



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

BASIC ASSESSMENT REPORT
and
ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

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

NAME OF APPLICANT: Witvlei Boerdery Trust (IT452/1994)

TEL NO: 054 431 0088 and 082 339 9827

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POSTAL ADDRESS: P. O. Box 241, Kakamas, 8870

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FILE REFERENCE NUMBER SAMRAD: NC30/5/1/3/2/10828MP

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1. IMPORTANT NOTICE

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

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

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

It is therefore an instruction that the prescribed 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 basic assessment process

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

- (a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;
- (b) identify the alternatives considered, including the activity, location, and technology alternatives;
- (c) describe the need and desirability of the proposed alternatives,
- (d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage , and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on the these aspects to determine:
 - (i) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and
 - (ii) the degree to which these impacts—
 - (aa) can be reversed;
 - (bb) may cause irreplaceable loss of resources; and
 - (cc) can be managed, avoided or mitigated;
- (e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—
 - (i) identify and motivate a preferred site, activity and technology alternative;
 - (ii) identify suitable measures to manage, avoid or mitigate identified impacts; and
 - (iii) identify residual risks that need to be managed and monitored.

PART A
SCOPE OF ASSESSMENT AND BASIC ASSESSMENT REPORT

3. Contact Person and correspondence address

a) Environmental Assessment Practitioner (EAP)

i) Details:

Name of The Practitioner: Vivienne Thomson

Tel No.: 021 851 1616

Fax No. : 086 512 0154

E-mail address: vivienne@enviroafrica.co.za

ii) Expertise of the EAP:

(1) The qualifications of the EAP

(with evidence).

See Curriculum Vitae attached as Appendix A

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

(In carrying out the Environmental Impact Assessment Procedure)

See Appendix A

b) Location of the overall Activity.

Farm Name:	Rozyne Bosch Farm No. 104, Portion 5
Application area (Ha)	not more than 5 hectare
Magisterial district:	Kenhardt
Distance and direction from nearest town	Approximately 40km south-east of Kakamas
21 digit Surveyor General Code for each farm portion	C03600000000010400005

c) Locality map

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

Please refer to Appendix B attached.

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

Please refer to Appendix B (Locality Maps) and Appendix C (Layout Plans) attached.

This mining permit application is for feldspar mining from a total area/footprint of not more than 5ha in size.

The total development footprint comprises two actual mining sites *viz.* Site 1a covering an area of 3.43ha which already has a partial excavation in need of rehabilitation, and Site 1b covering an area of 1.19ha (as per Figure 1 below), as well as a small processing plant to be established adjacent to existing ablution buildings and an existing shed (as per Figure 2 below). The processing plant, to be established adjacent to existing structures, covers an area of 0.1ha (as per Appendix B and C attached). The total footprint of the proposed development is, therefore, less than 5ha (i.e. 4.72ha).



Figure 1: (Left) Mining site 1a partially excavated and requiring rehabilitation and (Right) mining site 1b Picture taken looking towards the north west.

A small/basic plant for the physical crushing and screening of excavated material will be established, on disturbed land (adjacent to existing ablution and shed structures) on Portion 5 of Rozynen Bosch Farm No. 104.

After being excavated from the ground, mined feldspar will be loaded directly into C A Bruwer Konstruksie CC trucks for transportation within the same property to the processing (crushing/screening) plant using existing dirt roads on the property.

Once processed, the feldspar will be transported off site (also via trucks using existing roads), to the respective client/s.

The basic processing plant to be constructed on the proposed site does not lie immediately adjacent to the mine working areas but will be located on a disturbed area near the existing structures on the farm. The only 'structure' to be established on/near the mining sites is the provision of a portable toilet for the approximately 7 to 9 workers who will be working on site (digger/back-actor machine operators, processing plant operators and tip-truck drivers). Location of portable toilet near the mining site, is still to be determined. There will also be 2 office workers but they will not be located on the development site.

The processing plant for crushing and screening of excavated material will be established close to the existing main access road to Portion 5 of Rozynen Bosch Farm No. 104, on disturbed land and adjacent to existing buildings and ablutions. It is planned that the crusher plant will be relocated to this brownfields area and will be positioned between existing buildings and storage structures as per Figure 2 below.



Figure 2: Looking from north-north-east, to south-south-east over the disturbed/brownfields site where the processing plant will be located (processing plant footprint outlined in red).

No water will be used during the excavation process and potable water will be provided to the machine operators on site.

(i) Listed and specified activities

NAME OF ACTIVITY (E.g. For prospecting - drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route etc...etc...etc E.g. for mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.)	Aerial extent of the Activity Ha or m²	LISTED ACTIVITY Mark with an X where applicable or affected.	APPLICABLE LISTING NOTICE (GNR 544, GNR 545 or GNR 546)
Mining:	less than 5ha	X	NEMA, GNR 327, 21(a)
- excavations			
- crushing			
- processing plant for size grading/screening			
- temporary overburden stockpile			
- back-filling			
- rehabilitation			
- dirt roads			
- stormwater management/berms			
- loading trucks			
- transportation off site			
- porta-loo placement (ablutions)			
Development: Infrastructure or structures with a physical footprint of 100m ² or more where such development occurs if no development setback exists, within 32m of a watercourse, measured from the edge of a watercourse.	Less than 5ha	X	NEMA, GN. R.327, 12(xii)(c)

(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)

The mining permit application is for a feldspar mine and minerals associated with the occurrence of feldspar such as Mica, Bismuth and Beryl.

Mining activities entail:

Drill tests in known occurrences and magnetic ground survey.

Excavation along surveyed area using back-actor diggers.

Mined material will be transported via trucks to processing plant for crushing/screening (Processing plant to be established on Portion 5 of Rozynen Bosch Farm No. 104).

Processed material will be trucked away from site to clients.

Rehabilitation of excavated areas will take place as the mine works progress with final assessment upon mine closure as per rehabilitation plan. Rehabilitation may involve blasting of the bottom section/deepest side walls of the excavation trench to achieve optimum in-fill. Generally, in-filling and contouring/sloping of the inner walls of the trench will be undertaken using earth moving equipment/machinery. The use of blasting will only be employed (if required) on sections of the trench to collapse the deeper sections of the trench to achieve optimum in-fill of the trench. This may take place if optimum in-fill cannot be accomplished using excavation machinery.

