental and current land use map.

(Show all environmental and current land use features)

Current land use of the application is mining with patched of undisturbed natural veld. The landowner uses the area for mining related activities. See **Appendix 1(b) [Infrastructure Map]** for more detail.

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

(Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impacts of such activities, and as informed by the consultations with affected parties together with the significance, probability, and duration of the impacts. Please indicate the extent to which they can be reversed, the extent to which they may cause irreplaceable loss of resources, and can be avoided, managed or mitigated).

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

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

IMPACT SIGNIFICANCE IDENTIFICATION MATRIX FOR BOKFONTEIN 448 JQ

			A	B	C	D	E	F	E	F	G	H	I	J	K	L	M	N
	PHASE	Components	ABIOTIC									BIOTIC			VISUAL	SOCIO-ECONOMIC		
		Impacts	Geology	Topography	Soil	Land capability	Land use	Surface water	Ground water	Air quality	Noise	Vegetation	Wildlife	Sensitive landscapes	Visual impact	Archaeological & cultural sites	Socio-economic	Affected parties
		Activity, Product or Service																
1		Demarcation of mine focuses area.			L	M	L						M		M			
2		Establishment (site preparation, vegetation clearance, topsoil removal and stockpiling) of proper access roads (upgrade existing road), site workshop & storage area (temporary containers), mineral processing plant conveyor, mobile screen and generator, etc.) Initial vegetation clearance, topsoil removal & stockpiling next to first opencast/pit/trench within the mine focus area.		M	H	H			M	H	H	H	H	L	M		L	M
3	Construction	Establishment of bunded diesel and oil/chemical storage facilities, chemical toilets		M	M	H		M	M			M			M			
4		Provision of storage tanks for potable (drinking water) and process water (dust suppression).		H	H	H	H	L	M	M	H	H	H	M	L	L		
5		Provision of waste handling/disposal facilities (domestic & industrial waste bins.			L			L	L					L				
6		Fencing –off active mining site in as required in terms of the MHSA. Ensure access control (gate), etc.				M							M		M			H+
7		Vegetation clearance, topsoil removal & stockpiling net to opencast/pit/trench within the mine focus area (1 ha of surface area disturbed at any given time).		M	H	H	M	L		L		H	L		L		M	H
8		Mechanically excavating overburden with an excavator and stockpile separately from topsoil dump. Remove gravel with excavator and stockpile on side of trench/pit to load onto trucks	H	H+	H	H	H	L	M	L	L	H	L		L+		M	H
9		Transport with trucks to mineral processing plant (conveyor, screen,) for processing and sorting of concentrate at set intervals.			H			L	H	L	L	H			M+		M	H
10	Operational	The wet waste tailings coming out of the pans will be pumped to open excavations & pond/ dam, from where excess water is re-cycled. Backfilling of excavations (as part of concurrent rehabilitation): the coarse gravel (rough) sifted from the pans will be transported back by frond end-loaders towards all open pits fro backfilling.	M	H	H	H	H	H	M	L	L						M	H

			A	B	C	D	E	F	E	F	G	H	I	J	K	L	M	N
	PHASE	Components	ABIOTIC									BIOTIC			VISUAL	SOCIO-ECONOMIC		
		Impacts	Geology	Topography	Soil	Land capability	Land use	Surface water	Ground water	Air quality	Noise	Vegetation	Wildlife	Sensitive landscapes	Visual impact	Archaeological & cultural sites	Socio-economic	Affected parties
		Activity, Product or Service																
11		Final backfilling of all voids/trenches/pits and loping of overburden dumps (excess material as the result of swell factor).	H+	H+	H+	H+	H+	H+	H+	L	L				L		H+	H±
12		Compaction of backfilled sites		H+	H+	H+	H+	H+	H+		L						H+	H+
13	Decommissioning and closure	Replace and spread all topsoil evenly over backfilled sites.			H+	H+	H+	H+	H+	H+	L	H+	H+		H+		H+	H+
14		Establishment of vegetation cover			H+	H+	H+	H+	H+	H+		H+	H+		H+		H+	H+
15		Removal of all temporary & demolition of all permanent structures (Section 44 of the MPRDA).			H+	H+	H+	H+	H+	H+	L	H+	H+		H+		H+	H+
16		Rehabilitation of all access roads, compacted areas, etc.			H+	H+	H+	H+	H+	H+	L	H+	H+		H+		H+	H+

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

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

I. Introduction:

Table 9 describes and evaluates the effects of the different prospecting projects and the associated activities on the natural and social environments. The different environmental components, on which the project (can/may) have an impact, are:

1. Geology
2. Topography
3. Soil
4. Land Capability
5. Land Use
6. Vegetation
7. Wildlife
8. Surface Water
9. Ground Water
10. Air Quality
11. Noise
12. Archaeological and Cultural sites
13. Sensitive Landscapes
14. Visual Aspects
15. Socio-economic Structure
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 farm roads to be upgraded)
2. Temporary office, workshops, ablution facility, water tanks, diesel tanks and other temporary buildings
3. Prospecting equipment (conveyor, drum screen, washing pans, generator)
4. Stockpiles
5. Overburden dumps
6. Opencast trenches (as part of bulk sampling)
7. Tailings dam (porrel dam)

II. Environmental Impact Assessment Summary:

- **Environment likely to be affected by the prospecting operation. (See Appendix 1 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 &	X		
16. ARCHAEOLOGICAL			X

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

Prospecting will be a new land use over this area. The site that is earmarked for prospecting represents ± 1 % of the total area applied for. And it is further not foreseen that prospecting activities would disturbed an area of not more than 1 ha at any given time. The rest of the terrain would continue to be used for agriculture purposes by the landowner.

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

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

*Explanation of **probability** of impact occurrence*

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

*Explanation of **extent** of impact*

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

*Explanation of **duration** of impact*

Duration of	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	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.

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

ASPECT	IMPACTS				CUMULATIVE IMPACTS
1. GEOLOGY					
Nature of the impact	Geology will be destroyed during the opencast prospecting operation. During operation which will be for the next 5 years, the mineral resource (various minerals) will be extracted. Waste rock material/overburden material is disposed off/backfilled in existing excavations as part of the prospecting process.				
Extent	Site				Activity causing the impact
Duration	Permanent				An opencast prospecting method will be used to extract bulk samples. Therefore the original geology will be totally destroyed.
Probability	Definite				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X		

ASPECT 2. TOPOGRAPHY	IMPACTS				CUMULATIVE IMPACTS
Nature of the impact	* **Change in landform** : * The prospecting site is situated on: level plains some relief. * **Disturbance of the surface drainage:** The prospecting of the ore will result in the creation of trenches (3x3 m or less), that act as depressions in the environment that captures run-off. Prospecting activities will be concentrated as indicated on **Appendix 1** on the application area (approximately 10 m depth). Normal surface drainage will be disturbed at a given point. Run-off if any will be diverted away from the specific site.				
Extent	Site				Activity causing the impact
Duration	Very long to Permanent				Bulk sampling trough trenches, etc.
Probability	Definite				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

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

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 /tailings dumps, cause compaction of soil. All prospecting activities will be concentrated on the identified prospecting focus area where deposits could be found. In the same time a certain surface area is therefore alienated. The active prospecting surface area (alienated) would be restricted within the ±0.7 ha at any given time (in relation to area of application of the prospecting right of 8.9 ha) for the next 5 years.				
Extent	Site				Activity causing the impact
Duration	Long				Site preparation for additional prospecting sites and the construction, operation of listed infrastructure.
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

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

ASPECT	IMPACTS				CUMULATIVE IMPACTS
4.LAND CAPABILITY					
Nature of the impact	**Temporary loss of land capability**. The small area (0.7 ha) where the active prospecting activities occur (trenches, stock piles, prospecting equipment) etc. will thus be temporary alienated, until the area is rehabilitated. All trenches would be rehabilitated as part of the prospecting process during which trenches are back-filled. The rest of the application area will still be used by the landowner as agricultural land.				
Extent	Site				Activity causing the impact
Duration	Long				Site preparation for additional prospecting sites and the construction, operation of listed infrastructure, the land capability of the active prospecting area will be totally destroyed.
Probability	Definite				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
5. LAND USE					
Nature of the impact	This is a not a new prospecting operation and therefore will not really loose its land use as it has already been disturbed by mining activities on the applied portions of the 8.9 ha during the next 5 years. Only a small portions of land (0.7 ha at a time) would be affected by the prospecting operation relation to the total prospecting right application area of 8.9 ha. All trenches would be rehabilitated as part of the prospecting process during which excavations are back-filled.				
Extent	Site				Activity causing the impact
Duration	Long to permanent				Site preparation for prospecting and the construction, operation of listed infrastructure
Probability	Definite				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X		

