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Department:
Environment & Nature Conservation
NORTHERN CAPE PROVINCE
REPUBLIC OF SOUTH AFRICA

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|-----------------------------|-----------------------------|------|----------------|
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| | (For official use only) |
| File Reference Number: | |
| Application Number: | |
| Date Received: | |

Basic Assessment Report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

- This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
- This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
- The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
- Where applicable **tick** the boxes that are applicable in the report.
- An incomplete report may be returned to the applicant for revision.
- The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
- This report must be handed in at offices of the relevant competent authority as determined by each authority.
- No faxed or e-mailed reports will be accepted.
- The signature of the EAP on the report must be an original signature.
- The report must be compiled by an independent environmental assessment practitioner.
- Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
- A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
- Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

YES NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

- **ACTIVITY DESCRIPTION**

- a) **Describe the project associated with the listed activities applied for**

The unlawful construction of infrastructure for the expansion of a vineyard on Portion 13 of Orange Falls Farm no 16, Augrabies Falls Way is completed and operational. The soil in which the grapes are planted were ripped in order to create favourable conditions; no soil was removed by this action. The 10ha area that were developed is done on previously grazed fields. The activity commenced in different time frames: 5ha was developed in 2010; 2.5ha was developed in 2012 and 2.5ha was developed in 2016. During these development periods, there were no new roads constructed. The warehouse (packing shed) in which the grapes gets processed and packed was built in 2001. The packing shed has a footprint of approximately 810m². An area of more than 10ha has been cleared of natural vegetation for the construction of grape vineyards covering a surface area of approximately 10ha, and over some seasonal ephemeral drainage lines. Construction is completed. The grapes get packed in cartons and shipped in containers to other countries. An area of more than 10ha has been cleared of natural vegetation, although the site had previously been used for livestock grazing. The natural vegetation on site (SANBI BGIS) consists of Bushmanland Arid Grassland (*least threatened*). The site is approximately 9km north-west of Augrabies. (see figures 1 & 2 below). The site co-ordinates are **28°39'30.16"S, 20°20'28.81"E**.



Figure 1: Google Earth aerial image showing the location of the proposed site (red dot) and the surrounding area.

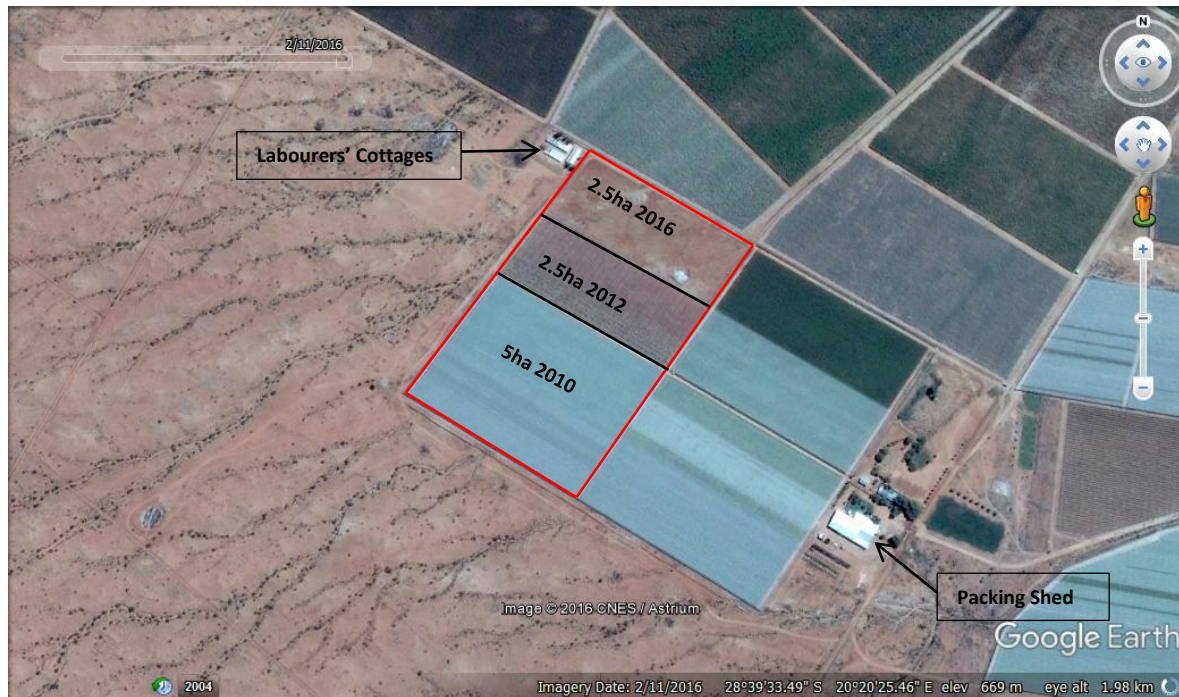


Figure 2: Google Earth aerial photo indicating the affected farm layout and development in each timeframe. The site is indicated by the red rectangle.

b) Provide a detailed description of the listed activities associated with the project as applied for

| Listed activity as described in GN 544, 545 and 546 | Description of project activity |
|--|---|
| Government Notice No. R. 544 Activity No(s): (Listing Notice 1 of 2010) | |
| 56 - Phased Activity for all the activities listed in this Schedule which commenced on or after the effective date of this Schedule, where any one phase of the activity may be below a threshold but where a combination of the phases, including expansions or extensions, will exceed a specific threshold; - Excluding the following activities listed in this Schedule; 2;11(i)-(vii);16(i)-(iv);17;19;20;22(i) &22(ii); 25;26;27;28;39;45(i)-(iv) 7 (vii)-(xv);50;51;53; and 54. | An area of approximately 10ha was cleared of vegetation to allow for the construction of infrastructure for the expansion of vineyards. The 10ha area that is developed is done on previously grazed fields. The activity commenced in different time frames: 5ha were developed in 2010; 2.5ha were developed in 2012 and 2.5ha were developed in 2016. The vegetation type on site is Bushmanland Arid Grassland (<i>Least Threatened</i> (SANBI BGIS)). |
| Government Notice No. R. 546 Activity No(s): (Listing Notice 3 of 2010) | |