The total development footprint is just under 5ha in area and comprises two actual mining sites (Site 1a covering an area of 3.43ha and Site 1b covering an area of 1.19ha), as well as the processing plant to be established adjacent to existing ablution buildings and an existing shed. The processing plant to be established covers an area of 0.1ha (as per Appendix B and C attached). The total footprint of the proposed development is, therefore, less than 5ha (i.e. 4.72ha).

A small/basic plant for the crushing and screening of excavated material will be established, adjacent to existing buildings on disturbed land on Portion 5 of Rozynen Bosch Farm No. 104.

Excavated feldspar will be loaded directly into C A Bruwer Konstruksie CC trucks for transportation to the processing (crushing/screening) plant using existing dirt roads.

Once processed, the feldspar will be transported off site (also via trucks using existing roads), to the respective client/s.

The basic processing plant to be constructed on the proposed site does not lie immediately adjacent to the mine working areas, except for the provision of a portable toilet for the approximately 4 to 5 workers who will be working on site (digger/back-actor machine operators and tip-truck drivers). Location of portable toilet near mining site, still to be determined.

The processing plant for crushing and screening of excavated material will be established close to the existing main access, adjacent road to Portion 5 of Rozynen Bosch Farm No. 104, on disturbed land.

No water will be used during the excavation process and potable water will be provided to the machine operators on site.

e) Policy and Legislative Context

<p>APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT</p> <p>(a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process)</p>	<p>REFERENCE WHERE APPLIED</p>	<p>HOW DOES THIS DEVELOPMENT COMPLY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT.</p> <p>(E.g. In terms of the National Water Act a Water Use License has/ has not been applied for)</p>
<p>National Environmental Management Act, No. 107 of 1998 (NEMA) Environmental Impact Assessment (EIA) Regulations Listing Notice 1 of 2014, as amended (GN. R. 327) 21(a)</p>	<p>Earthworks for the excavation and removal of mined material from an area not larger than 5ha.</p>	<p>Application for an environmental authorisation (EA) is being made by EnviroAfrica through this basic assessment report (BAR) and environmental management programme report (EMPR).</p>
<p>NEMA, EIA Regulations Listing Notice 1 of 2014, as amended (GN. R. 327) 12(xii)(c)</p>	<p>The development of a feldspar surface mining site and processing plant of not more than 5ha within 32m of a watercourse and the placement of a portable toilet within close proximity of the mining site.</p>	<p>A freshwater specialist study of the proposed site has been undertaken and recommendations have been included in the BAR and EMPR.</p>
<p>NEMA, EIA Regulations Listing Notice 1 of 2014, as amended (GN. R. 327) 27</p>	<p>More than 1ha of indigenous vegetation will be cleared</p>	<p>A specialist botanical assessment of the proposed site has been undertaken and recommendations have been included in the BAR and EMPR.</p>
<p>National Water Act, No. 36 of 1998 (NWA), Section 21 (c) & (i)</p>	<p>Proposed development footprint lies within 500m of several dry or ephemeral watercourses</p>	<p>Application for a water use licence is being made by WatsanAfrica CC on behalf of the proponent.</p>
<p>National Environmental Management: Biodiversity Act, No. 10 of 2004 (GN. R. 152)</p>	<p>Potential endangered, vulnerable or protected plant</p>	<p>Captured in EMPR. Although no species in terms of NEM:BA were</p>

	species on the proposed site	observed by botanical specialist
National Forests Act, No. 84 of 1998 (NFA)	Avoidance of protected / significant trees, or permit application if removal required	No NFA protected trees encountered by the botanical specialist on the actual development sites. Refer to EMPR and Botanical Assessment
Northern Cape Nature Conservation Act, No. 9 of 2009	Avoidance of protected / significant plants and trees, or permit application if removal required	Captured in EMPr. Refer to EMPr and Botanical Assessment

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 Witvlei Boerdery Trust's appointed Trustees are Mr Charel Andries Bruwer and Mr Hendrik Cornelius Le Roux as the Independent Trustee (Refer to Appendix E). Mr Bruwer is the owner of an established mining, construction machinery and supply business in the region viz. C A Bruwer Konstruksie CC.

Kakamas (and the Kenhardt region) are ever developing areas in the Northern Cape Province. While the actual proposed development will not provide additional employment for surrounding community members, it will provide sustained income for Mr Bruwer's approximately 11 skilled to semi-skilled employees who will be part of the operational staff for the development.

In addition, the mined materials provided by the proposed development, will enable other (customer) industries/companies to provide skilled and unskilled employment opportunities for persons in the region (potential permanent and temporary employment opportunities).

g) Motivation for the overall preferred site, activities and technology alternative.

The farm (on which the feldspar surface mine development is proposed), is owned by the Applicant, the Witvlei Boerdery Trust (represented by Mr Bruwer), as per Appendix F.

The proposed mining activities entail:

Drill tests in known occurrences and magnetic ground survey.

Excavation along surveyed area using back-actor diggers.

Mined material will be transported via trucks to processing plant for crushing/screening (Processing plant to be established on Portion 5 of Rozynen Bosch Farm No. 104).

Processed material will be trucked away from site to clients.

Rehabilitation of excavated area to take place as the mine works progress with final assessment upon mine closure as per rehabilitation plan. Rehabilitation may involve blasting of the 7 to 8m deep side walls of the excavation trench, as well as earthworks using machinery.

The total development footprint is just under 5ha in area and comprises two actual mining sites (Site 1a covering an area of 3.43ha and Site 1b covering an area of 1.19ha), as well as the processing plant to be established adjacent to existing ablution buildings and an existing shed. The processing plant to be established covers an area of 0.1ha (as per Appendix B and C attached). The total footprint of the proposed development is, therefore, less than 5ha (i.e. 4.72ha).

A small/basic plant for the crushing and screening of excavated material will be established, adjacent to existing buildings on disturbed land on Portion 5 of Rozyne Bosch Farm No. 104.

Excavated feldspar will be loaded directly into CMA Besighede (Pty) Ltd trucks for transportation to the processing (crushing/screening) plant using existing dirt roads.

Once processed, the feldspar will be transported off site (also via trucks using existing roads), to the respective client/s.

The basic processing plant to be constructed on the proposed site does not lie immediately adjacent to the mine working areas, except for the provision of a portable toilet for the approximately 7 to 9 workers who will be working on site (digger/back-actor machine operators and tip-truck drivers). Location of portable toilet near mining site, still to be determined.

The processing plant for crushing and screening of excavated material will be established close to the existing main access, adjacent road to Portion 5 of Rozyne Bosch Farm No. 104, on disturbed land.

No water will be used during the excavation process and potable water will be provided to the machine operators on site.