ASPECT	IMPACTS				CUMULATIVE IMPACTS
6.VEGETATION					
Nature of the impact	Vegetation clearance, disturbance and trampling. Destruction of habitats for vegetation. Due to a disturbed ecosystem, bare ground and spreading of exotics can follow.				
Extent	Site				Activity causing the impact
Duration	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
6.VEGETATION					
Nature of the impact	Habitat change, loss of species, spread of alien and invasive species.				
Extent	Site				Activity causing the impact
Duration	Permanent				The change in the current habitat will be mitigated during final rehabilitation.
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X		

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

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

ASPECT	IMPACTS	CUMULATIVE IMPACTS
7. WILDLIFE		
Nature of the impact	Restoration of habitat.	None
Extent	Site	Activity causing the impact
Duration	Short	As rehabilitation progresses the habitat of certain species will be restored/created (Closure objective)
Probability	Low	

Significance	Low				Animals will probably only move back when human movement is limited.
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

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

ASPECT	IMPACTS				CUMULATIVE IMPACTS
8. SURFACE WATER					
Nature of the impact	Change in surface water quality. Spillages from vehicles and also surface water run-off that is not adequately diverted away from the active prospecting excavations could end-up in the excavations creating problems regarding water quality and hindering the prospecting process. Surface run-off from active prospecting sites (overburden dumps & tailings dam/dump) if not adequately contained on site could end-up in the adjacent undisturbed natural veld. If the natural surface run-off is not adequately diverted in the case of the dry-water course area, prospecting sections it could become silted-up.				
Extent	Local				Activity causing the impact
Duration	Short				"Dirty / Clean" water systems at facilities like the overburden dumps, roads, trenches, etc. may impact on the quality of the surface water. The water should be contained in the surface runoff control 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
8. SURFACE WATER					
Nature of the impact	Change in surface water quantity: **Water management area (3) : Crocodile (West) and Marico** **Stream name: The mine falls under the primary drainage region C21 and in quaternary sub-catchment C21J.** Notwithstanding the above-mentioned facts, it is not expected that prospecting operations will have any effect on the boundaries or the general water flow of the catchment. Standing water in trenches could as the result of rain/ surface run-off ending up in shallow depressions.				
Extent	Site				Activity causing the impact
Duration	Long				It is an operational objective to contain or divert all surface run-offs from the active prospecting trenches area mainly due to pollution (sediment) potential. This will reduce the run-off quantity, although small in comparison with the drainage area in total.
Probability	High				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X		

ASPECT	IMPACTS	CUMULATIVE IMPACTS
9. GROUND WATER		
Nature of the impact	Reduction of groundwater quality Prospecting activities are not likely to impact on local ground-water quality. No chemicals area used during the prospecting process. Handling of waste and transport of building material can cause various types of spills (domestic waste, pit latrines, hydrocarbons) which can infiltrate and contaminate of the groundwater system.	
Extent	Site	Activity causing the impact
Duration	Long	
Probability	Definite	
Significance	High	

Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

9. GROUND WATER					
Nature of the impact	Even though abstraction is likely to have a minimal effect on the surrounding groundwater users, this is a new use, and groundwater levels are expected to continue current trends. Groundwater will be abstracted for potable water supply and prospecting processes. The volume of water needed is small (10 000 Lit/hr) in comparison to other water use and will have a small impact on the surrounding aquifer.				
Extent	Site				Activity causing the impact
Duration	Long				Opencast prospecting operation.
Probability	Low				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

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

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

ASPECT 12. ARCHAEOLOGICAL AND CULTURAL SITES	IMPACTS				CUMULATIVE IMPACTS
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.				
Extent	Site				Activity causing the impact
Duration	Permanent				
Probability	Definite				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X			

ASPECT	IMPACTS				CUMULATIVE IMPACTS
13. SENSITIVE LANDSCAPE					
Nature of the impact	No sensitive landscapes identified.				
Extent	Not applicable				Activity causing the impact
Duration	Not applicable				
Probability	Not applicable				
Significance	Not applicable				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
14.VISUAL ASPECTS					
Nature of the impact	Prospecting will only be visible to the neighbours living there. The operation is not visible to from any tourist road.				
Extent	Site				Activity causing the impact
Duration	Long				Diamond prospecting operation.
Probability	Definite				
Significance	Low				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

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

ASPECT	IMPACTS				CUMULATIVE IMPACTS
15. SOCIO ECONOMICS					
Nature of the impact	The main impact on the landowners is visual impact and the small area of 0.7 ha at a time that will not be available for agricultural activities at any given time for 5 years. The applicant is also the landowner.				The economic benefits in terms of investment and the delivery of services in the North West province will get an additional benefit from the project.
Extent	Regional				Activity causing the impact
Duration	Very Long				
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
16. INTERESTED & AFFECTEDPARTIES					
Nature of the impact	Impact of activities on I&AP's. Temporary loss of utilization of the prospecting focus areas for agricultural purposes. The long-term benefits far out-weight the current benefits from the current use. Loss of cattle due to falling of animals in mine workings if not fenced. No negative impact is expected that could be appropriately mitigated, such as the eventual rehabilitation of the excavations.				
Extent	Local				Activity causing the impact
Duration	Long				
Probability	High				
Significance	High				

Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

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

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

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

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

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

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

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

Refer to the results of consultation contained as **Appendix 2** for the issues that were raised by I&AP's and stakeholders during the review period of the Consultation phase of the Scoping 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.

Environmental Component	**Geology**
Environmental Management/Mitigation Measures/Action Plans/Commitments	
• No mitigation exists except to backfill the excavations with the rock waste material and fine tailings. • As prospecting progressed and the excavation has been back-filled, a certain amount of overburden material and topsoil would be placed on these areas. This will not restore the geology, but will mitigate the impact. • Planned, systematic and thorough prospecting of the mineral resource (mineral deposits) should take place. • Optimal utilization of the mineral resource should take place within the boundaries of the prospecting terrain. • Strip, remove and store soil and overburden as far as practical in an orderly fashion and replace as far as possible on back-filled areas, in the reverse order once decision have been taken that no further prospecting would take place in a particular section or which might still be traversed by vehicles and disturbed in the process. Cognisance should be taken of the fact that bulk sampling would take place by means of an opencast mining method until such level is reach / cut-off point is reach where rehabilitation could begin. • Care must be taken that the removal of deposits by means of earthmoving equipment is restricted to what is really necessary to achieve the objective.	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Optimal exploration of the mineral resource in order to ensure to facilitate better rehabilitation planning. The overburden and topsoil (where available) must be replaced in a responsible and planned manner in order to achieve some conformity with the surrounding undisturbed area.	

Environmental Component	Topography
Environmental Management/Mitigation Measures/Action Plans/Commitments	
• All trenches should be back-filled with waste tailings material and eventually overburden material, covered with a shallow layer of topsoil (if available). • Access to all active bulk sampling excavation areas should be controlled. The active bulk sampling area should be fenced off. The necessary warning signs should be put in place. All prospecting activities should be restricted to the fenced-off area. • Surface run-off control should be put in place at active trenches (preventing water from entering) and also rehabilitated tailings dumps and overburden dumps in order to prevent the loss of growth medium on top of the dumps. Prospecting would be done according to a definite PWP (only disturbing an area that is really necessary). As part of the PWP the handling of tailings material, overburden material, construction of dumps and back-filling of trenches should also form part of it. Rehabilitation of the new topographical landscape in such a way that it would blend in with the surrounding landscape and allow normal surface drainage to continue. As soon as a section of the prospecting site would not be explored anymore it should be rehabilitated (planned and phased manner).	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
Rehabilitation of the new and old disturbances topographical landscape in such a way that it would blend in with the surrounding landscape and allow normal surface drainage to continue. Rehabilitation in such a way that the new landscape features would be stable and would not pose any safety hazard to human and animal anymore.	

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

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

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

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

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

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

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

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

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

Environmental Component	Vegetation
Environmental Management/Mitigation Measures/Action Plans/Commitments	
Habitat change, loss of species, spread of alien and invasive species: No mitigation exists except to replace the vegetation by reseeding of grasses. Prospecting should be done in a well-planned manner (according to a PWP) and in the process ensuring that activities are only restricted to surface areas really required. ***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. An invasive and alien control programme must be implemented by the mine.	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No invasive and alien species must be present after closure. A post-closure control program must also be implemented.	

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

Environmental Component	Wildlife (habitat)
Environmental Management/Mitigation Measures/Action Plans/Commitments	
Wildlife or wildlife habitat destruction /change / disturbance : To take care that no new or unnecessary destruction of habitats, other than the demarcated prospecting site should take place. **Restoration of habitat:** Ensure the rehabilitation plan is implemented.	
EMP Performance Assessment & Monitoring Reporting	

To be included in EMP/EIA.
Closure Objective
The animal life habitat must be restored after decommissioning. Success will be measured against the extent to which the animals return to the area.

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

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

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

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

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

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

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

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

Environmental Component	Archaeological and Cultural Sites
Environmental Management/Mitigation Measures/Action Plans/Commitments	
No graves on site. However, the potential occurrence of unmarked graves or subsurface finds not recorded during this survey can never be excluded, so it is advised that SAHRA and a qualified archaeologist are informed immediately if archaeological objects are uncovered.	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No site of archaeological importance should be disturbed or damaged until the necessary permit from SAHRA has been issued.	