| | |
|--|--|
| <p>12 - The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.</p> | <p>An area of approximately 10ha was cleared of vegetation to allow for the construction of infrastructure for the expansion of vineyards. The 10ha area that is developed is done on previously grazed fields. The activity commenced in different time frames: 5ha were developed in 2010; 2.5ha were developed in 2012 and 2.5ha were developed in 2016. The vegetation type on site is Bushmanland Arid Grassland (<i>Least Threatened</i>) (SANBI BGIS).</p> |
| <p>Government Notice No. R. 983 Activity No(s): (Listing Notice 1 of 2014)</p> | |
| <p>27 - The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for;</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p> | <p>An area of approximately 10ha was cleared of vegetation to allow for the construction of infrastructure for the expansion of vineyards. The 10ha area that is developed is done on previously grazed fields. The activity commenced in different time frames: 5ha were developed in 2010; 2.5ha were developed in 2012 and 2.5ha were developed in 2016. The vegetation type on site is Bushmanland Arid Grassland (<i>Least Threatened</i>) (SANBI BGIS)).</p> |
| <p>67 - Phased activities for all activities listed in this Notice, which commenced on or after the effective date of this Notice; or similarly listed in any of the previous NEMA notices, which commenced on or after the effective date of such previous NEMA Notices; where any phase of the activity may be below a threshold but where a combination of the phases, including expansions or extensions, will exceed a specified threshold;</p> <p>excluding the following activities listed in this Notice;</p> <p>17(i)(a-d); 17(ii)(a-d); 17(iii)(a-d); 17(iv)(a-d); 17(v)(a-d); 20; 21; 22; 24(i); 29; 30; 31; 32; 34; 54(i)(a-d); 54(ii)(a-d); 54(iii)(a-d); 54(iv)(a-d); 54(v)(a-d); 55; 61; 62;64; and 65.</p> | <p>An area of approximately 10ha was cleared of vegetation to allow for the construction of infrastructure for the expansion of vineyards. The 10ha area that is developed is done on previously grazed fields. The activity commenced in different time frames: 5ha were developed in 2010; 2.5ha were developed in 2012 and 2.5ha were developed in 2016. The vegetation type on site is Bushmanland Arid Grassland (<i>Least Threatened</i>) (SANBI BGIS)).</p> |
| <p>Government Notice No. R. 985 Activity No(s): (Listing Notice 3 of 2014)</p> | |
| <p>12 - The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.</p> | <p>An area of approximately 10ha was cleared of vegetation to allow for the construction of infrastructure for the expansion of vineyards. The 10ha area that is developed is done on previously grazed fields. The activity commenced in different time frames: 5ha were developed in 2010; 2.5ha were developed in 2012 and 2.5ha were developed in 2016. The vegetation type on site is Bushmanland Arid Grassland (<i>Least Threatened</i>) (SANBI BGIS)).</p> |

| | |
|---|--|
| <p>Government Notice No. R. 327 Activity No(s): (Listing Notice 1 of 2014)</p> | |
| <p>12 - The development of— dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or infrastructure or structures with a physical footprint of 100 square metres or more;</p> <p>where such development occurs - (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;</p> | <p>An area of more than 10ha has been cleared of natural vegetation for the construction of grape vineyards covering a surface area a of approximately 10ha, and over some seasonal ephemeral drainage lines. Construction is completed.</p> <p>The development took place over some smaller seasonal ephemeral drainage lines.</p> |
| <p>19 - The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</p> | <p>An area of more than 10ha has been cleared of natural vegetation for the construction of grape vineyards covering a surface area a of approximately 10ha, and over some seasonal ephemeral drainage lines. Construction is completed.</p> <p>The development took place over some smaller seasonal ephemeral drainage lines.</p> |
| <p>Government Notice No. R. 324 Activity No(s): (Listing Notice 3 of 2014)</p> | |
| <p>14 - The development of; (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 10 square metres; (ii) infrastructure or structures with a physical footprint of 10 square metres or more;</p> <p>where such development occurs; (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;</p> <p>Excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> | <p>An area of more than 10ha has been cleared of natural vegetation for the construction of grape vineyards covering a surface area a of approximately 10ha, and over some seasonal ephemeral drainage lines. Construction is completed.</p> <p>The development took place over some smaller seasonal ephemeral drainage lines.</p> |

• **FEASIBLE AND REASONABLE ALTERNATIVES**

“**alternatives**”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives 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.

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

The preferred site alternative is **alternative 1** on the demarcated site on figures 2, 3 & 4.

The only other reasonable site alternative for the applicant would have been alternative 2 prior to commencement. However, this alternative would have resulted in the clearing of indigenous vegetation on an undeveloped part of the property. Given that the area on which alternative 1 is located has previously been grazed by livestock means that the expansion and construction of vineyards (grape production) on the preferred site causes the least harm to the environment. The town of Augrabies is a known agricultural area, with grape farmers in the surrounding area (along the Orange River). The construction is completed.

| Alternative 1 (preferred alternative) | | |
|---|----------------|----------------|
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| <p>The expansion and development of agricultural land for the establishment of vineyards with a development footprint of 10ha on Portion 13 of Orange Falls Farm no 16, Augrabies Falls Way, Augrabies.</p> <p>This alternative entails the clearance of indigenous vegetation on site, through different stages.</p> | 28° 39' 30.16" | 20° 20' 28.81" |



Figure 3: A Google-Earth view of the alternatives.


The soil in which the grapes vines were planted gets ripped in order to create favorable conditions; no soil were removed by this action. The 10ha area that was developed, was done on previously grazed fields. A number of smaller seasonal ephemeral drainage lines are likely to have been impacted by the development, but were considered insignificant. The activity commenced in different time frames: 5ha were developed in 2010; 2.5ha were developed in 2012 and 2.5ha were developed in 2016. During this development, there were no new roads constructed. The warehouse (packing shed) in which the grapes gets processed and packed was built in 2001. The packing shed has a footprint of approximately 810m². The grapes get packed into cartons and shipped in containers to other countries. An area of more than 10ha has been cleared of natural vegetation, although the site had previously been used for livestock grazing.

This option was considered the most feasible and reasonable alternative for the applicant since the site was located next to existing vineyards, on land that has previously been used for grazing by livestock farming on the property.

This option is the most feasible because of its location relative to the other already developed land on the farm. The location of alternative 1 is more cost effective for irrigation purposes as well as from the perspective of the worker houses. For drainage purposes, the same ditch as the developed part was used and just extended, whereas in alternative 2 a new ditch will be necessary.

The construction of infrastructure for the expansion of vineyards had a low negative impact on the natural vegetation, without mitigation. According to the botanical assessment (appendix D1) it is unlikely that the development would have had any significant impact on botanical features and is unlikely that the development would have been disallowed based on botanical issues.