There is no technology alternative for this activity since this is a surface feldspar mining operation and follows the feldspar vein which often presents as an outcrop of feldspar at surface.

h) Full description of the process followed to reach the proposed preferred alternatives within the 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.

i) Details of the development footprint alternatives considered.

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

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

a) The proposed mining and processing plant development will take place on Portion 5 of Rozyne Bosch Farm No. 104, Kenhardt Magisterial District, Northern Cape Province (refer to Appendix B).

The farm (on which the feldspar surface mine development is proposed), is owned by the Applicant, the Witvlei Boerdery Trust (represented by Mr Bruwer), as per Appendix F.

b) The proposed mining activities entail:

Drill tests in known occurrences and magnetic ground survey.

Excavation along surveyed area using back-actor diggers.

Mined material will be transported via trucks to processing plant for crushing/screening (Processing plant to be established on Portion 5 of Rozynen Bosch Farm No. 104).

Processed material will be trucked away from site to clients.

Rehabilitation of excavated area to take place as the mine works progress with final assessment upon mine closure as per rehabilitation plan. Rehabilitation may involve blasting of the 7 to 8m deep side walls of the excavation trench, as well as earthworks using machinery.

c) The total development footprint is just under 5ha in area and comprises two actual mining sites (Site 1a covering an area of 3.43ha and Site 1b covering an area of 1.19ha, as per Appendices b and D), as well as the processing plant to be established adjacent to existing ablation buildings and an existing shed. The processing plant to be established covers an area of 0.1ha (as per Appendix B and D attached). The total footprint of the proposed development is, therefore, less than 5ha (i.e. 4.72ha).

d) Feldspar and associated minerals as indicated in the SAMRAD application, will be mined using mechanical means (earth moving equipment). No chemical beneficiation or extraction processes will be used. A small/basic plant for the crushing and screening of excavated material will be established, adjacent to existing buildings on disturbed land on Portion 5 of Rozynen Bosch Farm No. 104.

Excavated feldspar will be loaded directly into CMA Besighede (Pty) Ltd trucks for transportation to the processing (crushing/screening) plant using existing dirt roads.

Once processed, the feldspar will be transported off site (also via trucks using existing roads), to the respective client/s.

The basic processing plant to be constructed on the proposed site does not lie immediately adjacent to the mine working areas, except for the provision of a portable toilet for the approximately 7 to 9 workers who will be working on site (digger/back-actor machine operators and tip-truck drivers). Location of portable toilet near mining site, still to be determined.

The processing plant for crushing and screening of excavated material will be established close to the existing main access, adjacent road to Portion 5 of Rozynen Bosch Farm No. 104, on disturbed land.

No water will be used during the excavation process and potable water will be provided to the machine operators on site.

There is no technology alternative for this activity since this is a surface feldspar mining operation and follows the feldspar vein which often presents as an outcrop of feldspar at surface.

e) See points 'b' and 'd' above for operational aspects of the proposed activity.

f) The preferred development footprint does not allow any options for alternative sites since the feldspar seam which presents at surface in the proposed mining footprint, is being mined. Part of this seam had already been excavated and the rehabilitation of this section forms part of this project.

The possibility of alternative sites for feldspar mining on Portion 5 of Rozynen Bosch Farm No. 104 does exist. However, prospecting for occurrences of feldspar will need to be Undertaken. It was communicated that exploration of these this potential future development sites (i.e. prospecting) will be conducted as a separate EIA undertaking/application to the Department.

ii) Details of the Public Participation Process Followed

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

First round of public participation (PP) process i.e. pre-application:

Placed advertisement in local newspaper regarding project, background information maildrop notification.

Sent/posted notifications to immediate neighbours, occupiers of the proposed site, organs of state,

ward councillors and potential interested and affected parties (I&APs).

Place A2 posters on proposed development site boundary.

Display and place A3 posters and maildrop letters in public facilities (municipality, large formal retail shops, libraries).

Display A3 posters in additional public places e.g. informal settlement entrances, local/informal spaza shops/gathering places.

Deliver maildrop letters to any neighbouring properties / surrounding communities

Update I&AP list.

Populate summary of issues raised by I&APs in BAR.

Second round of public participation (PP) process i.e. post-application:

Load application form and associated documents on SAMRAD for competent authority viewing.

Send out notifications to registered I&APs *re.* application and DBAR availability on EnviroAfrica website for public viewing / comment.

Email, deliver or post copies of any PP documentation to querying I&APs who request them.

Update I&AP List.

Update summary of issues raised by I&APs in BAR.

Submit final BAR (FBAR) for comment (via SAMRAD and one hardcopy to Springbok office) and inform I&APs of submission.

Await competent authority EA decision.

Inform I&APs of competent authority appeal process and EA decision when received.

iii) Summary of issues raised by I&APs

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

Interested and Affected Parties	Date	Issues raised	EAPs response to issues as mandated by the applicant	Section and paragraph reference in this report where the issues and or response were incorporated.
<p>List the names of persons consulted in this column, and Mark with an X where those who must be consulted were in fact consulted.</p>	<p>Comments Received</p>			
<u>AFFECTED PARTIES</u>				
<p>Landowner/s</p>	<p>X None received</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p>Lawful occupier/s of the land</p>	<p>None received</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p>Landowners or lawful occupiers on adjacent properties</p>	<p>X None received</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p>Municipal councillor</p>	<p>X None received</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p>Municipality</p>	<p>X None received</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p>Organs of state (Responsible for</p>				

infrastructure that may be affected Roads Department, Eskom, Telkom, DWA e												
SANRAL notified	X	None received	N/A	General initial comment received from V Ramugondo indicating that if watercourses are impacted a pre-application meeting and water use licence/authorisation application (WULAA) with the DHSW&S must be undertaken.	N/A	DHSW&S correspondence sent via email to freshwater specialist (Dr. Dirk van Driel, Watsan Africa) since Watsan Africa is handling the WULAA process (separate to the NEMA EIA process)	N/A	N/A	Appendix J			
Department of Human Settlements, Water and Sanitation (DHSW&S)	X	2019/09/16	N/A		N/A							
Communities		N/A	N/A		N/A				N/A			
Dept. Land Affairs		N/A	N/A		N/A				N/A			
Traditional Leaders		N/A	N/A		N/A				N/A			
Dept. Forestry, Fisheries and the Environment (DFFE)		N/A	N/A		N/A				N/A			
Other Competent Authorities affected												
DFFE (Forestry Directorate)	X	2020/09/29		Follow-up email after EAP contacted the then Department of Agriculture, Forestry and Fisheries (DAFF) to find out if a pre-application comment was given on the project. Confirmation from DAFF/DFFE		EAP (Vivienne Thomson, EnviroAfrica) contacted the DAFF to find out if a pre-application comment was given on the project.			Appendix J			

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

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

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

The most significant feature of the area, influencing topography is the Hartbees River that runs to the west of the property (from southeast to northwest) as it drains towards the Orange River. Consequently, Portion 5 of the Farm Rozynen Bosch 104 slopes gently from East-North-East to West-South-West.