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

Environmental Component	Visual Aspects
Environmental Management/Mitigation Measures/Action Plans/Commitments	
Visual impact would be addressed by means of; * re-vegetation of disturbed areas with grasses; * removal of any temporary building, scrap, domestic waste, etc. that would otherwise contribute to a negative visual impact. Concurrent rehabilitation should be done simultaneously as prospecting activities progress.	
EMP Performance Assessment & Monitoring Reporting	
To be included in EMP/EIA.	
Closure Objective	
No residual visual impacts will remain after closure. The terrain should blend in with the surrounding landscape.	

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

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

ix) Motivation where no alternative sites were considered.

Alternative is not applicable. The current land use is mining by the landowner. The option to explore the possibility for mining is already in itself an alternative land use. The applicant, Onalenna Group (Pty) Ltd, is not interested in any other alternative land use over this land aside of diamonds exploration, or any other activity, or method use other than prospecting for diamonds in the 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. (Provide a statement motivating the final site layout that is proposed)

The farm area applied for is believed has prospects for mineral (diamond) exploration on the applied remaining extends of the farm Bokfontein 448 JQ. The applicant is only interested in this portion. The specific site location for the test pits and bulk sampling can only be determined after the geological surveying's which will shows which area has potential to have the applied minerals. When the location of the test pits area determined, the following process will be followed in order to confirm the preferred site. The prospecting operation will not be a static operation, the mobile plant will move as prospecting progress, thus the whole application is to determine a potential site for when the mining phase is reached. The feasibility of mining the diamond material from an environmental, social and economic perspective also plays a role

h) Full description of the process undertaken 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.

(Including (i) a description of all environmental issues and risks that are identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.)

ASPECT	**IMPACTS**				**CUMULATIVE IMPACTS**
1. GEOLOGY					
Nature of the impact	Geology deposits will be destroyed during the opencast prospecting operation. During operation which will be for the next 5 years, the mineral resource (***Cobalt; Copper; Nickel; PGM's; Gold; Silver; Iron; Zink; Vanadium; Lithium; Uranium; Sample***) will be extracted from alluvial deposits. Waste rock material/overburden material is disposed off/backfilled in existing excavations as part of the prospecting process.				
Extent	Site				Activity causing the impact
Duration	Permanent				An opencast prospecting method will be used to extract bulk samples. Therefore the original geology will be totally destroyed.
Probability	Definite				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X		

ASPECT	IMPACTS	CUMULATIVE IMPACTS
2. TOPOGRAPHY		
Nature of the impact	* **Change in landform :** * The prospecting site is situated on: level plains some relief. * **Disturbance of the surface drainage:** The prospecting of the minerals will result in the creation of trenches (3 x 3 m or less), that act as depressions in the environment that captures run-off. Prospecting activities will be concentrated as indicated on **Appendix 1** on the application area (approximately 10 m depth). Normal surface drainage will be disturbed at a given point. Run-off if any will be diverted away from the specific site.	
Extent	Site	Activity causing the impact
Duration	Very long to Permanent	Bulk sampling trough trenches, etc.
Probability	Definite	

Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

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

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 /tailings dumps, cause compaction of soil. All prospecting activities will be concentrated on the identified prospecting focus area where alluvial deposits could be found. In the same time a certain surface area is therefore alienated. The active prospecting surface area (alienated) would be restricted within the ±0.7 ha at any given time for the next 5 years.				
Extent	Site				Activity causing the impact
Duration	Long				Site preparation for additional prospecting sites and the construction, operation of listed infrastructure.
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

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

ASPECT 3. SOIL	IMPACTS				CUMULATIVE IMPACTS
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 form oil etc.) all may cause this situation.
Probability	Definite				
Significance	Low				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X		

ASPECT	IMPACTS				CUMULATIVE IMPACTS
4.LAND CAPABILITY					
Nature of the impact	**Temporary loss of land capability.** The small area (0.7 ha) where the active prospecting activities occur (trenches, stock piles, prospecting equipment) etc. will thus be temporary alienated, until the area is rehabilitated. All trenches would be rehabilitated as part of the prospecting process during which trenches are back-filled. The rest of the application area will still be used by the landowner as agricultural land.				
Extent	Site				Activity causing the impact
Duration	Long				Site preparation for additional prospecting sites and the construction, operation of listed infrastructure, the land capability of the active prospecting area will be totally destroyed.
Probability	Definite				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
5. LAND USE					
Nature of the impact	This is a not a new prospecting operation and therefore will not really loose its land use as it has already been disturbed by mining activities on the applied portions of the 8.9 ha during the next 5 years. Only a small portions of land (0.7 ha at a time) would be affected by the prospecting operation relation to the total prospecting right application area of 8.9 ha. All trenches would be rehabilitated as part of the prospecting process during which excavations are back-filled.				
Extent	Site				Activity causing the impact
Duration	Long to permanent				Site preparation for prospecting and the construction, operation of listed infrastructure
Probability	Definite				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X		

ASPECT	IMPACTS				CUMULATIVE IMPACTS
6.VEGETATION					
Nature of the impact	Vegetation clearance, disturbance and trampling. Destruction of habitats for vegetation. Due to a disturbed ecosystem, bare ground and spreading of exotics can follow.				
Extent	Site				Activity causing the impact
Duration	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.
Probability	Definite				
Significance	High				
Phase responsible for the	Phase 1	Phase 2	Phase 3	Closure	

impact		X	X		The vegetation needs to be cleared to remove the topsoil.
ASPECT	**IMPACTS**				**CUMULATIVE IMPACTS**
6.VEGETATION					
Nature of the impact	Habitat change, loss of species, spread of alien and invasive species.				
Extent	Site				Activity causing the impact
Duration	Permanent				The change in the current habitat will be mitigated during final rehabilitation.
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X		

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

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

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

ASPECT	**IMPACTS**				**CUMULATIVE IMPACTS**
8. SURFACE WATER					
Nature of the impact	Increased silt load.Clearing topsoil for footprint areas can increase infiltration rates of water to the groundwater system and decrease buffering capacity of soils to absorb contaminants from spills on surface. This can increase the risk of contamination of the groundwater system (increases aquifer vulnerability.				
Extent	Local				Activity causing the impact
Duration	Short				"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
Probability	Moderate				
Significance	High				
Phase responsible for the	Phase 1	Phase 2	Phase 3	Closure	

impact		X	X		provided therefore.

9. GROUND WATER					
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 prospecting processes. The volume of water needed is small (10 000 Lit/hr) in comparison to other water use and will have a small impact on the surrounding aquifer.				
Extent	Site				Activity causing the impact
Duration	Long				Opencast prospecting operation.
Probability	Low				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

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

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

ASPECT **12. ARCHAEOLOGICAL AND CULTURAL SITES**	**IMPACTS**				**CUMULATIVE IMPACTS**
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.				
Extent	Site				Activity causing the impact
Duration	Permanent				
Probability	Definite				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X			

ASPECT **13. SENSITIVE LANDSCAPE**	**IMPACTS**				**CUMULATIVE IMPACTS**
Nature of the impact	No sensitive landscapes identified.				
Extent	Not applicable				Activity causing the impact
Duration	Not applicable				
Probability	Not applicable				
Significance	Not applicable				
Phase responsible for the	Phase 1	Phase 2	Phase 3	Closure	

impact					

ASPECT	IMPACTS				CUMULATIVE IMPACTS
14.VISUAL ASPECTS					
Nature of the impact	Prospecting will only be visible to the neighbours living there. The operation is not visible to from any tourist road.				
Extent	Site				Activity causing the impact
Duration	Long				Diamond prospecting operation.
Probability	Definite				
Significance	Low				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

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

ASPECT	IMPACTS				CUMULATIVE IMPACTS
15. SOCIO ECONOMICS					
Nature of the impact	The main impact on the landowners is visual impact and the small area of 0.7 ha that will not be available for agricultural activities at any given time for 5 years. The applicant is also the landowner.				The economic benefits in terms of investment and the delivery of services in the North West province will get an additional benefit from the project.
Extent	Regional				Activity causing the impact
Duration	Very Long				
Probability	High				
Significance	Moderate				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

ASPECT	IMPACTS				CUMULATIVE IMPACTS
16. INTERESTED & AFFECTEDPARTIES					
Nature of the impact	Impact of activities on I&AP's Temporary loss of utilization of the prospecting focus areas for agricultural purposes. The long-term benefits far out-weight the current benefits from the current use. Loss of cattle due to falling of animals in mine workings if not fenced. No negative impact is expected that could be appropriately mitigated, such as the eventual rehabilitation of the excavations.				
Extent	Local				Activity causing the impact
Duration	Long				
Probability	High				
Significance	High				
Phase responsible for the impact	Phase 1	Phase 2	Phase 3	Closure	
		X	X	X	

i) Assessment of each identified potentially significant impact and risk

(This section of the report must consider all the known typical impacts of each of the activities (including those that could or should have been identified by knowledgeable persons) and not only those that were raised by registered interested and affected parties).