A number of smaller seasonal ephemeral drainage lines are likely to have been impacted by the development, but they were considered insignificant, especially since there remains no downstream linkage (linkage beyond property itself). This resulted in the deduction that no significant watercourses were expected to have been impacted by this specific development.

| | | |
|---|-----------------|------------------|
| The EMPr will be implemented to manage and mitigate any negative environmental impacts. | | |
| Alternative 2 | | |
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| This alternative entails the establishment of 10ha of grape vineyards on Portion 13 of Orange Falls Farm no 16, Augrabies Falls Way, Augrabies. This option will be located on the south-eastern part of the property and adjacent to the existing vineyards on the property. The co-ordinates for this alternative is 28°39'44.18"S20°20'26.53"E. | 28°39'44.18"S | 20°20'26.53"E |
|  | | |
| <p>Figure 4: Google-Earth view of the alternatives.</p> <p>However, this site is considered the least feasible or reasonable to the applicant due to the following:</p> <ul style="list-style-type: none"> • The location of this proposed alternative does not favour the establishment of vineyards with the least environmental impacts. • A new draining ditch will be needed and the more south you move on the property the more uneven the surface from a topographical view, therefore a more expensive development than alternative 1. • This alternative might possibly cross some drainage lines on the property. • The site is relatively steep compared to the site characteristics of alternative 1. • Given that the vineyards as identified in alternative 1 had already commenced and completed, the impact of constructing the additional 10ha as alternative 2 can be avoided. • The site/location of this alternative is not considered to be the best practicable environmental option. | | |
| Alternative 3 | | |
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| N/A | | |

In the case of linear activities:

Alternative:

Alternative S1 (preferred)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Latitude (S):

Longitude (E):

| | |
|--|--|
| | |
| | |
| | |

Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

| | |
|--|--|
| | |
| | |
| | |

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

b) Lay-out alternatives

| Alternative 1 (preferred alternative) | | |
|---|--------------|---------------|
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| Please refer to the location alternatives described above as Alternative 1 and Alternative 2. | | |
| Alternative 2 | | |
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| | | |
| Alternative 3 | | |
| Description | Lat (DDMMSS) | Long (DDMMSS) |
| | | |

c) Technology alternatives

No technology alternatives were considered prior to development (the vineyards have already been established and is operational). However, drip irrigation is being implemented on the farm to use water more efficiently.

| Alternative 1 (preferred alternative) |
|--|
| |
| Alternative 2 |
| |
| Alternative 3 |
| |

d) **Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)**

N/A

| | | |
|--|--|--|
| Alternative 1 (preferred alternative) | | |
| | | |
| Alternative 2 | | |
| Alternative 3 | | |
| Alternative 3 | | |
| Alternative 3 | | |

e) **No-go alternative**

This would mean that no development would take place and the proposed site will remain as is (degraded).

According to the Kai !Garib Municipality IDP 2014, the agricultural sector is still the main economic sector who made the biggest contribution (51.8 %) to the economy of Kai !Garib in 2010. The Agriculture sector is also a major employer in the Municipality, providing 66.5% of all formal employment. It is also the sector with the largest potential for economic growth. The commercial farmers farm especially with grapes for export, raisins and wine, while citrus types of fruit are also becoming more prevalent in the area.

The capital value of the completed activity (establishment of vineyards and grape production) as well as the expected yearly income and value of the employment opportunities would not be achieved. Although this option would result in no potential negative environmental impacts, the significant socio-economic benefits from implementing the activity would not be achieved.

The no-go option would only have been recommended if it were found that the activities on this site or in this area might potentially cause substantial detrimental harm to the surrounding environment, prior to construction. The activity is completed and operational.

The No-Development option would therefore represent a lost opportunity for Augrabies and the local economy. This would represent a negative social cost.

The No-Development option would therefore represent a significant missed opportunity and is therefore not considered to be the most feasible or reasonable alternative.

Paragraphs 3 – 13 below should be completed for each alternative.

• **PHYSICAL SIZE OF THE ACTIVITY**

a) **Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):**

Alternative:

- Alternative A1 (preferred activity alternative)
- Alternative A2 (if any)
- Alternative A3 (if any)

Size of the activity:

| | |
|--|----------------|
| | 10.8ha |
| | 10ha |
| | m ² |

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

| | |
|--|---|
| | m |
| | m |
| | m |

- b) **Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):**

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

| | |
|--|----------------|
| | m ² |
| | m ² |
| | m ² |

- SITE ACCESS**

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

| | |
|-----|----|
| YES | NO |
| m | |

Describe the type of access road planned:

N/A. No new roads were constructed.

Existing gravel roads on the farm was used to gain access to and from the site. The site is situated next to established vineyards, with gravel access roads.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

- LOCALITY MAP**

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

- **LAYOUT/ROUTE PLAN**

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

- **SENSITIVITY MAP**

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

- **SITE PHOTOGRAPHS**

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

- **FACILITY ILLUSTRATION**

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

• **ACTIVITY MOTIVATION**

Motivate and explain the need and desirability of the activity (including demand for the activity):

| | | | |
|---|-----|----|----------------|
| <p>• Is the activity permitted in terms of the property's existing land use rights?</p> | YES | NO | Please explain |
| <p>Yes, the applicant bought the farm with the aim of developing/establishing vineyards on the farm. The farm is zoned Agriculture and is being used for agricultural purpose.</p> | | | |
| <p>• Will the activity be in line with the following?</p> | | | |
| <p>(a) Provincial Spatial Development Framework (PSDF)</p> | YES | NO | Please explain |
| <p>The Northern Cape Provincial Spatial Development Framework (PSDF) recognises the agricultural sector as a key economic sector and that the growth thereof can rejuvenate other sectors of the economy. The Northern Cape Spatial Development Framework (NCSDF) aims to ensure the effective utilisation of land and resources. The NCSDF also serves to enhance the future of the Northern Cape and its people by ensuring that:</p> <ol style="list-style-type: none"> 1. All land-uses allow people to live with dignity and improve the integrity of the environment. 2. Innovative management and technology is used to balance resource use with the carrying capacity of the environment. 3. The comparative and competitive advantages in the province are developed and utilised sustainably. <p>The NCSDF therefore emphasises development that is ecologically sustainable in the long-term. The agricultural activities on site will advance the objectives of the NCSDF, specifically the utilisation of comparative advantages and improved quality of life (through job creation). The role of The Lair Trust therefore is to ensure that this development operates in the most effective and sustainable manner possible.</p> | | | |
| <p>(b) Urban edge / Edge of Built environment for the area</p> | YES | NO | Please explain |
| <p>The site is located outside the urban edge and form part of an existing agricultural area along the Orange River. There are intensive agricultural practises surrounding the site.</p> | | | |
| <p>(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).</p> | YES | NO | Please explain |
| <p>According to the draft IDP of Kai Garib the agricultural sector is still the main economic sector who made the biggest contribution (51.8 %) to the economy of Kai! Garib in 2010. The Agriculture sector is also a major employer in the Municipality, providing 66.5% of all formal employment. According to Statistics South Africa (Census 2011) about 399 of the households work on crops only; 1382 on livestock only; 222 on mix farming and 69 on other farming methods. It is also the sector with the largest potential for economic growth. The commercial farmers farm especially with grapes for export, raisins and wine, while citrus types of fruit are also becoming more prevalent in the area. The expansion and development of agricultural land on Portion 13 of Orange Farm No. 16, Augrabies Falls Way, is not considered to have a negative impact on the Municipality's IDP and SDF.</p> | | | |