To the east and north-east of the property small hills (koppies) can be observed, but for the most part the landscape can be described as undulating as it slopes (drains) down towards the Hartbees River.

The property itself is criss-crossed by a number of small seasonal drainage lines as well as two slightly more significant drainage lines.

Elevation drops from approximately 835 m to about 722 m (at the Hartbees River) over a distance of just under 9 km, with a maximum slope of 9.1% and an average slope of only 1.7%.

The following protected or endangered species was encountered / expected:

- **Two red-listed species**, namely *Hoodia gordonii* & *Aloidendron dichotomum*
- One NEM: BA protected plant species observed, namely *Hoodia gordonii*
- No NFA protected trees were encountered
- Eight NCNCA protected plant species were encountered, but more can be expected (e.g. annual herbs which only shows after good rains)

A number of protected plant species were observed, most notably the potential impact on a number of *Aloidendron dichotomum* and *Boscia foetida* individuals. However, the owner committed (confirmed by previous development practices on this property) to the protection of all significant indigenous trees (wherever possible). None-the-less, it is expected that a number of smaller *Boscia foetida* species and provincially protected species will be impacted and appropriate permits must be obtained, where required.

The Northern Cape CBA Map (2016) identifies biodiversity priority areas, called Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs), which, together with protected areas, are important for the persistence of a viable representative sample of all ecosystem types and species as well as the long-term ecological functioning of the

landscape as a whole (Holness & Oosthuysen, 2016). According to the NCCBA the proposed site will not impact on a CBA or ESA (Refer to Appendix C attached). Furthermore, the site will not impact on any recognised centre of endemism.

While the actual proposed development will not provide additional employment for surrounding communities member, it will provide sustained income for Mr Bruwer's 11 skilled and semi-skilled employees who will be part of the operational staff for the development.

(b) Description of the current land uses.

Current land use zoning is agricultural.

Refer to Appendix D - Sensitivity Maps.

The surrounding land use is primarily agricultural. A regional dirt road runs to the west of the farm Rozyne Bosch 104/5.

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

Please refer to (a) above.

(d) Environmental and current land use map.

(Show all environmental, and current land use features)

Please refer to sensitivity and location maps attached as Appendices D and B, respectively.

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).

Refer to Appendix M.

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).

Refer to Appendix M.

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)

Refer to Appendix M for positive and negative impacts of the proposed activity.

The preferred development footprint does not allow many options for alternative sites since the feldspar seam which presents at surface in the proposed mining footprint, is being mined. Part of this seam had already been excavated and the rehabilitation of this section forms part of this project.

While the actual proposed development will not provide additional employment for surrounding communities member, it will provide sustained income for Mr Bruwer's 11 skilled and semi-skilled employees who will be part of the operational staff for the development.

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 section h(iii) above.

ix) Motivation where no alternative sites were considered.

The Applicant is the owner of the Farm i.e. the Witvlei Boerdery Trust (represented by Mr C A Bruwer). The preferred development footprint does not allow any options for alternative sites since the feldspar seam which presents at surface in the proposed mining footprint, is being mined. Part of this seam had already been excavated and the rehabilitation of this section forms part of this project.

The possibility of alternative sites for feldspar mining on Portion 5 of Rozynen Bosch Farm No. 104 does exist. However, prospecting for occurrences of feldspar will need to be Undertaken. It was communicated that exploration of these this potential future development sites (i.e. prospecting) will be conducted as a separate EIA undertaking/application to the Department.

x) Statement motivating the alternative development location within the overall site. (Provide a statement motivating the final site layout that is proposed)

An alternative development location at this stage was not possible, since the preferred development footprint does not allow any options for alternative sites since the feldspar

seam which presents at surface in the proposed mining footprint, is being mined. Part of this seam had already been excavated and the rehabilitation of this section forms part of this project.

The possibility of alternative sites for feldspar mining on Portion 5 of Rozynen Bosch Farm No. 104 does exist. However, prospecting for occurrences of feldspar will need to be Undertaken. It was communicated that exploration of these this potential future development sites (i.e. prospecting) will be conducted as a separate EIA undertaking/application to the Department.

The location of the processing plant will be on an already disturbed area with existing ablution/toilet facilities for employees.

- i) 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 were 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.)**

Refer to Appendix M, as well as risk identification and ratings in specialist reports (Appendices J to L).

j) 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	POTENTIAL IMPACT (Including the potential impacts for cumulative impacts)	ASPECTS AFFECTED	PHASE In which impact is anticipated	SIGNIFICANCE if not mitigated	MITIGATION TYPE	SIGNIFICANCE if mitigated
<p>(E.g. For prospecting - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route etc....etc....etc</p> <p>E.g. For mining:- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc....etc....etc.)</p>	<p>(e.g. dust, noise, drainage surface water disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc...)</p>		<p>(e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)</p>		<p>(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)</p> <p>E.g. Modify through alternative method. Control through noise control Control through management and monitoring through rehabilitation..</p>	
Please refer to Appendix M						

The supporting impact assessment conducted by the EAP must be attached as an appendix, marked **Appendix M**

k) 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 THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)	REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.
Botanical Assessment, P B Consult (February 2020)	<p>Before construction commences:</p> <ul style="list-style-type: none"> • All construction must be done in accordance with an approved construction and operational phase Environmental Management Plan (EMP), which must include the recommendations made in this report. • A suitably qualified Environmental Control Officer must be appointed to monitor the construction phase in terms of the EMP and any other conditions pertaining to specialist studies. • Before any work is done the site and access routes must be clearly demarcated (with the aim at minimal width/smallest footprint). The demarcation must include the total footprint necessary to execute the work but must aim at minimum disturbance. • Access must be limited to routes approved by the ECO. • Lay-down areas or construction sites must be located within already disturbed areas or areas of low ecological value and must be pre-approved by the ECO. • An application must be made to DENC for a flora permit in terms of the NCNCA with regards to impacts on species protected in terms of the act. • Conservation of red-listed and protected plant species: 	All recommendations included	Within BAR, Appendix H, as well as in EMPr.