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc... etc.. etc E.g. For mining ,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling, and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc...	POTENTIAL IMPACT (Including the potential impacts for cumulative impacts) (e.g. dust, noise, drainage, surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc...etc...)	ASPECTS AFFECTED	PHASE In which impact is anticipated	SIGNIFICANCE if not mitigated	MITIGATION TYPE (modify, remedy, control, or stop) Through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)	SIGNIFICANCE if mitigated
Excavations for gravel and stone	1.1 Removal of the sample ore up to 10m. Disturbance of 0.5 hectare at any given time.	Geology & soil	Operational	High -	The bulk of the material mined will be sold. The impact will be mitigated by sloping the sides and stabilizing the soil to prevent erosion	Low +
	1.2 Change in landform. The entire prospecting area will be lowered by 10m and normal surface drainage will be disturbed at this specific point. The pit will be backfilled	Topography	Operational and closure	Moderate -	The pit will be backfilled. The sides will be sloped and top soiled and vegetated. A surface water cut-off trench should be put in place around the active prospecting site in order to prevent surface run-off water on the prospecting site. Rehabilitation of the new sloped landscape in such a way that it would blend in with the surrounding landscape.	Moderate +
	1.3 Stripping of all available topsoil and stockpiled. Stockpile and plant area of 0.5 hectare at any given time.	Soil	Construction and Operational	Low -	Any area on the prospecting area where disturbance will take place the top soil must be removed and stockpiled for rehabilitation purposes in a demarcated area.	Low +
	1.4 Soil erosion: Due to the fact that certain surface areas would become devoid of any vegetation cover and compacted this would lead to lesser infiltration of rain water and more run-off that could cause erosion on bare disturbed areas and side slopes	Soil	Construction	Low-	To take preventive steps against erosion. Implement and maintain cut-off trenches and or berms around the prospecting area to prevent water entering that can cause erosion. Concurrent rehabilitation and re-vegetation of mined areas must happen as soon as the particular area is mined out. Rehabilitated areas must be inspected and managed in such a way that any signs of erosion can be mitigated immediately.	Low +
	1.5 Land capability and land use. Loss of land to support grazing.	Land capability & Land use	Operational and closure	Low-	As this is only a very small area of 1 hectare, the impact is not so big. As the excavation will be backfilled and vegetated the rehabilitated area must be treated as sensitive when grazed as overgrazing can trigger erosion and infiltration of declares weeds.	
	1.6 Generation of dust by excavating and vehicle movement	Air quality	Operational	Low -	The prospecting method will serve as mitigation measure because it will limit dust to the active prospecting area, where the excavator and trucks operating. Daily spraying of the roads with water.	

j) Summary of specialist reports.

(This summary must be completed if any specialist reports informed the impact assessment and final site layout process and must be in the following tabular form):-

LIST OF STUDIES UNDERTAKEN	RECOMMENDATIONS OF SPECIALIST REPORTS	SPECIALIST RECOMMENDATIONS THATHAVE BEEN INCLUDED IN THE EIA REPORT (Mention X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
Heritage Resources	N/A already disturbed by agriculture and minng.	X	See page 16 & 17
Wetland Delineation	N/A no open water or wetlands within 2km radius.	X	See page 16 & 17

k) Environmental impact statement

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

The small scale sample ore prospecting operation is definitely going to have an impact on the environment.
The main impact relates to topography, geology, soil, vegetation, and land use and land capability.

The mineral resource will be prospected over a period of 5 years.
The existing land-use is agriculture, grazing land and previously disturbed.
This is a small operation and for the next 5 years only a small portion of the farm will be temporarily alienated.

The conservation of topsoil is of utmost importance and therefore in order to ensure a sustainable land use again on the 1 ha, the top at least 30 cm topsoil need to be removed prior to mining of the underlying alluvial gravel (up to 10 m depth). This will be used again as growth medium during the rehabilitation phase of the quarry. Topsoil will be stored in berm walls on the border of the quarry in order to divert any surface run-off during a rainfall event.

Other environmental impacts relates to the day to day operation that could easily be managed, such as dust and noise.

(ii) Final Site Map

Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental sensitivities of the preferred siteindicating any areas that should be avoided, including buffers.

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

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

The loss of land use and land capability will be temporary as the site will be rehabilitated in such a way that it allows the establishment of a grass cover again. The rest of the farm will still be continued to be used for grazing for cattle.

Although this is small alluvial gravel mining operation it would also add to the increased economic activity within the farming and exiting mining community around Brits. Jobs for 7 permanent laborers will be created.

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

No concerns have been raised as yet by any I & AP.

The specific occurrence of the alluvial gravel deposit dictates the selection of the specific prospecting site.

l) Proposed impact management objectives and the impact management outcomes for inclusion in the EMPr; Based on the assessment and where applicable the recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorisation.

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

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

m) Final proposed alternatives.

(Provide an explanation for the final layout of the infrastructure and activities on the overall site as shown on the final site map together with the reasons why they are the final proposed alternatives which respond to the impact management measures, avoidance, and mitigation measures identified through the assessment)

None.

n) Aspects for inclusion as conditions of Authorisation.

Any aspects which have not formed part of the EMPr that must be made conditions of the Environmental Authorisation

All important aspect were included in the EMPR and there are no aspects that need to be special conditions.

o) Description of any assumptions, uncertainties and gaps in knowledge.

(Which relate to the assessment and mitigation measures proposed)

With the site visit and rating of the impacts there are no uncertainties and gaps in knowledge that need to be noted.

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

h) Reasons why the activity should be authorized or not.

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

ii) Conditions that must be included in the authorization

None.

(1) Specific conditions to be included into the compilation and approval of EMPr

None.

(2) Rehabilitation requirements

Normal rehabilitation.

q) Period for which the Environmental Authorisation is required.

5 years.

r) Undertaking

Confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic assessment report and the Environmental Management Programme report.

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

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

UNDERTAKING

I, D. E. Erasmus, the undersigned and duly authorised thereto by *Bila Civil Contractors (Pty) Ltd.*, have studied and understand the contents of the Environmental Management Programme and duly undertake to adhere to the conditions as set out therein, unless specifically or otherwise agreed to.

Signed at Klerksdorp on this day.....of.....2018.

.....

Signature of Mine Manager

s) Financial Provision

State the amount that is required to both manage and rehabilitate the environment in respect of rehabilitation.

R126 504.00 for rehabilitation. See quantum attached as **Appendix 3**.

Appendix 3 – Quantum of Rehabilitation

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.

(Confirm that the amount, is anticipated to be an operating cost and is provided for as such in the Mining work programme, Financial and Technical Competence Report or Mining Work Programme as the case may be).

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

t) Specific Information required by the competent Authority

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

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

(Provide the results of investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond mining on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as an **Appendix**

The applicant will remunerate the occupier for the land used as agreed upon. 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.

(Provide the results of investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond mining on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act, attach the investigation report as **Appendix 2.19.2** and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12herein).

There is no graveyard within the application area.

According to Section 36(3) of the National Heritage Resources Act 25 of 1999 no person may, without a permit issued by SAHRA or a provincial heritage resources authority—

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

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

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

It is recommended that the graveyard is included in the overall management plan of the mine development. Preservation of the site will require that the area is properly demarcated with at least a 20m buffer zone placed around the graveyard in order to avoid potential damage during mining activities. It will be necessary to ensure that the graveyard is accessible to the relatives of the deceased.

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

(the EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist. The EAP must attach such motivation as **Appendix 1**).

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

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

1) Draft environmental management programme.

a) Details of the EAP, (Confirm that the requirement for the provision of the details and expertise of the EAP are already included in PART A, section 1(a) herein as required).

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 (Confirm that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (I)(h) herein as required).

Yes see **Part A.**

c) Composite Map

(Provide a map (Attached as an **Appendix 4 (a)** at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers)

See Appendix 1

d) Description of Impact management objectives including management statements

i) Determination of closure objectives. (ensure that the closure objectives are informed by the type of environment described)

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

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

Onalenna Group (Pty) Ltd (Pty) Ltd. **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.

***Onalenna Group (Pty) Ltd (Pty) Ltd.* 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 (***Cobalt; Copper; Nickel; PGM's; Gold; Silver; Iron; Zink; Vanadium; Lithium; Uranium; Sample***);

ensure that the prospecting site is closed efficiently and cost effectively.

ensure that the operation is not abandoned but closed in accordance with the relevant requirements;

ensure that the interest of all interested and affected parties will be considered;

ensure that the all-relevant legislation regarding mine closure will be adhered to, and all relevant application procedures followed.

ii) Volumes and rate of water use required for the operation.

2 000 litres a day will be used for washing/screening plant.

iii) Has a water use license has been applied for?