| | | | |
|---|-----|----|----------------|
| (d) Approved Structure Plan of the Municipality | YES | NO | Please explain |
| <p>The development has no impact on the Municipality's SDF. The ZF Mgcawu DM IDP places emphasis on infrastructure improvements and economic growth. However, no formal Spatial Development Framework (SDF) for some LM's and ZFMDM has been approved but we can make inferences from founding principles in the IDP of ZFMDM that they do promote the growth of the agricultural sector.</p> | | | |
| (e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?) | YES | NO | Please explain |
| <p>The ZF Mgcawu Environmental Management Framework highlights the varied landscape of the area which provides a unique and special character to the area which has the potential to contribute to a variety of local and international tourism opportunities, especially if scenic routes are developed that takes these landscapes into account. The site and the surrounding area is characterised by agricultural activities, with grape vineyards along the Orange River. The Orange River provides a significant source of water that is available for irrigation and the low population density results in a regime where even though it is an arid area, water availability per capita is generally high.</p> | | | |
| (f) Any other Plans (e.g. Guide Plan) | YES | NO | Please explain |
| N/A | | | |
| <ul style="list-style-type: none"> Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)? | YES | NO | Please explain |
| <p>The expansion and development of agricultural land on Portion 13 of Orange Farm No. 16, Augrabies Falls Way, is in line with the zoning of the property. The site and the surrounding area is characterised by agricultural activities, with grape vineyards along the Orange River. The Orange River provides a significant source of water that is available for irrigation and the low population density results in a regime where even though it is an arid area, water availability per capita is generally high.</p> <p>According to the Kai !Garib Municipality IDP 2014, the agricultural sector is still the main economic sector who made the biggest contribution (51.8 %) to the economy of Kai !Garib in 2010. The Agriculture sector is also a major employer in the Municipality, providing 66.5% of all formal employment. It is also the sector with the largest potential for economic growth. The commercial farmers farm especially with grapes for export, raisins and wine, while citrus types of fruit are also becoming more prevalent in the area.</p> | | | |

| | | | |
|--|-----|----|----------------|
| <ul style="list-style-type: none"> • Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.) | YES | NO | Please explain |
| <p>This is a very small development in comparison with the rest of the surrounding farmers but with its small size the farm can provide 80 people with an income in die table grape harvest season annually. The economy of the town will directly benefit from the activity, by providing approximately 80 employment opportunities during the harvest season. It is a great advantage to the small business practices because of the money they spend on living costs. The development gives people an opportunity to educate themselves and find a permanent position due to their level of experience.</p> <p>The town of Augrabies is known for its agricultural sector. So the establishment of vineyards (grape production) on Portion 13 of Orange Farm No. 16, Augrabies Falls Way, is in line with the surrounding agricultural land uses.</p> <p>According to the Kai !Garib Municipality IDP 2014, the agricultural sector is still the main economic sector who made the biggest contribution (51.8 %) to the economy of Kai !Garib in 2010. The Agriculture sector is also a major employer in the Municipality, providing 66.5% of all formal employment. It is also the sector with the largest potential for economic growth. The commercial farmers farm especially with grapes for export, raisins and wine, while citrus types of fruit are also becoming more prevalent in the area.</p> <p>In addition, the development falls within the ambit of Strategic Infrastructure Project (“SIP”) 11 (Agri-logistics and rural Infrastructure) as identified in the National Infrastructure Plan. SIP 11 aim to “Improve investment in agricultural and rural infrastructure that supports expansion of production and employment, small-scale farming and rural development, including facilities for storage (silos, fresh-produce facilities, packing houses); transport links to main networks (rural roads, branch train-line, ports), fencing of farms, irrigation schemes to poor areas, improved R&D on rural issues (including expansion of agricultural colleges), processing facilities (abattoirs, dairy infrastructure), aquaculture incubation schemes and rural tourism infrastructure”.</p> | | | |
| <ul style="list-style-type: none"> • Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.) | YES | NO | Please explain |
| <p>The availability of services with adequate capacity (sewerage, solid waste disposal and water) has been confirmed by the Municipality (please see appendix J5). Although there are limited services available, it must first be determined what the maximum amount of people the existing infrastructure can service.</p> <p>The municipality is expected to be the service provider, although additional service providers may be required. An amount of 10ha water rights is currently leased to irrigate the constructed vineyards. However, a Water Use License Application (“WULA”) will be submitted to DWS, for the shortage of water rights. The established vineyards triggered the need for a WULA, and will be addressed through the WULA process.</p> <p>Waste is disposed of at a disposal site on the farm that is fenced, locked and secured. This site passes the Global Gap and Tesco Audits every year. The sewage is disposed of in a drain that is emptied by</p> | | | |

| | | | |
|---|-----|----|----------------|
| <p>a honey sucker by the Kai !Garib Local Municipality when it is full (see appendix J5). In addition, Eskom is the electricity provider on the farm.</p> <p>The water supply is from the canal next to the Orange river and currently they have an existing amount of 10ha water rights on their farm, they have a 20ha development and therefore they currently rent and extra 10.8ha water rights to supply the other 10ha of developed vineyards.</p> | | | |
| <p>• Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)</p> | YES | NO | Please explain |
| <p>This development is not expected to have any significant impact on the infrastructure plans of the Municipality.</p> | | | |
| <p>• Is this project part of a national programme to address an issue of national concern or importance?</p> | YES | NO | Please explain |
| <p>No, however, additional job opportunities and economic development are of national importance. In addition, the development falls within the ambit of Strategic Infrastructure Project (“SIP”) 11 (Agriculture and rural Infrastructure) as identified in the National Infrastructure Plan. SIP 11 aim to “<i>Improve investment in agricultural and rural infrastructure that supports expansion of production and employment, small-scale farming and rural development, including facilities for storage (silos, fresh-produce facilities, packing houses); transport links to main networks (rural roads, branch train-line, ports), fencing of farms, irrigation schemes to poor areas, improved R&D on rural issues (including expansion of agricultural colleges), processing facilities (abattoirs, dairy infrastructure), aquaculture incubation schemes and rural tourism infrastructure</i>”.</p> | | | |
| <p>• Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)</p> | YES | NO | Please explain |
| <p>Yes. The site is located on an existing farm that is being used for table grape production. The site is located adjacent to established vineyards, with existing gravel access roads. Therefore, no need for additional road constructions. In addition, the site is located south-east of the Orange River. According to the Kai !Garib Municipality IDP 2014, the Orange River provides a significant source of water that is available for irrigation and the low population density results in a regime where even though it is an arid area, water availability per capita is generally high.</p> | | | |
| <p>• Is the development the best practicable environmental option for this land/site?</p> | YES | NO | Please explain |
| <p>Although the development had some potential environmental impacts, these are considered insignificant-low at this stage.</p> <p>The best environmental option would be the no-go alternative. However, the massive social benefits of the proposed project would not be realised. The potential benefits from a socio-economic perspective are considered to significantly outweigh any potential environmental impacts. The site was previously used for livestock grazing and was in a somewhat degraded state.</p> | | | |