- ***Hoodia gordonii***: The plant should be demarcated and protected throughout the mining operation (Refer to Tables 4 and 7 in botanical/biodiversity specialist report attached as Appendix I);
- ***Aloidendron dichotomum***: All efforts should be made to protect individual plants *in-situ*. However, if this is not possible impacted plants must be transplanted, to a suitable area within the adjacent landscape. Search & rescue must be under supervision of a suitable qualified person and only with the ECO approval. Transplanted plants must have a follow-up maintenance (watering) plan for at least one year (Refer to Tables 4, 5, 7 and 8 in botanical/biodiversity specialist report attached as Appendix I);
- ***Northern Cape Nature Conservation Act protected species***: Please refer to Table 8 in botanical/biodiversity specialist report attached as Appendix I, for recommendations on the management of the various plants encountered.

During construction/operation:

- Topsoil (the top 10 – 15cm layer) should be removed (but only from the area that will actually be mined and spoil storage areas) and stored within the construction footprint (the topsoil contains and protects the seed store of the plants of the site). It must be protected and may not be contaminated by spoil or other excavated material. However, please note the following:
 - **NB:** Topsoil must only be removed from the **areas that will be mined or used for the storage of spoil** (not from the surrounding veld – even if it will be impacted by construction vehicle movement). In other words, the whole footprint, should not be cleared UNLESS the whole site will be mined. In dry desert climates like that encountered at Rozyne Bosch, the rehabilitation of the veld after disturbance will take

many years, and in this case the shallow rocky substrate will protect many of the plant species and or their seeds even if construction vehicles will move over the site.

- Indiscriminate clearing of any area outside of the construction footprint must be avoided.
- An integrated waste management approach must be implemented during construction.
 - Construction related general and hazardous waste may only be disposed of at Municipal approved waste disposal sites.
 - All rubble and rubbish should be collected and removed from the site to a suitable registered waste disposal site.

Rehabilitation:

- The areas impacted by the mining or prospecting activities must be rehabilitated on completion of the project. Since Feldspar mining results in deep trenches, with very steep (stable) sides (**Error! Reference source not found.** in botanical/biodiversity specialist report) the following rehabilitation technique has been discussed with the land-owner with the aim of minimising the disturbance footprint):
 - Collapse the sidewalls of the trench from the bottom upwards (e.g. using explosives) wherever possible. The aim is to reduce the impact on the topsoil. In this way it is hoped that the topsoil on top of the trenches will remain at the top, while the subsoil shifts to the sides – resulting in infilling and reducing the slope of the sides simultaneously.;
 - Then fill and shape the trench with all surplus spoil, ensuring that slopes approved by the DMR;
 - Lastly, place the topsoil back into the trench on top of the excavated area.

	<p>According to the botanical/biodiversity specialist, “With the available information, it is recommended that the project be approved since it is unlikely to result in irreversible environmental impact”.</p>		
<p>Freshwater Report, Watsan Africa, October 2019</p>	<p><u>Freshwater specialist recommendations:</u></p> <ul style="list-style-type: none"> • The existing excavated trench must be filled in again, when mined out and as the mining proceeds along the seam of feldspar. It should not wait until the mining is done but should follow the mining face. The waste rock/soil should be pushed back into the trench, followed by the overburden, to eventually leave a landscaped site behind that is lower than the original one, but that blends in with its surroundings. • Any stockpiles at the crushing/processing plant should be removed completely once the mining operation has ceased. • Erosion control along the access road in the drainage lines, where unsightly, should be covered with soil to soften the visual impact. • The road should be kept in good order, with repairs done where the heavily laden trucks caused damage. <p>According to the freshwater specialist, “The potential impact of the proposed expansion of the Rozynenbosch mine and its associated infrastructure is insignificant. The impact on the surrounding landscape is rather striking and would be permanent if not rehabilitated”.</p>	<p>All recommendations included</p>	<p>Within BAR, Appendix I, as well as in EMPr.</p>
<p>Phase 1 HIA Report, Ubique Heritage Consultants, November 2019</p>	<p><u>Heritage specialist recommendations:</u></p> <ul style="list-style-type: none"> • Based on the assessment of the potential impact of the development on the identified heritage, the following recommendations are made, taking into consideration any existing or potential sustainable social and economic benefits: • No significant heritage sites or features were identified within the development footprint. No further mitigation is required. 	<p>All relevant recommendations included</p>	<p>Within BAR, Appendix J, as well as in EMPr.</p>

	<ul style="list-style-type: none"> • According to heritage specialists, “ ... , we recommend that the proposed mining development and permit applications can continue ”. • Due to the zero to low palaeontological significance of the area, no further palaeontological heritage studies, ground-truthing and/or specialist mitigation are required. It is considered that the development of the proposed development is deemed appropriate and feasible and will not lead to detrimental impacts on the palaeontological resources of the area as the igneous rocks underlying the site are not fossiliferous. 		
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Attach copies of Specialist Reports as appendices I to K

I) Environmental impact statement

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

Botanical/biodiversity:

The proposed development will result in the semi-permanent transformation of approximately <5ha of natural veld. According to the impact assessment given in the botanical/biodiversity specialist report attached as Appendix J, the potential impact should be relatively low, even to begin with, but with good environmental control, the impact of the proposed activities should result in very low to negligible impact on the environment.

With the correct mitigation it is considered highly unlikely that the proposed development will contribute significantly to any of the following:

- Significant loss of vegetation type and associated habitat.
- Loss of ecological processes (e.g. migration patterns, pollinators, river function etc.) due to construction and operational activities.
- Loss of local biodiversity and threatened plant species.
- Loss of ecosystem connectivity.

According to the botanical/biodiversity specialist, *“With the available information, it is recommended that the project be approved since it is unlikely to result in irreversible environmental impact”*.

Freshwater:

The potential impact of the proposed expansion of the Rozynenbosch mine and its associated infrastructure is insignificant. The impact on the surrounding landscape is rather striking and would be permanent if not rehabilitated.

The Risk Matrix suggests that a General Authorization is the appropriate level of authorization in terms of the water use licence/authorisation process regulated by the National Water Act, No. 36 of 1998.

Heritage:

- No significant heritage sites or features were identified within the development footprint. No further mitigation is required.
- According to heritage specialists, *“Therefore, from a heritage point of view, we recommend that the proposed mining development and permit applications can continue”*.
- Due to the zero to low palaeontological significance of the area, no further palaeontological heritage studies, ground-truthing and/or specialist mitigation are required. It is considered that the development of the proposed development is deemed appropriate and feasible and will not lead to detrimental impacts on the palaeontological resources of the area as the igneous rocks underlying the site are not fossiliferous.