Application will be submitted. It will be amended for prospecting.

iv)Impacts to be mitigated in their respective phases

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

ACTIVITIES (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	PHASE (of operation in which activity will take place. State; Planning and design, Pre-Construction' Construction, Operational, Rehabilitation, Closure, Post closure).	SIZE AND SCALE of disturbance (volumes, tonnages and hectares or m²)	MITIGATION MEASURES (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by competent Authorities)	TIME PERIOD FOR IMPLEMENTATION Describe the time period when the measures in the environmental management programme must be implemented. Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation, therefore state either: Upon cessation of the individual activity or, Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.
1. Excavations	Operational	0.5 hectare at any stage	Concurrent rehabilitation by sloping the sides of the excavation to be stable/sustainable and covered with topsoil and vegetate.	The pit will backfilled with puddle for stability and providing a base for the replacement of topsoil.	As part of concurrent rehabilitation.
2. Ore Stockpile area	Operational	0.2 hectares at any stage	Keep this area as small as possible within the demarcated area. Prevent spillages of fuels by machines	Immediate cleaning of spillages	Concurrent with prospecting
3. Screening of ore	Operational	0.3 hectares at any stage	Keep this area as small as possible. Prevent spillages of fuels by equipment.	Immediate cleaning of spillages	Concurrent with the prospecting

e) Impact Management Outcomes

(A description of impact management outcomes, identifying the standard of impact management required for the aspects contemplated in paragraph ();

ACTIVITY (whether listed or not listed) (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc. .etc .etc.).	POTENTIAL IMPACT (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc... etc...)	ASPECTS AFFECTED	PHASE In which impact is anticipated (e.g. Construction, commissioning, operational, Decommissioning, closure, post-closure)	MITIGATION TYPE (modify, remedy, control, or stop) through (e.g. Noise control measures, storm water control, dust control, rehabilitation,design measures, blasting controls,avoidance, relocation, alternative activitysetc. etc). E.g. (Modify through alternative method. (Control through noise control (Control through management andmonitoring (Remedy through rehabilitation.	STANDARD TO BE ACHIEVED (impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
1. Excavations for alluvial gravel	1.1 Removal of the sample ore up to 10 m	Geology & soil	Operational	The bulk of the material removed will be sold. The impact will be mitigated be sloping the sides of the excavation and stabilizing the soil to prevent soil erosion.	Stable slopes that can sustain erosion without excessive erosion.
	1.2 Change in landform. The entire prospecting area will be lowered by 10m and normal surface drainage will be disturbed at this specific point. The pit will be backfilled	Topography	Operational and closure	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 prospecting site I order to prevent surface water on the prospecting site. Rehabilitation of the new sloped landscape in such a way that it would blend in with the surrounding landscape.	Gentle stable slopes.
	1.3 Stripping of all available topsoil and stockpiled	Soil	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 prospecting area to prevent water entering that can cause excessive erosion.	No excessive erosion that cannot be stabilized.
	1.5. Loss of Land capability & land use.	Land capability & land use	Operational and closure	As this is only a very small area of 1 hectare, the impact is low. As the sides will be sloped and vegetated, the rehabilitated area must be treated as sensitive when grazed as overgrazing can trigger erosion and infiltration of declared weeds.	Sustainable rehabilitated area.
	1.6 Generation of dust by excavating and vehicle movement	Air quality	Operational	The generation of dust will only be localized at the prospecting site. Daily spraying of roads with water	No excessive dust that can be harmful to the environment and humans.

f) Impact Management Actions

(A description of impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (c) and (d) will be achieved).

ACTIVITY (whether listed or not listed) (E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc... etc... etc.).	POTENTIAL IMPACT (e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc...etc...)	MITIGATION TYPE (modify, remedy, control, or stop) Through (e.g. noise control measures, storm water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activities, etc) E.g. Modify through alternative method. Control through noise control Control through management and monitoring Remedy through rehabilitation.	TIME PERIOD FOR IMPLEMENTATION Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation, therefore state either:- Upon cessation of the individual activity or Upon the cessation of mining bulk sampling or alluvial diamond prospecting as the case may be.	COMPLIANCE WITH STANDARDS (A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)
Excavations for alluvial gravel	1.1 Removal of the sample ore up to 10 m	The bulk of the material removed will be screened and the waste material to the excavation. The impact will be mitigated by backfilling the excavation and stabilizing the soil to prevent soil erosion.		
	1.2 Change in landform. The entire prospecting area will be lowered by 10m and normal surface drainage will be disturbed at this specific point. The pit will be backfilled	The pit will be backfilled and the soil stabilized to prevent erosion. A surface water cut-off trench should be put in place around the active prospecting site I order to prevent surface water on the prospecting site. Rehabilitation of the new rehabilitated landscape in such a way that it would blend in with the surrounding landscape.		
	1.3 Stripping of all available topsoil and stockpiled	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 preventive steps against erosion. Implement and maintain cut-off trenches and or berms around the prospecting area to prevent water entering that can cause excessive erosion.		
	1.5 Loss of Land capability & land use	As this is only a very small area of 1.5 ha, the impact is low. As the sides will be sloped and vegetated, the rehabilitated area must be treated as sensitive when grazed as overgrazing can trigger erosion and infiltration of declared weeds.		
	1.6 Generation of dust by excavating and vehicle movement	The generation of dust will only be localized at the prospecting site. Daily spraying of roads with water		

J Financial Provision

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

Onalenna Group (Pty) Ltd (Pty) Ltd. 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.

Onalenna Group (Pty) Ltd (Pty) Ltd. 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 (***PGM's, Phosphate, Nickel, Sample, Manganese and Vanadium***);
- ensure that the prospecting site is closed efficiently and cost effectively.
- ensure that the operation is not abandoned but closed in accordance with the relevant requirements;
- ensure that the interest of all interested and affected parties will be considered;
- ensure that the all-relevant legislation regarding mine closure will be adhered to, and all relevant application procedures followed.

(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 closure.

a. 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 re-growth of vegetation and the soil ameliorated based on a fertilizer recommendation (soil sample analysed).

Rehabilitation of access roads

Whenever a prospecting right 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-prospecting situation.

Roads shall be ripped or ploughed, and if necessary, appropriately fertilized (based on a soil analysis) to ensure the re-growth of vegetation. Imported road construction materials which may hamper re-growth 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 analyzed and any deleterious effects on the soil arising from the prospecting 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 quarry 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 quarry floor area will be sloped and levelled and the previously stored topsoil replaced.

The area shall then be fertilized 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;
- re-vegetation (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 analyzed and any deleterious effects on the soil arising from the prospecting 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 borehole prospecting site:

Cenchrusciliaris
Cynodondactylon
Digitariaeriantha
Heteropogoncontortus
Panicum maximum

b. Demolition of infrastructure/buildings
On completion of operations, all buildings, structures or other on the prospecting 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.

c. 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.

The excavations will be backfilled as far as possible and sloped and top soil will be placed back. This site can be rehabilitated. The historic rehabilitation onsite will be part of the rehabilitation if the new bulk sampling area going over the existing

disturbances. Most of the old heaps are vegetated and stable thus no rehabilitation required. Deep excavations that is unsafe will be sloped.

(e) Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline.

R 126 504.00 See **Appendix 3** – Quantum Table.

(f) Confirm that the financial provision will be provided as determined.

The financing for this project will be done from the account ***Onalenna Group (Pty) Ltd (Pty) Ltd***, the applicant himself out of own funds. The guarantee will be provided in the form of Bank Guarantee after confirmation of the amount.

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

g) Monitoring of Impact Management Actions
h) Monitoring and reporting frequency
i) Responsible persons

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

l) Indicate the frequency of the submission of the performance assessment/ environmental audit report.

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

m) Environmental Awareness Plan

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

Onalenna Group (Pty) Ltd (Pty) Ltd, will contract DERA Environmental Consultants to inform the employees after the EMP was approved.
The following guidelines will be used:

Communication
Urge
Leadership
Teamwork
Understanding
Recognition
Empowerment (CULTURE)

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

The risks will be dealt with by proper management actions as described in table below

ACTIVITIES (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. For mining.- excavations, blasting, stockpiles, discard dumps or dams. Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	**PHASE** (of operation in which activity will take place State; Planning and design, Pre-Construction, Construction, Operational, Rehabilitation, Closure, Post closure).	**SIZE AND SCALE of disturbance** (volumes, tonnages and hectares or m²)	**MITIGATION MEASURES** (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by competent Authorities)	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation, therefore state either: Upon cessation of the individual activity or, Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.
4. Excavations	Operational	0.5 hectare at any stage	Concurrent rehabilitation by sloping the sides of the excavation to be stable/sustainable and covered with topsoil and vegetate.	The pit will backfilled with puddle for stability and providing a base for the replacement of topsoil.	As part of concurrent rehabilitation.
5. Ore Stockpile area	Operational	0.2 hectares at any stage	Keep this area as small as possible within the demarcated area. Prevent spillages of fuels by machines	Immediate cleaning of spillages	Concurrent with prospecting
6. Screening of ore	Operational	0.3 hectares at any stage	Keep this area as small as possible. Prevent spillages of fuels by equipment.	Immediate cleaning of spillages	Concurrent with the prospecting

n) Specific information required by the Competent Authority

(Among others, confirm that the financial provision will be reviewed annually).