| | | | |
|---|-----|----|----------------|
| With appropriate measures, as per the Specialist recommendations and the Environmental Management Programme (“EMPr”), any potential negative environmental impacts are expected to be satisfactorily mitigated. | | | |
| • Will the benefits of the proposed land use/development outweigh the negative impacts of it? | YES | NO | Please explain |
| No significant negative environmental impacts have been identified or are expected. Any negative environmental impacts identified (see section B and D) will be adequately mitigated. The socio-economic benefits are expected to outweigh these environmental impacts. According to the Botanical Assessment (Appendix D1), the development impacted on approximately 10ha of remaining 65 to 70ha of natural veld on an operating table grape farm. The only viable alternative land-use is livestock grazing by the owners. However, since the grazing potential of the veld is very low, and the farm is relatively small, intense agriculture will be much more viable than livestock grazing. The development might thus be considered a positive impact in terms of land use. | | | |
| • Will the proposed land use/development set a precedent for similar activities in the area (local municipality)? | YES | NO | Please explain |
| Not necessarily. However, Augrabies and the surrounding areas are predominantly agricultural. According to the Kai !Garib Municipality IDP 2014, the agricultural sector is still the main economic sector who made the biggest contribution (51.8 %) to the economy of Kai !Garib in 2010. The economy is heavily depended on the Agricultural Sector, both intensive and extensive (Kai !Garib Municipality IDP, 2014). | | | |
| • Will any person’s rights be negatively affected by the proposed activity/ies? | YES | NO | Please explain |
| No person’s rights are expected to be negatively affected by the development. The activity is expected to have a general positive impact on the residents of the area (through employment opportunities). | | | |
| • Will the proposed activity/ies compromise the “urban edge” as defined by the local municipality? | YES | NO | Please explain |
| The development is located outside the urban edge. The site is located within an existing agricultural area of Augrabies, along the Orange River. | | | |
| • Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)? | YES | NO | Please explain |
| Yes, the development falls within the ambit of Strategic Infrastructure Project (“SIP”) 11 (Agriculture and rural Infrastructure) as identified in the National Infrastructure Plan. SIP 11 aim to “Improve investment in agricultural and rural infrastructure that supports expansion of production and employment, small-scale farming and rural development, including facilities for storage (silos, fresh-produce facilities, packing houses); transport links to main networks (rural roads, branch train-line, ports), fencing of farms, irrigation schemes to poor areas, improved R&D on rural issues (including expansion of agricultural colleges), processing facilities (abattoirs, dairy infrastructure), aquaculture incubation schemes and rural tourism infrastructure”. | | | |

| | |
|---|----------------|
| <ul style="list-style-type: none"> • What will the benefits be to society in general and to the local communities? | Please explain |
| <p>This is a very small development in comparison with the rest of the surrounding farmers, but with its small size the farm is able to provide 80 people with an income in die table grape harvest season annually. The economy of the town will directly benefit from the activity, by providing approximately 80 employment opportunities during the harvest season. It is a great advantage to the small business practices because of the money they spend on living costs. The development gives people an opportunity to educate themselves and find a permanent position due to their level of experience.</p> <p>The town of Augrabies is known for its agricultural sector. So the establishment of vineyards (grape production) on Portion 13 of Orange Farm No. 16, Augrabies Falls Way, were therefore in line with the surrounding agricultural land uses.</p> <p>According to the Kai !Garib Municipality IDP 2014, the agricultural sector is still the main economic sector who made the biggest contribution (51.8 %) to the economy of Kai !Garib in 2010. The Agriculture sector is also a major employer in the Municipality, providing 66.5% of all formal employment. It is also the sector with the largest potential for economic growth. The commercial farmers farm especially with grapes for export, raisins and wine, while citrus types of fruit are also becoming more prevalent in the area.</p> <p>In addition, the development falls within the ambit of Strategic Infrastructure Project (“SIP”) 11 (Agriculture and rural Infrastructure) as identified in the National Infrastructure Plan. SIP 11 aim to “Improve investment in agricultural and rural infrastructure that supports expansion of production and employment, small-scale farming and rural development, including facilities for storage (silos, fresh-produce facilities, packing houses); transport links to main networks (rural roads, branch train-line, ports), fencing of farms, irrigation schemes to poor areas, improved R&D on rural issues (including expansion of agricultural colleges), processing facilities (abattoirs, dairy infrastructure), aquaculture incubation schemes and rural tourism infrastructure”.</p> | |
| <ul style="list-style-type: none"> • Any other need and desirability considerations related to the proposed activity? | Please explain |
| <p>The activity is in line with the zoning of the farm. The farm is zoned agricultural and are being used for agricultural purposes. The site has previously been grazed by some livestock and was in a somewhat degraded state. In addition, the site is located next to existing developed vineyards (table grapes). No roads were constructed as there were existing gravel roads to gain access to the site. Electricity is obtained from Eskom. The botanical assessment found that it is highly unlikely that the development contributed significantly to any of the following:</p> <ul style="list-style-type: none"> • 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; and • Loss of ecosystem connectivity (see Appendix D1). <p>However, a number of smaller seasonal ephemeral drainage lines are likely to have been impacted by the development, but they were considered insignificant, especially since there remains no downstream linkage (linkage beyond the property itself). Considering the large expanse of existing vineyards as well as large scale establishment of new vineyards in the region, the two blocks of vineyards are entirely insignificant (see appendix D3).</p> | |
| <ul style="list-style-type: none"> • How does the project fit into the National Development Plan for 2030? | Please explain |
| <p>Economic development and job creation is a priority of National importance.</p> | |

- **Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.**

The general objectives of Integrated Environmental Management have been taken into account through the following:

- The actual and potential impacts of the activity on the environment, socio-economic conditions and cultural heritage have been identified, predicted and evaluated, as well as the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impact, maximizing benefits and promoting compliance with the principles of environmental management – *please refer to Section D below.*
- The effects of the activity on the environment have been considered before actions taken in connection with them – *alternatives have been considered and investigated (please refer to Section A below).*
- Adequate and appropriate opportunity for public participation was ensured through the public participation process – *please refer to Section C for the public participation information, including the list of identified Interested and Affected parties, as well as the methods for identifying and informing I&APs of the application and proposed activity.*
- The environmental attributes have been considered in the management and decision-making of the activity – *an EMPr has been included (Appendix G) with the proposed activity and must adhere to the requirements of all applicable state Authorities.*

- **Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.**

The principles of environmental management as set out in section 2 of NEMA have been taken into account. The principles pertinent to this activity include:

- People and their needs have been placed at the forefront while serving their physical, psychological, developmental, cultural and social interests – *the proposed activity will have a significant beneficial impact on people, as it will provide much needed economic opportunities.*
- Development must be socially, environmentally and economically sustainable. Where disturbance of ecosystems, loss of biodiversity, pollution and degradation, and landscapes and sites that constitute the nation's cultural heritage cannot be avoided, are minimised and remedied.
- Where waste cannot be avoided, it is minimised and remedied through the implementation and adherence of EMPr.
- The use of non-renewable natural resources is responsible and equitable – *no exploitation of non-renewable natural resources occurs with the proposed activity.*
- The negative impacts on the environment and on people's environmental rights have been anticipated and prevented, and where they cannot be prevented, are minimised and remedied - *refer to Section F below.*
- The interests, needs and values of all interested and affected parties have been taken into account in any decisions through the Public Participation Process – *please refer to Section C for the public participation information.*
- The social, economic and environmental impacts of the activity have been considered, assessed and evaluated, including the disadvantages and benefits – *refer to Section B below.*
- The effects of decisions on all aspects of the environment and all people in the environment have been taken into account, by pursuing what is considered the best practicable environmental option – *the proposed activity is expected to have minimal/negligible environmental impacts, especially after mitigation measures as described under Section D and E and in the EMPr are implemented.*

- **APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES**

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

| Title of legislation, policy or guideline | Applicability to the project | Administering authority | Date |
|--|--|---|---------|
| National Water Act (NWA, Act 36 of 1998). | A WULA application will be submitted to DWS. A temporary transfer application has been submitted to DWS (see appendix J6). | Department of Water and Sanitation | Not yet |
| Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983). | Plough Certificate | Department of Agriculture, Forest and Fisheries | Not yet |
| National Heritage Resources Act, 1999 (Act 25 of 1999) | SAHRA | Permit | Not yet |

• **WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT**

a) **Solid waste management**

Will the activity produce solid construction waste during the construction/initiation phase?

| | |
|----------------|----|
| YES | NO |
| m ³ | |

If YES, what estimated quantity will be produced per month? **Unknown**

How will the construction solid waste be disposed of (describe)?

The general solid waste generated during construction was consolidated on site during construction, and disposed of at the nearest approved municipal landfill site.

Where will the construction solid waste be disposed of (describe)?

The general solid waste generated during construction was consolidated on site during construction, and disposed of at the nearest approved municipal landfill site.

Will the activity produce solid waste during its operational phase?

- If YES, what estimated quantity will be produced per month? – **Unknown at this stage**

| | |
|----------------|----|
| YES | NO |
| m ³ | |

How will the solid waste be disposed of (describe)?

The solid waste generated by the farm, especially in the grape packing season, get disposed on the farm at a dumping site that is safe, fenced and locked and audited by Global Gap and Tesco every year (See **Appendix J** for certificates).

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

Sewage gets removed by the municipality (see appendix J5).

Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?

The solid waste generated by the farm, especially during the grape packing season, get disposed on the farm at a dumping site that is safe, fenced and locked and audited by Global Gap and Tesco every year (See **Appendix J** for certificates).

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?

| | |
|----------------|----|
| YES | NO |
|----------------|----|

If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility?

| | |
|----------------|----|
| YES | NO |
|----------------|----|

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

| | |
|----------------|----|
| YES | NO |
|----------------|----|

If YES, what estimated quantity will be produced per month?

m³

Will the activity produce any effluent that will be treated and/or disposed of on site?

| | |
|-----|---------------|
| YES | NO |
|-----|---------------|

If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

| | |
|----------------|----|
| YES | NO |
|----------------|----|

If YES, provide the particulars of the facility:

| | | |
|------------------------|--------------|--|
| Facility name: | | |
| Contact person: | | |
| Postal address: | | |
| Postal code: | | |
| Telephone: | Cell: | |
| E-mail: | Fax: | |

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

The sewage is disposed of in a drain that is emptied by a honeysucker by the Kai !Garib Local Municipality when it is full (see appendix J5).

The treatment of sewage on-site at this stage is considered not feasible for the applicant, as the Municipality collects the sewage from the farm. The drainage water of the vineyards is directed to run through reeds which is an excellent natural cleaning agent of water. The water then gets discharged into the Brabees River (see appendix D3).

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

| | |
|----------------|----|
| YES | NO |
|----------------|----|

If YES, is it controlled by any legislation of any sphere of government?

| | |
|-----|----|
| YES | NO |
|-----|----|

If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If NO, describe the emissions in terms of type and concentration:

This application is for the rectification for the unlawful expansion and development of agricultural land to allow for the establishment of vineyards (table grape farming). Vegetation was cleared for the establishment of vineyards on site; however, the activities are not going to produce emissions into the atmosphere.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

| | |
|-----|----|
| YES | NO |
|-----|----|

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

| | |
|-----|---------------|
| YES | NO |
|-----|---------------|

If YES, is it controlled by any legislation of any sphere of government?

| | |
|----------------|----|
| YES | NO |
|----------------|----|

Describe the noise in terms of type and level:

The activity produced localised noise during the construction stage (earthworks), and was/ will be reduced to normal working hours. The activity is unlikely to produce significant noise levels as the activities took place on an existing farm that are being used for the farming of table grapes. The establishment and operation of vineyards (table grape farming) is not considered to cause a significant negative noise impact. The site is surrounded by other agricultural practices. Low-negative noise will occur without mitigation. However, the EMPr will be implemented to reduce the amount of noise generated during the construction and operational phase.

• WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

| | | | | | |
|----------------------|-------------|------------------------|----------------------------|-------|--|
| Municipal | Water board | Groundwater | River, stream, dam or lake | Other | The activity will not use water |
|----------------------|-------------|------------------------|----------------------------|-------|--|

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

- Unknown at this stage, but the applicant received 10ha water rights on 14 June 1999. The water supply is from the canal next to the Orange river and currently they have an existing amount of 10ha water rights on their farm. Irrigation will be done within the existing water rights.
- A Temporary Water Transfer Application has been submitted to DWS. Please see appendix J6.
- An amount of 10ha water rights is currently leased to irrigate the constructed grape vineyards. However, a Water Use License Application (“WULA”) will be submitted to DWS, for the shortage of water rights. The established vineyards triggered the need for a WULA, and will be addressed through the WULA process.

| | |
|--------|----|
| litres | |
| YES | NO |

Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

• **ENERGY EFFICIENCY**

Describe the design measures, if any, which have been taken to ensure that the activity is energy efficient:

N/A. No energy efficiency measures were adopted during the establishment of vineyards on the farm. However, the young vines were covered with netting in order protect it against the natural elements.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A. No alternative energy sources were considered during the establishment of vineyards on the farm.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A):

- Paragraphs 1 - 6 below must be completed for each alternative.

- Has a specialist been consulted to assist with the completion of this section?

| | |
|-----|----|
| YES | NO |
|-----|----|

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

| | | | |
|--|------------------------------|--|-----------|
| Property description/physical address: | Province | Northern Cape | |
| | District Municipality | ZF Mgcawu District Municipality | |
| | Local Municipality | Kai !Garib Local Municipality | |
| | Ward Number(s) | 1 | |
| | Farm name and number | Orange Falls Farm No. 16 | |
| | Portion number | 13 | |
| | SG Code | C03600000000001600091 | |
| Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above. | | | |
| Current land-use zoning as per local municipality IDP/records: | | Agricultural zoning | |
| | | In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application. | |
| Is a change of land-use or a consent use application required? | | | YES NO |

- GRADIENT OF THE SITE**

Indicate the general gradient of the site.

Alternative S1:

| | | | | | | |
|------|-------------|-------------|-------------|--------------|-------------|------------------|
| Flat | 1:50 — 1:20 | 1:20 — 1:15 | 1:15 — 1:10 | 1:10 — 1:7,5 | 1:7,5 — 1:5 | Steeper than 1:5 |
|------|-------------|-------------|-------------|--------------|-------------|------------------|

Alternative S2 (if any):

| | | | | | | |
|------|-------------|-------------|-------------|--------------|-------------|------------------|
| Flat | 1:50 — 1:20 | 1:20 — 1:15 | 1:15 — 1:10 | 1:10 — 1:7,5 | 1:7,5 — 1:5 | Steeper than 1:5 |
|------|-------------|-------------|-------------|--------------|-------------|------------------|

Alternative S3 (if any):

| | | | | | | |
|------|-------------|-------------|-------------|--------------|-------------|------------------|
| Flat | 1:50 – 1:20 | 1:20 – 1:15 | 1:15 – 1:10 | 1:10 – 1:7,5 | 1:7,5 – 1:5 | Steeper than 1:5 |
|------|-------------|-------------|-------------|--------------|-------------|------------------|

- LOCATION IN LANDSCAPE**

Indicate the landform(s) that best describes the site:

| | | | | | |
|---------------------------------|--|-------------------|---|----------------------------------|--|
| 2.1 Ridgeline | | 2.4 Closed valley | | 2.7 Undulating plain / low hills | |
| 2.2 Plateau | | 2.5 Open valley | | 2.8 Dune | |
| 2.3 Side slope of hill/mountain | | 2.6 Plain | x | 2.9 Seafront | |
| 2.10 At sea | | | | | |

- GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE**

Is the site(s) located on any of the following?

| | Alternative S1: | | Alternative S2 (if any): | | Alternative S3 (if any): | |
|--|-----------------|----|--------------------------|----|--------------------------|----|
| Shallow water table (less than 1.5m deep) | YES | NO | YES | NO | YES | NO |
| Dolomite, sinkhole or doline areas | YES | NO | YES | NO | YES | NO |
| Seasonally wet soils (often close to water bodies) | YES | NO | YES | NO | YES | NO |
| Unstable rocky slopes or steep slopes with loose soil | YES | NO | YES | NO | YES | NO |
| Dispersive soils (soils that dissolve in water) | YES | NO | YES | NO | YES | NO |
| Soils with high clay content (clay fraction more than 40%) | YES | NO | YES | NO | YES | NO |
| Any other unstable soil or geological feature | YES | NO | YES | NO | YES | NO |
| An area sensitive to erosion | YES | NO | YES | NO | YES | NO |

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

Please refer to the Soil Survey ([Appendix J4](#)) for more details.

• **GROUNDCOVER**

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

| | | | | |
|---|---|--|--|-----------|
| Natural veld in good condition ^E | Natural veld with scattered aliens ^E | Natural veld with heavy alien infestation ^E | Veld dominated by alien species ^E | Gardens |
| Sport field | Cultivated land | Paved surface | Building or other structure | Bare soil |

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise. The site is currently transformed due to past agricultural practises on the farm.

The site would historically have been covered with Bushmanland Arid Grassland (*Least Threatened*) (SANBI BGIS). The land/site was previously grazed by livestock, and was in a degraded state prior to commencement (Please see figure 5). In accordance with the National Vegetation map 2012 beta2 of South Africa, the vegetation types expected in the vicinity of the proposed site is Bushmanland Arid Grassland (*Least Threatened*) vegetation type. The area along the Orange River falls in the Lower Gariep Alluvial Vegetation (*Vulnerable*) vegetation type. (see Appendix D1). The agricultural land can be described as transformed with no natural veld left, but the remainder of the property still supports natural veld, most of which is still in fairly good condition (See Appendix D1). In addition, the Botanical Assessment indicates that no red-listed species was observed during the site visit; and no plants protected in terms of the National Environmental Management: Biodiversity Act, Act 10 of 2004 and its “Lists of critically endangered, endangered, vulnerable and protected species” (GN. R. 152 of 23 February 2007) were encountered on the site.