(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 site indicating any areas that should be avoided, including buffers.

Refer to Appendices B and D

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

Refer to Appendix M

m) 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.

Botanical/biodiversity specialist recommendations:

The proposed development will result in the semi-permanent transformation of approximately < 5 ha of natural veld. According to the impact assessment given in the botanical/biodiversity specialist report attached as Appendix J, the potential impact should be relatively low, even to begin with, but with good environmental control, the impact of the proposed activities should result very low to negligible impact on the environment.

With the correct mitigation it is considered highly unlikely that the proposed development will contribute significantly to any of the following:

- Significant loss of vegetation type and associated habitat.
- Loss of ecological processes (e.g. migration patterns, pollinators, river function etc.) due to construction and operational activities.
- Loss of local biodiversity and threatened plant species.
- Loss of ecosystem connectivity.

Before construction commences:

- All construction must be done in accordance with an approved construction and operational phase Environmental Management Plan Report (EMPR), which must include the recommendations made in this report.
- A suitably qualified Environmental Control Officer must be appointed to monitor the construction phase in terms of the EMPR and any other conditions pertaining to specialist studies.
- Before any work is done the site and access routes must be clearly demarcated (with the aim at minimal width/smallest footprint). The demarcation must include the total footprint necessary to execute the work but must aim at minimum disturbance.
- Access must be limited to routes approved by the ECO.
- Lay-down areas or construction sites must be located within already disturbed areas or areas of low ecological value and must be pre-approved by the ECO.
- An application must be made to DENC for a flora permit in terms of the NCNCA with regards to impacts on species protected in terms of the act.
- Conservation of red-listed and protected plant species:
 - *Hoodia gordonii*: The plant should be demarcated and protected throughout the mining operation (Refer to Tables 4 and 7 in botanical/biodiversity specialist report);

- *Aloidendron dichotomum*: All efforts should be made to protect individual plants *in-situ*. However, if this is not possible impacted plants must be transplanted, to a suitable area within the adjacent landscape. Search & rescue must be under supervision of a suitable qualified person and only with the ECO approval. Transplanted plants must have a follow-up maintenance (watering) plan for at least one year (Refer to Tables 4, 5, 7 and 8 in botanical/biodiversity specialist report);
- *Northern Cape Nature Conservation Act protected species*: Please refer to Table 8 for recommendations on the management of the various plants encountered.

During construction/operation:

- Topsoil (the top 10 – 15cm layer) should be removed (but only from the area that will actually be mined and spoil storage areas) and stored within the construction footprint (the topsoil contains and protects the seed store of the plants of the site). It must be protected and may not be contaminated by spoil or other excavated material. However, please note the following:
 - **NB:** Topsoil must only be removed from the **areas that will be mined or used for the storage of spoil** (not from the surrounding veld – even if it will be impacted by construction vehicle movement). In other words, the whole footprint, should not be cleared UNLESS the whole site will be mined. In dry desert climates like that encountered at Rozynen Bosch, the rehabilitation of the veld after disturbance will take many years, and in this case the shallow rocky substrate will protect many of the plant species and or their seeds even if construction vehicles will move over the site.
- Indiscriminate clearing of any area outside of the construction footprint must be avoided.
- An integrated waste management approach must be implemented during construction.
 - Construction related general and hazardous waste may only be disposed of at Municipal approved waste disposal sites.
 - All rubble and rubbish should be collected and removed from the site to a suitable registered waste disposal site.

Rehabilitation:

- The areas impacted by the mining or prospecting activities must be rehabilitated on completion of the project. Since Feldspar mining results in deep trenches, with very steep (stable) sides as mentioned in the botanical/biodiversity specialist report) the following rehabilitation technique has been discussed with the land-owner (with the aim of minimising the disturbance footprint):
 - Collapse the sidewalls of the trench from the bottom upwards (e.g. using explosives) wherever possible. The aim is to reduce the impact on the topsoil. In this way it is hoped that the topsoil on top of the trenches will remain at the top, while the subsoil shifts to the sides – resulting in infilling and reducing the slope of the sides simultaneously.;
 - Then fill and shape the trench with all surplus spoil, ensuring that slopes approved by the DMR;
 - Lastly, place the topsoil back into the trench on-top of the excavation.

Freshwater specialist recommendations:

- In terms of watercourses, only the most obvious aspects of the rehabilitation are mentioned.
- The trench must be filled in again, when mined out and as the mining proceeds along the seam of feldspar. It should not wait until the mining is done but should follow the mining face. The waste

should be pushed back into the trench, followed by the overburden, to eventually leave a landscaped site behind that is lower than the original one, but that blends in with its surroundings.

- Immediately following prospecting, the rocks and other material should be pushed back into the holes. The areas should be levelled and landscaped to blend in with the surroundings. This is particularly applicable to Prospection Areas 3 and 4.
- Likewise, the stockpiles at the crusher should be removed completed once the mining operation has ceased.
- Erosion control along the access road in the drainage lines, where unsightly, should be covered with soil to soften the visual impact. The road should be kept in good order, with repairs done where the heavily laden trucks caused damage.

Heritage specialist recommendations:

- Based on the assessment of the potential impact of the development on the identified heritage, the following recommendations are made, taking into consideration any existing or potential sustainable social and economic benefits:
- No significant heritage sites or features were identified within the development footprint. No further mitigation is required. Therefore, from a heritage point of view, we recommend that the proposed mining development and permit applications can continue.
- Due to the zero to low palaeontological significance of the area, no further palaeontological heritage studies, ground-truthing and/or specialist mitigation are required. It is considered that the development of the proposed development is deemed appropriate and feasible and will not lead to detrimental impacts on the palaeontological resources of the area as the igneous rocks underlying the site are not fossiliferous.

n) Aspects for inclusion as conditions of Authorisation.

As per section 'm' above and including additional aspects as per the EMPR (attached as Appendix N).

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

(Which relate to the assessment and mitigation measures proposed)

It was stated by the botanical /biodiversity specialist that the ongoing drought in which the Farm Rozyne Bosch 104/5 had not received rainfall for the past four years.

This caused the veld to be reduced to a very sparse low shrubland, with only the hardier and drought resistant species remaining (many of which are also slowly succumbing to the drought). Due to this, it was sometimes difficult for the botanical /biodiversity specialist to identify plants to species level.