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

See Table 7 below:

Table 7: Monitoring Plan

Action	Frequency	Method	Period
1.Monitoring of perimeter fence	Monthly and following any heavy rainfall.	Foot or vehicle patrol. Record	Until closure.
2.Monitoring of re-vegetation Mined out and rehabilitated areas Leveled and Rehabilitated Dumps Mine residue dam walls Old roads Covered over waste pits Rehabilitation plots	Every 6 months	Foot inspection Initiate set up of test plots Photograph. Transect / Quadrant Get consultants in if necessary.	Until closure.
3.Monitoring of erosion Roads Mine residue dam walls Rehabilitated mined out areas Dumps Pumps and pipelines Any other areas	Every 6 months and following any heavy rainfall	Visual inspection Walk over rehabilitated areas Drive along roads. Check pipelines and pumps: mine residue dams, dumps. Photographic records.	Until closure
4 Monitoring of alien plants over the whole site.	On-going until under control - then every 6 months.	Visual inspection on foot patrol. Map presence of invasive plants. Plan removal, remove and document area covered on monthly basis. Verify Photograph.	On-going until closure
5 Monitoring of Water Quality from selected points	Every 6 months	Chemical and bacteriological tests at identified boreholes as recommended in Figure 23 designated points. Build up database and graph the results. Compare with limits and take action on non-conformances.	Until closure.
6. Monitoring of All Rehabilitation Areas. Check compliance with gradients and variation in topography	Every 6 months.	Survey- map new rehabilitated areas. Plot on map and calculate area treated, Get rehab consultants in if necessary.	Until closure.
7. Monitoring of stability of mine Residue dams and water Storage facilities.	Monthly and summarize every 6 months	Follow specifications in mandatory code of practice for puddle dams	Until closure
8.Monitoring of disposal of metal scrap, old oil, oil filters, old oil drums, oily cloths, batteries, fluorescent tubes, tyres and contaminated soil (Hazardous waste)	Monthly and summarize every 6 months.	Record each load sent off the site. Give used oils to Oilkol Ensure safe disposal certificates are obtained from suppliers if the material is given back to them.	Until closure.
9.Monitoring of maintenance of general waste disposal	All loads of waste to be recorded and quantity extrapolated. Covering of waste pit - Monthly.	Running total of loads of waste taken Record of waste taken to Wolmaransstad waste disposal site Keeping record of waste taken to disposal site	Until closure
10.Monitoring of condition of septic tanks	Every six months	Visual inspection. Record condition.	Until closure
11. Monitoring of condition of bunded Areas around diesel fuel tanks, Refueling area, old oil tank; and underground petrol tank.	Every six months.	Visual inspection	Until closure
12. Monitoring of water use.	Monthly	Record total water use and water use at different plants by recording flow meters. Ensure compliance with license.	Until closure

2) UNDERTAKING

The Environmental Assessment Practitioner

DE Erasmus

I, I _____

General declaration:

- I act as the independent environmental practitioner in this application
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favorable to the applicant

- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and anyguidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I will take into account, to the extent possible, the matters listed in regulation 8 of the regulations when preparing the application and any report relating to the application;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favorable to the applicant or not
- all the particulars furnished by me in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realize that a false declaration is an offence in terms of regulation 71 and is punishable in terms of section 24F of the Act.

Disclosure of Vested Interest (delete whichever is not applicable)

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

- I have a vested interest in the proposed activity proceeding, such vested interest being:

The EAP herewith confirms

a) the correctness of the information provided in the reports ☐

b) the inclusion of comments and inputs from stakeholders and I&APs; ☐

c) the inclusion of inputs and recommendations from the specialist reports where relevant; and ☐

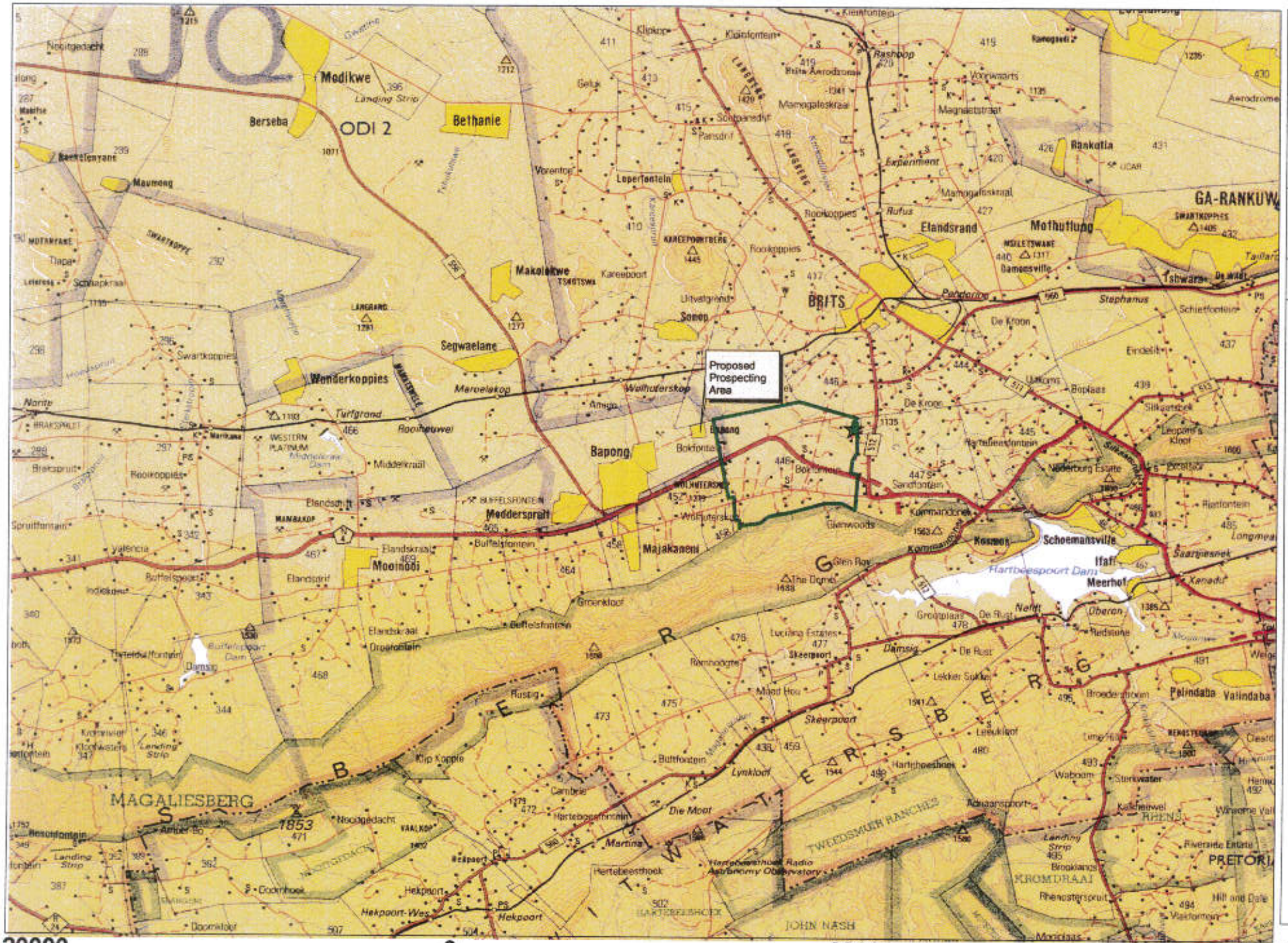
d) that the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties are correctly reflected herein. ☐

Signature of the environmental assessment practitioner

DERA Omgewingskonsultante (Pty) Ltd.
Name of company

10/04/2018
Date

-END



APPENDIX 1 (a)

LOCALITY MAP

Co-ordinates:

WGS 84/WGS 84

View1 1:250000

Legent:

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

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
AFFECTED PARTIES				
Chemstof (Pty) Ltd. Represented by Mynie Stoffberg (CEO) P.O. Box 2076, Protea Park, 0305 Tel: 082 809 8415 e-mail: admin@chemstof.com	X	24 Nov 2017 11 Jan 2017	Consultation letter Confirmation that letter was received. Meeting was held at Bokfontein, see minutes of the meeting attached.	
Lawful occupier/s of the land				
Landowners or lawful occupiers on adjacent properties (Neighbours)	X	24 Nov 2017 11 Jan 2018	Community meeting will be held on 20 January 2018, and Onalenna Group was invited to the meeting	
Municipal councilor				
Municipality	X			
Madibeng Local Municipality LED Manager: Johanna Motswatswe Fax: 012 318 9203		27 Nov 2017 11 Dec 2017	No response	
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA.				
Eskom				
Communities				
Dept. Land Affairs	X			
Mr. KeatbeswеMothupi, Office of the Regional Land Claims Commissioner, N W Province; Private Bag X08, Mmabatho, 2735; Fax: 018 389 9641		24 Nov 2017 11 Dec 2017	E-mail sent	Comments received 13 Dec 2017. No land claim
Traditional Leaders				
N/A				
Dept. Rural, Environment and Agricultural Development	X			
Ouma Skosana Agricentre Building, Cnr James Moroka & Stadium Road, Mmabatho, 2735 E-mail: oskosana@nwpg.gov.za		12 Dec 2017 April 2018	Scoping Report was sent with Fastway couriers for comments EMPr&EIA sent with Fastway Couriers for comments	No objection – Comments received 5 March 2018
Dept. Water and Sanitation	X			
Cornia Theunissen Private Bag X357, Hartebeespoort, 0216 Tel: 012 253 1026 E-mail: theunissenc@dwa.gov.za		12 Dec 2017 10 April 2018	Scoping Report was sent with registered post for comments. EMPr&EIA sent with Fastway Couriers for comments	Acknowledgement received 22 Jan 2018
Dept. Agriculture, Forestry and Fisheries	X			
Maurice Vuyega Louis le Grange Building, Cnr Peter Mokaba & Wolmarans street,3rd Floor, Office nr 318, Potchefstroom, 2520		12 Dec 2017 10 April 2018	Scoping Report was sent with Fastway couriers for comments. EMPr&EIA sent with Fastway Couriers for comments	No comments received
Dept. Rural Development and Landform				
Other Competent Authorities	X			

APPENDIX 2 – PROOF OF CONSULTATION

Provincial Heritage Resources Agency J.Dipale Corner Tillard & Warren Street, Mafikeng, 2745 Tel: 018 381 2032 E-mail: jdipale@nh.sahra.org.za		12 Dec 2017	Scoping Report was sent with Fastway couriers for comments.	No comments received.
OTHER AFFECTED PARTIES				
SAHRIS P.O .Box 4637, Cape Town, 8000 Tel: 021 202 8643 E-mail: info@sahra.org.za		May 2018	SAHRIS Website technical problem and not working. Will do consultation as soon as it is running again.	
INTERESTED PARTIES				

P O Box 6499
Flamwood
2572
Fax2Mail: 086 5783 085
Mobile: 082 895 3516
E-mail: dera.office@dera.co.za
daane@dera.co.za

DERA

Environmental Consultants

24 November 2017

To whom it may concern

CONSULTATION WITH INTERESTED AND AFFECTED PARTIES WITH REGARD TO AN APPLICATION FOR A PROSPECTING RIGHT IN TERMS SECTION 16 OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) AND NEMA, EIA 2014 OVER: PORTION 65, PORTION 66, PORTION 67 AND PORTION 68 OF THE FARM BOKFONTEIN 448 JQ, MAGISTERIAL DISTRICT OF BRITS.

You are herewith informed that **Onalenna Group (Pty) Ltd.** has submitted an application in terms of Section 16 of the Minerals and Petroleum Resources Development Act, 2002 (Act 28 of 2002), and NEMA, EIA 2014 to the Regional Manager: Mineral Regulation, Northern West Region in respect of **Cobalt (Co), Copper ore (Cu), Nickel, Platinum Group Metal (PGM), Gold ore (Au), Silver ore (Ag), Iron ore (Fe), Zink ore (Zn), Vanadium ore (V), Lithium ore (Li) and Uranium ore (U) and Crome ore (Cr),** in the magisterial district of Rustenburg.

Onalenna Group (Pty) Ltd. is in the process of compiling the Scoping Report, which needs to be submitted at the Regional Office of DMR. After acceptance of the application is received an Environmental Management Programme (EMPr) & Environmental Impact Report (EIA) need to be submitted at the Regional Office of DMR within 106 days from date of acceptance of the Scoping Report. The above documents will be available on request for I&AP's for comments.

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

Onalenna Group (Pty) Ltd. deem it necessary to consult with inter alia yourself / your company/ your organization, and you are therefore kindly requested to comment very clearly and unambiguously with regard to the proposed prospecting project. You are requested to put in writing any interest/ objection and/or comments you may have and send it back to the appointed consultants (**Reference no. NW30/5/1/1/2/12234PR**) within 30 days from the date of receipt of this letter. If no correspondence is received from you within the mentioned period, the applicant shall accept that you have no objection in the proposed prospecting activities.

Please call me if any further information is needed.

Your co-operation will be appreciated.

Yours faithfully
P.P.
Daan Erasmus
DERA Environmental Consultants

CHEMSTOF (Pty) Ltd

BOKFONTEIN PORTION 52, Brits
PO BOX 20761
PROTEAPARK 0305
E-mail: admin@chemstof.com

VAT NO: 4900221070
REG NO: 2005/017306/07
OFFICE: 082 809 8415
FAX: 086 582 1597

DELIVERY AND RECEIPT OF CONSULTATION LETTER REF: NW30/5/1/1/2/12234PR

DERA: Environmental Consultants on behalf of Onalenna Group (Pty) Ltd delivered the letter dated 24 November 2017 regarding consultation with affected party.

Chemstof (Pty) Ltd is an affected party and therefore acknowledge receiving the letter on the 11th of January 2018 and will provide feedback within 30 business days from 11th of January 2018 as allowed in the NEMA act.

Signed for and on behalf of Chemstof (Pty) Ltd

Name: Mynie Stoffberg
CEO

Signed on behalf of DERA Environmental consultants:

Name: Lefa Moswe

Date letter was delivered: 4/01/2018

Signature:

Minutes of the Consultation meeting held at Bokfontein dated 11/01/2018

Agenda

Opening and welcome

Introduction of our company Onalenna Group

The application

Comments

The councillor Mr Thabo Mokwena welcomed us and read the agenda, the agenda was adopted.

Lefa Mosue introduced the company Onalenna Group

Lefa then explained the purpose of the consultation and that it relates to the application for prospecting that Onalenna Group has done on the farm Bokfontein Portions 65,66,67 and 68.

Mr Thabo asked which jobs will possibly be created when the company starts working. Lefa Mosue answered by saying that the community will be made aware of each and every position available when the prospecting work starts.

Mr Henry from Chemstof (Pty) Ltd indicated that they are the affected party and that they will be sending comments to Dera Envriomental within 30days since the properties applied for are registered to the company. Mr Mosue indicated that we will wait for the company's comments about the application and proceed from there.

Mr Mokwena indicated that his wish is that the Onalenna Group must come to Bokfontein community on Saturday the 20th as there will be a big community meeting and that they as a community have a list of job seekers that they can provide to the company to choose from. Mr Mosue accepted the community invitation and promised to attend the community meeting.

Mr Mokwena proposed closure and the meeting was adjourned at 11:55.

FLAMWOOD
2572

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Fax2mail. 086 578 3085
E-mail: dera.office@dera.co.za

DERA

Environmental Consultants

9203

To: **Madibeng Local Municipality - LED Manager: Johanna Motswatswe** Fax: **012 318 9665**

From: **Daan Erasmus** Date: **24 November 2017**

Re: **Proposed Prospecting Right application – consultation letter** Pages: **1 + 2**

CC:

☑Urgent ☐ For Review ☐ Please Comment Please Reply ☐ Please Recycle

Please find attached the consultation letter of Onalenna Group (Pty) Ltd. for a prospecting right application on Portions 65, 66, 67 and 68 of the farm Bokfontein 448 JQ, in the district of Brits.

The Departement of Mineral Resources requested that we must inform the Madibeng Local Municipality of the proposed mining permit application as part of the Public Participation process with interested and/or affected party.

It would be highly appreciated if you could sign the attached consultation letter and return it to Dera Environmental Consultants at fax: 018 468 4015 or e-mail it to dera.office@dera.co.za.

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

Thank you.
P.P.
Daan Erasmus

P O Box 6499
Flamwood
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Fax2Mail: 086 5783 085
Mobile: 082 895 3516
E-mail: dera.office@dera.co.za
daane@dera.co.za

DERA

24 November 2017

Environmental Consultants

To whom it may concern

CONSULTATION WITH INTERESTED AND AFFECTED PARTIES WITH REGARD TO AN APPLICATION FOR A PROSPECTING RIGHT IN TERMS SECTION 16 OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT 28 OF 2002) AND NEMA, EIA 2014 OVER: PORTION 65, PORTION 66, PORTION 67 AND PORTION 68 OF THE FARM BOKFONTEIN 448 JQ, MAGISTERIAL DISTRICT OF BRITS.

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Onalenna Group (Pty) Ltd. deem it necessary to consult with inter alia yourself / your company/ your organization, and you are therefore kindly requested to comment very clearly and unambiguously with regard to the proposed prospecting project. You are requested to put in writing any interest/ objection and/or comments you may have and send it back to the appointed consultants (**Reference no. NW30/5/1/1/2/12234PR**) within 30 days from the date of receipt of this letter. If no correspondence is received from you within the mentioned period, the applicant shall accept that you have no objection in the proposed prospecting activities.