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

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

None of the specialist assessments indicated any fatal flaw or significant reason for the intended mining development not to proceed.

In addition, from a general EAP assessment, the benefits of rehabilitation of already impacted sections on the site and the provision of employment for 11 persons from the region, provide additional positive motivation supporting authorisation of the activity.

ii) Conditions that must be included in the authorisation

As per section 'k' above (tabulated specialist recommendations).

q) Period for which the Environmental Authorisation is required.

Two (2) to five (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.

It is confirmed that the undertaking is provided at the end of the EMPR.

s) Financial Provision

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

i) Explain how the aforesaid amount was derived.

To be included in SAMRAD submission to competent authority (not included due to confidential nature of information)

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 Prospecting Work Programme as the case may be).

To be included in SAMRAD submission to competent authority (not included due to confidential nature of information)

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 prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim, attach the investigation report as an Appendix.

The farm on which the proposed mining development is to take place, Rozynen Bosch 104/5, is privately owned by the Witvlei Boerdery Trust. The Trust is also the Applicant for this activity.

Besides the monetary benefit to the business endeavours of the Applicant and the provision of approximately 11 jobs for the skilled and semi-skilled employees currently working for Mr C A Bruwer (a Trustee of the Witvlei Boerdery Trust and representative of the Trust in this application), there are no wide-reaching socio-economic benefits for the broader community.

There are also no known land restitution claims against the property/owner of the property.

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

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

None. Refer to specialist report as per Appendix L.

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 4**).

The preferred development footprint does not allow any options for alternative sites since the sub-surface feldspar vein presents at surface in the proposed mining footprint at site 1a. This is the section of the feldspar seam which is being applied for mining rights. Part of this seam had already been excavated and the rehabilitation of this section also forms part of this project. Site 1b is a continuation of the vein from site 1a but seems to run more below the surface. Therefore, for this application, the Applicant is merely following a known source of the mineral (and associated commodities as listed in the SAMRAD application).

The possibility of alternative sites for feldspar mining on Portion 5 of Rozynen Bosch Farm No. 104 does exist. However, prospecting for occurrences of feldspar will need to be Undertaken. It was communicated that exploration of these this potential future development sites (i.e. prospecting) will be conducted as a separate EIA undertaking/application to the Department.

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).

Refer to Appendix 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 (1)(h) herein as required).

Refer to Appendix M.

c) **Composite Map**

(Provide a map (**Attached as an Appendix**) 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 should be avoided, including buffers)

Refer to Appendices B, C and D.

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)

It was communicated that the end-of-life use of the proposed development site will be for agricultural (grazing) use. Currently the land is used agriculturally (for grazing).

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

N/A

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

A water use licence authorisation due to certain listed activities under the National Water Act, No. 36 of 1998 is to be applied for. EnviroAfrica is not undertaking the water use licence authorisation process.

iv) Impacts to be mitigated in their respective phases

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

ACTIVITIES	PHASE	SIZE AND SCALE of disturbance (volumes, tonnages and hectares or m ²)	MITIGATION MEASURES (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	COMPLIANCE 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
<p>(E.g. For prospecting - drill site, site camp, ablation facility, accommodation, equipment storage, sample storage, site office, access route etc....etc....etc</p> <p>E.g. For mining,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablation, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc....etc....etc.)</p>	<p>(of operation in which activity will take place.</p> <p>State; Planning and design, Pre-Construction, Operational, Rehabilitation, Closure, Post closure).</p>				<p>Describe the time period when the measures in the environmental management programme must be implemented. Measures must be implemented when required.</p> <p>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.</p> <p>Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.</p>
Please refer to Appendix M for impacts per activity and mitigation measures.					

e) Impact Management Outcomes

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

ACTIVITY (whether listed or not listed).	POTENTIAL IMPACT	ASPECTS AFFECTED	PHASE In which impact is anticipated	MITIGATION TYPE	STANDARD TO BE ACHIEVED
(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.).	(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc...)		(e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc) E.g. <ul style="list-style-type: none"> • Modify through alternative method. • Control through noise control • Control through management and monitoring • Remedy through rehabilitation.. 	(Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.
Please refer to Appendix M for impacts per activity and mitigation measures and reduction in significant/risk rating due to mitigation management outcomes. The detailed EMPR attached as Appendix XX further lists mitigation types (often controlled through method statements/procedures and site inspections).					

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.	POTENTIAL IMPACT	MITIGATION TYPE	TIME PERIOD FOR IMPLEMENTATION	COMPLIANCE WITH STANDARDS
<p>(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..).</p>	<p>(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc....etc...)</p>	<p>(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)</p> <p>E.g.</p> <ul style="list-style-type: none"> • Modify through alternative method. • Control through noise control • Control through management and monitoring <p>Remedy through rehabilitation..</p>	<p>Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required.</p> <p>With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation, therefore state either:-.</p> <p>Upon cessation of the individual activity or.</p> <p>Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.</p>	<p>(A description of how each of the recommendations in 2.1.1.6 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)</p>
Please refer to Appendix M and detailed EMPR attached as Appendix N for impacts per activity and mitigation management actions.				

i) Financial Provision

(1) Determination of the amount of Financial Provision.

(a) Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation.

It is the Applicant's objective to return the area/development sites to its original state. All specialist will be adhered to and have been included in the EMPR attached as Appendix N to this final BAR.

The flora related regulatory Departments' recommendations concur with the botanical/biodiversity specialist findings and have also been included in the EMPR attached as Appendix N to this final BAR.

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

The Applicant is the landowner. Environmental objectives and recommendations with respect to mine site closure were included in the draft BAR which was circulated for public comment.

(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.

The biodiversity/botanical specialist's report (Appendix J) includes a rehabilitation assessment and rehabilitation plan in section 8.1.3. Recommendations from the biodiversity/botanical specialist's report (Appendix J) are also included in the EMPR attached as Appendix N to this final BAR.

(d) Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives.

The biodiversity/botanical specialist's report (Appendix J of the final BAR) included rehabilitation assessment and EMPR attached as Appendix N to this final BAR

(e) Calculate and state the quantum of the financial provision required to manage and rehabilitate the

environment in accordance with the applicable guideline.

Refer to Appendix O, page 2, as attached.

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

The applicant (who is also the owner of the land) made declaration as per Appendix P of the final BAR, as well as in the application form (as revised), that financial provision as determined will be provided.

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
- j) Time period for implementing impact management actions
- k) Mechanism for monitoring compliance

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
Routine Environmental Control Officer site inspections				
Quarterly EA and EMPr compliance report	As per detailed EMPr attached as Appendix N to this BAR.			

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

Quarterly (every four month from date EA issued).

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

Verbal communication (only approximately 7 to 9 employees on site with 2 off-site office/administration workers).

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

Environmental Control Officer inspections will be required on a twice a month (every second week) basis to ensure that specialist recommendations and preservation of specified flora/trees (or correct process is for tree removal) is adhered to.

n) Specific information required by the Competent Authority
(Among others, confirm that the financial provision will be reviewed annually).

Applicant must submit documentation confirming financial provision for rehabilitation/landscaping of mining site/s upon site 'closure'/reversion to agricultural land use.

2) UNDERTAKING

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:

EnviroAfrica CC

Name of company:

22 September 2021

Date:

-END-



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

NAME OF APPLICANT: Witvlei Boerdery Trust (NC30/5/1/3/2/10828MP)

FINANCIAL AND TECHNICAL COMPETENCE REPORT

SUBMITTED FOR A MINING PERMIT APPLICATION

AS REQUIRED IN TERMS OF ITEM B OF FORM F, ANNEXURE I OF THE REGULATIONS FOR THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT (ACT 28 of 2002), AND IN ACCORDANCE WITH THE STANDARD DIRECTIVE FOR THE COMPILATION THEREOF AS PUBLISHED ON THE OFFICIAL WEBSITE OF THE DEPARTMENT OF MINERAL RESOURCES.

STANDARD DIRECTIVE

All applicants for mining permits are herewith, in terms of the provisions of Section 29 (a) of the Mineral and Petroleum Resources Development Act, directed to submit a report strictly in accordance with the following format, and as informed by the guideline posted on the Departments Official Website, together with an application for a mining permit.

2. ABILITY TO MANAGE AND REHABILITATE RELEVANT ENVIRONMENTAL IMPACTS

TABLE 2 Environmental cost estimate.

ACTIVITY Mark with X which activities are applicable	POTENTIAL IMPACT	MITIGATION MEASURE	STATE QUARTERLY COST OF MITIGATION MEASURES IN THE AVAILABLE SPACE BELOW, IN RANDB	STATE THE ESTIMATED REHABILITATION COST RELATED TO THE ACTIVITY IN THE AVAILABLE SPACE BELOW, IN RANDB
Excavating	X Surface disturbance	Rehabilitation		On-going rehabilitation / infilling of excavated trench part of mitigation
	Dust	Dust control measures	not known	
	Noise	Noise control measures	0	
	Contaminated Drainage	Storm water system	15,000	
Blasting	X Fly Rock	Access control measures	R5,000	
Stockpiles	Surface disturbance	Rehabilitation		
	Dust	Dust Control Measures		
	Contaminated Drainage	Storm water system		
Discard dumps or dams	Surface Disturbance	Rehabilitation		
	Dust	Dust control Measures	0	
	Contaminated Drainage	Storm water system	0	
Loading, hauling and transport	Noise	Noise control measures	0	
	Dust	Dust control Measures	0	
Water supply dams and boreholes.	Surface disturbance	Rehabilitation		
	Surface disturbance	Rehabilitation		
Accommodation, offices, ablution, stores, workshops etc.	Noise	Noise control measures		
	Dust	Dust control Measures		
	Contaminated Drainage	Storm water system		
	Surface disturbance	Rehabilitation		
Processing Plant	Surface disturbance	Rehabilitation		
	Surface disturbance	Rehabilitation		
TOTAL			R20,000	

TABLE 3.2- FINANCING THE PROJECT

CATEGORY	AMOUNT	SUPPORTING INFORMATION
State the amount required to fund the project	R5,338,200	
State the amount the applicant has available to fund the project	R5,500,000	Attach documentary proof that the amount is available in the form of a bank statement.
State the outstanding amount required to fund the project	0	

CATEGORY	DESCRIPTION	SUPPORTING INFORMATION
State how the outstanding amount will be financed, e.g. Loan, investor, etc.	Not applicable	Attach documentary proof of any financing agreement, or other relevant evidence

NOTE ! If the applicant does not have sufficient financial resources readily available (or cannot provide) for the working losses, and for the operating, technical competence and working cost of the first quarter stated in the cash flow forecast above, it cannot be concluded that the applicant has or can provide for the necessary financial resources to carry out the mining activities and to mitigate and rehabilitate relevant environmental impacts.

4. SUPPORTING INFORMATION

TABLE 4.1- CAPITAL COST ESTIMATE: Complete the information required in the table below

COST CATEGORY	QUARTERLY RENTAL WHERE APPLICABLE R'000	OUTRIGHT PURCHASE AMOUNT
Land	0	0
Buildings and infrastructure	None	150,000
Processing plant	None	None
Machinery	None	None
Other (specify)		
TOTAL (to be reflected in the cash flow forecast in table 3.1 above)		R150,000

TABLE 4.2- OPERATING COSTS: Complete the information below:-

COST CATEGORY		Quarterly cost R'000
Fuel		65
Electricity		
Water		
Stores and materials		110
Other (specify)	Salaries (R126, 409 per quarter for nine employees)	126
TOTAL QUARTERLY COST (must be reflected in the cash flow forecast in table 3.1 above)		126

TABLE 4.3- BACKGROUND TO OPERATING COSTS: Complete the information below:-

CATEGORY	REQUIREMENT	COMPLETE THIS COLUMN
MINERAL	State the mineral to be mined	Feldspar
FUEL	State volume or tonnage of earth to be excavated per quarter	3000 ton
	State number of excavators to be used	1-2
	State number of loaders to be used	1-2
	State number of trucks to be used	1-2
ELECTRICITY	State volume or tonnage of material to be processed in the plant	0
	List plant or equipment that requires electricity	0
WATER	State volume of water to be used	Potable water in tanks for drinking only
	Where will the water be obtained?	Supplied via bottled water/in a tank
OTHER	Describe other operating costs to be incurred, if applicable	Equipment operators - R4681 monthly salary = R37,530 per quarter for nine employees

5. IDENTIFICATION OF THE REPORT

Herewith I, the person whose name and identity number is stated below, confirm that I am the person authorised to act as representative of the applicant in terms of the resolution submitted with the application, and confirm that the above report and appendices comprise the details and documentary proof of the Financial and Technical ability required to be submitted with this application in terms of form F, annexure I of the MPRDA Regulations.

Full Names and Surname	Choriel Andries Bruner
Identity Number	5612205047084

.....END.....