Please call me if any further information is needed.

Your co-operation will be appreciated.

Yours faithfully
P.P.

Daan Erasmus
DERA Environmental Consultants

REGISTRATION FORM AND COMMENT FOR THE PUBLIC PARTICIPATION PROCESS PROPOSED PROSPECTING RIGHT APPLICATION ON PORTION 65, PORTION 66, PORTION 67 AND PORTION 68 OF THE FARM BOKFONTEIN 448 JQ, MAGISTERIAL DISTRICT OF BRITS.

Daan Erasmus
P.O. Box 6499
KLERKSDORP
2572

Tel. 018-468 5355
Fax: 018-468 4015
Mobile: 082 895 3516
E-mail: dera.office@dera.co.za or 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: .....

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

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

Postal Address/ Posadres .....

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

COMMENT/OBJECTION:

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

_____

_____

_____

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

_____

_____

YES/NO JA/NEE

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

_____

_____

_____

3. Do you foresee that this activity will have a negative impact on yourself or the environment/Voorsien u dat die voorgenome 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/Ingevul op..... day of /dag van..... (month)/(maand) 2017

_____ _____

Name and Surname/ Company **Signature/Handtekening**

Naam en Van/Maatskappy

. . . . . .

TRANSACTION REPORT

11/DEC/2017/MON 11:30

FAX(TX)

#	DATE	START T.	RECEIVER	COM.TIME	PAGE	TYPE/NOTE	FILE
001	11/DEC	11:27	0123189665			MEMORY NO RESPONSE	1583

THE FOLLOWING DATA COULD NOT BE SENT.
PLEASE GIVE THIS TRANSACTION REPORT TO SENDER.

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Fax. 018-468 4015
Fax2mail. 086 578 3085
E-mail: dera.office@dera.co.za

DERA

Environmental Consultants

To: **Madibeng Local Municipality - LED Manager: Johanna Motswatswe** Fax: **012 318 9665**

From: **Daan Erasmus** Date: **24 November 2017**

Re: **Proposed Prospecting Right application – consultation letter** Pages: **1 + 2**

CC:

☑ Urgent ☐ For Review ☐ Please Comment Please Reply ☐ Please Recycle

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The Departement of Mineral Resources requested that we must inform the Madibeng Local Municipality of the proposed mining permit application as part of the Public Participation process with interested and/or affected party.

It would be highly appreciated if you could sign the attached consultation letter and return it to Dera Environmental Consultants at fax: 018 468 4015 or e-mail it to dera.office@dera.co.za.

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

Thank you.
P.P.
Daan Erasmus

TRANSACTION REPORT

11/DEC/2017/MON 12:31

FAX(TX)

#	DATE	START T.	RECEIVER	COM.TIME	PAGE	TYPE/NOTE	FILE
001	11/DEC	12:22	0123189203			MEMORY BUSY	1588

THE FOLLOWING DATA COULD NOT BE SENT.
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Thank you.
P.P.
Daan Erasmus

TRANSACTION REPORT

11/DEC/2017/MON 12:47

FAX(TX)

#	DATE	START T.	RECEIVER	COM.TIME	PAGE	TYPE/NOTE	FILE
001	11/DEC	12:41	0123189203			MEMORY BUSY	1589

THE FOLLOWING DATA COULD NOT BE SENT.
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P.P.
Daan Erasmus

TRANSACTION REPORT

10/MAY/2018/THU 07:41

FAX(TX)

#	DATE	START T.	RECEIVER	COM.TIME	PAGE	TYPE/NOTE	FILE
001	10/MAY	07:38	0123189203	0:01:23		MEMORY FAIL00(0000)	3142

THE FOLLOWING DATA COULD NOT BE SENT.
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Thank you.
P.P.
Daan Erasmus

TRANSACTION REPORT

10/MAY/2018/THU 07:45

FAX(TX)

#	DATE	START T.	RECEIVER	COM.TIME	PAGE	TYPE/NOTE	FILE
001	10/MAY	07:42	0123189665			MEMORY NO RESPONSE	3143

THE FOLLOWING DATA COULD NOT BE SENT.
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Thank you.
P.P.
Daan Erasmus

Office

From: Office <dera.office@dera.co.za>
Sent: Monday, December 11, 2017 12:06 PM
To: Keabetswe Mothupi
Subject: Verification of land claims - Bokfontein 448 JQ
Attachments: Scan_20171211_112827.pdf

Good day Kea

Please see attached our request for verification of land claims on the farm Bokfontein 448 JQ in the Brits district.

Kind regards.

Ns/pp Gerda Els
Daan Erasmus
Dera Environmental Consultants/Dera Omgewingskonsultante P.O. Box 6499, Flamwood 2572 VAT No: 464 020 4881
Tel: 018 468 5355
Fax: 018 468 4015
Cell: 082 895 3516
Fax2mail: 086 578 3085
e-mail: dera.office@dera.co.za or daane@dera.co.za

Scan_20171211_112827.pdf;

P O Box 6499
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E-mail:dera.office@dera.co.za
daane@dera.co.za

DERA

Environmental Consultants

24 November 2017

Departement of Land Affairs & Rural Development

Attention: Keabetswe Mothupi

Re: Verification of Land Claims

We are Environmental Consultants situated in Klerksdorp and has applied on behalf of Onalenna Group (Pty) Ltd. for a prospecting right on the following farm in the Brits district.

- **Portion 65**
- **Portion 66**
- **Portion 67 &**
- **Portion 68 of the farm Bokfontein 448 JQ**

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

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

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

Yours truly.

p.p.

Daan Erasmus

COMMISSION ON RESTITUTION OF LAND RIGHTS

Onalenna

OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: NORTH WEST
Cnr James Moroka and Sekame Drive, West Gallery, Mega City, MMABATHO 2735
Tel: (018) 388 7000/7099

Enquiries: Keabetswe Mothupi
E-Mail: keabetswe.mothupi@drdlr.gov.za
Tel: 018 388 7220

DERA ENVIRONMENTAL CONSULTANTS
BY E-MAIL: **dera.office@dera.co.za**

Dear D Erasmus

LAND CLAIM ENQUIRY – PORTIONS 65, 66, 67 & 68 OF THE FARM BOKFONTEIN 448 JQ

We refer to your letter dated 24th of November 2017.

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

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

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

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

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

Yours faithfully

MR. L.J. BOGATSU
CHIEF DIRECTOR
OFFICE OF THE REGIONAL LAND CLAIMS COMMISSIONER: NORTH WEST
DATE: 13/12/2017.

CALCULATION OF THE QUANTUM

Applicant: **Onalenna Group** **12234 PR**
Evaluators: **DERA** **Apr-18**

No.	Description	Unit	A Quantity	B Master Rate	C Multiplication factor	D Weighting factor 1	E=A*B*C*D Amount (Rands)
1	Dismantling of processing plant and related structures (including overland conveyors and powerlines)	m3	0	14.05	1	1	0
2 (A)	Demolition of steel buildings and structures	m2	0	195.76	1	1	0
2(B)	Demolition of reinforced concrete buildings and structures	m2	0	288.49	1	1	0
3	Rehabilitation of access roads	m2	0	35.03	1	1	0
4 (A)	Demolition and rehabilitation of electrified railway lines	m	0	340.01	1	1	0
4 (A)	Demolition and rehabilitation of non-electrified railway lines	m	0	185.46	1	1	0
5	Demolition of housing and/or administration facilities	m2	0	391.53	1	1	0
6	Opencast rehabilitation including final voids and ramps	ha	0.48	205242.16	0.52	1	51228.44314
7	Sealing of shafts adits and inclines	m3	0	105.09	1	1	0
8 (A)	Rehabilitation of overburden and spoils	ha	0	136828.1	1	1	0
8 (B)	Rehabilitation of processing waste deposits and evaporation ponds (non-polluting potential)	ha	0	170416.93	1	1	0
8 (C)	Rehabilitation of processing waste deposits and evaporation ponds (polluting potential)	ha	0	494971.55	1	1	0
9	Rehabilitation of subsided areas	ha	0	114572.93	1	1	0
10	General surface rehabilitation	ha	0.3	108390.94	1	1	32517.282
11	River diversions	ha	0	108390.94	1	1	0
12	Fencing	m	0	123.64	1	1	0
13	Water management	ha	0	41213.28	1	1	0
14	2 to 3 years of maintenance and aftercare	ha	0.5	14424.65	1	1	7212.325
15 (A)	Specialist study	Sum	0			1	0
15 (B)	Specialist study	Sum				1	0
					Sub Total 1		90958.05014

1	Preliminary and General	10914.96602	weighting factor 2 1	10914.96602
2	Contingencies	9095.805014		9095.805014
			Subtotal 2	110968.82
			VAT (14%)	15535.63
			Grand Total	**126504**