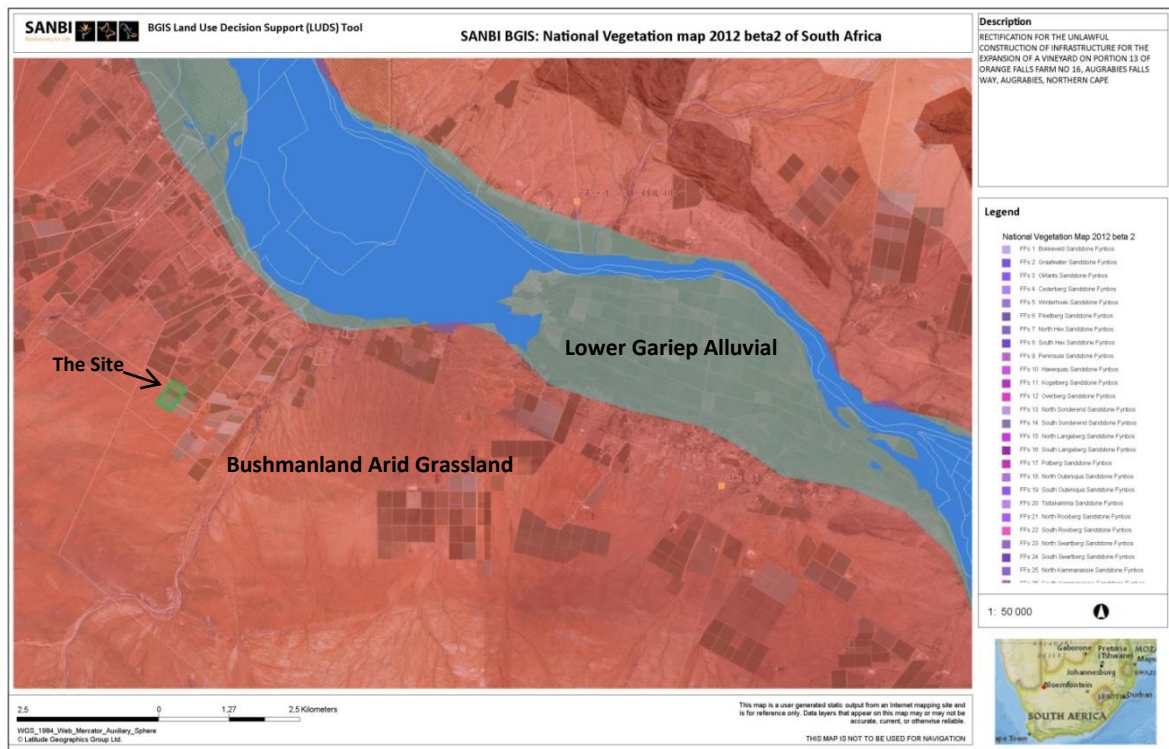


Figure 5: SANBI BGIS - National Vegetation Map 2012 beta2 of South Africa, indicating the vegetation on the site and the surrounding areas.

- **SURFACE WATER**

Indicate the surface water present on and or adjacent to the site and alternative sites?

| | | | |
|--|-----|----|--------|
| Perennial River | YES | NO | UNSURE |
| Non-Perennial River – Please see description below | YES | NO | UNSURE |
| Permanent Wetland | YES | NO | UNSURE |
| Seasonal Wetland | YES | NO | UNSURE |
| Artificial Wetland | YES | NO | UNSURE |
| Estuarine / Lagoonal wetland | YES | NO | UNSURE |

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

The site is located on an agricultural property and is situated next to existing vineyards. The Orange River is approximately 2.3km north-east of the site. The Brabees River is approximately 1.3km East of the site. The development is located inside partially disturbed Bushmanland Arid Grassland. The site is approximately 2300m from a National Freshwater Ecosystem Priority Area (NFEPA) river (See figure 6 below). This is more than 32m from a freshwater system.

However, a number of smaller seasonal ephemeral drainage lines are likely to have been impacted by the development, but they were considered insignificant, especially since there remains no downstream linkage (linkage beyond the property itself). Considering the large expanse of existing vineyards as well as large scale establishment of new vineyards in the region, the two blocks of vineyards are entirely insignificant (see appendix D3).

The establishment of vineyards had a insignificant-low negative impact on some small ephemeral drainage lines. No wetlands were evident on site. According to the Botanical Assessment (Appendix D1), ephemeral drainage lines are present on the property, but no significant watercourse was observed or expected to have been impacted. However, stormwater management will be part of the management.

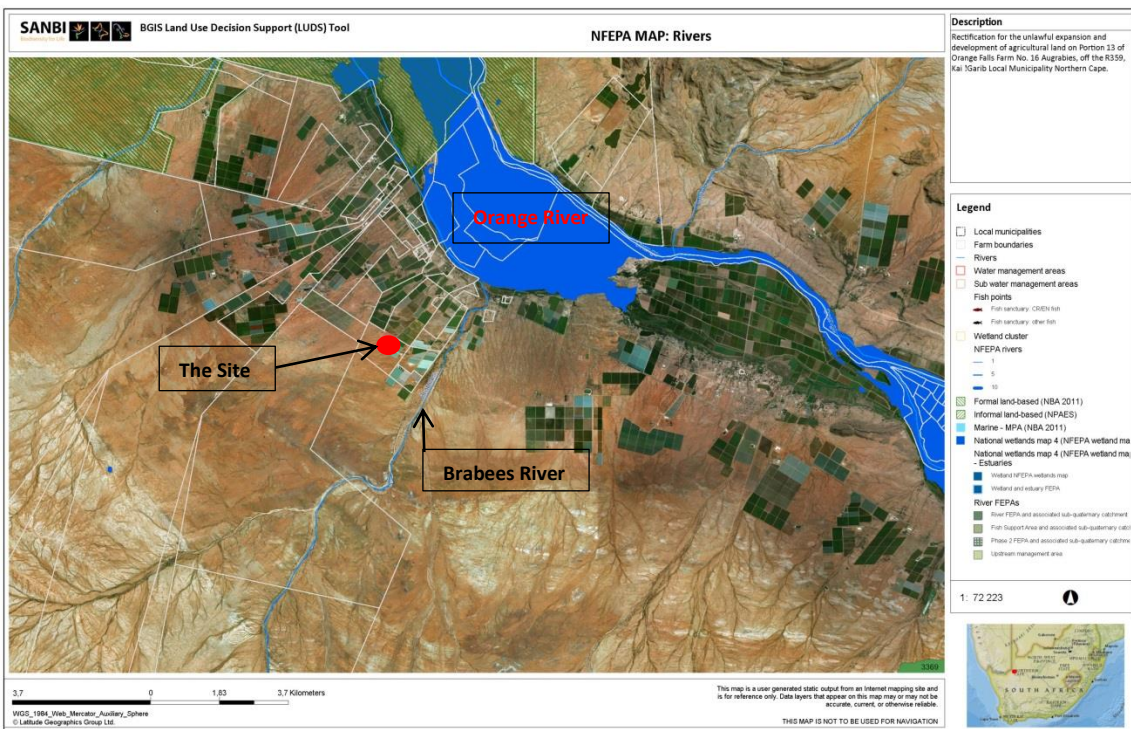


Figure 6: NFEPA (National Freshwater Ecosystem Priority Areas) Map of the proposed site (red dot) and the surrounding rivers.

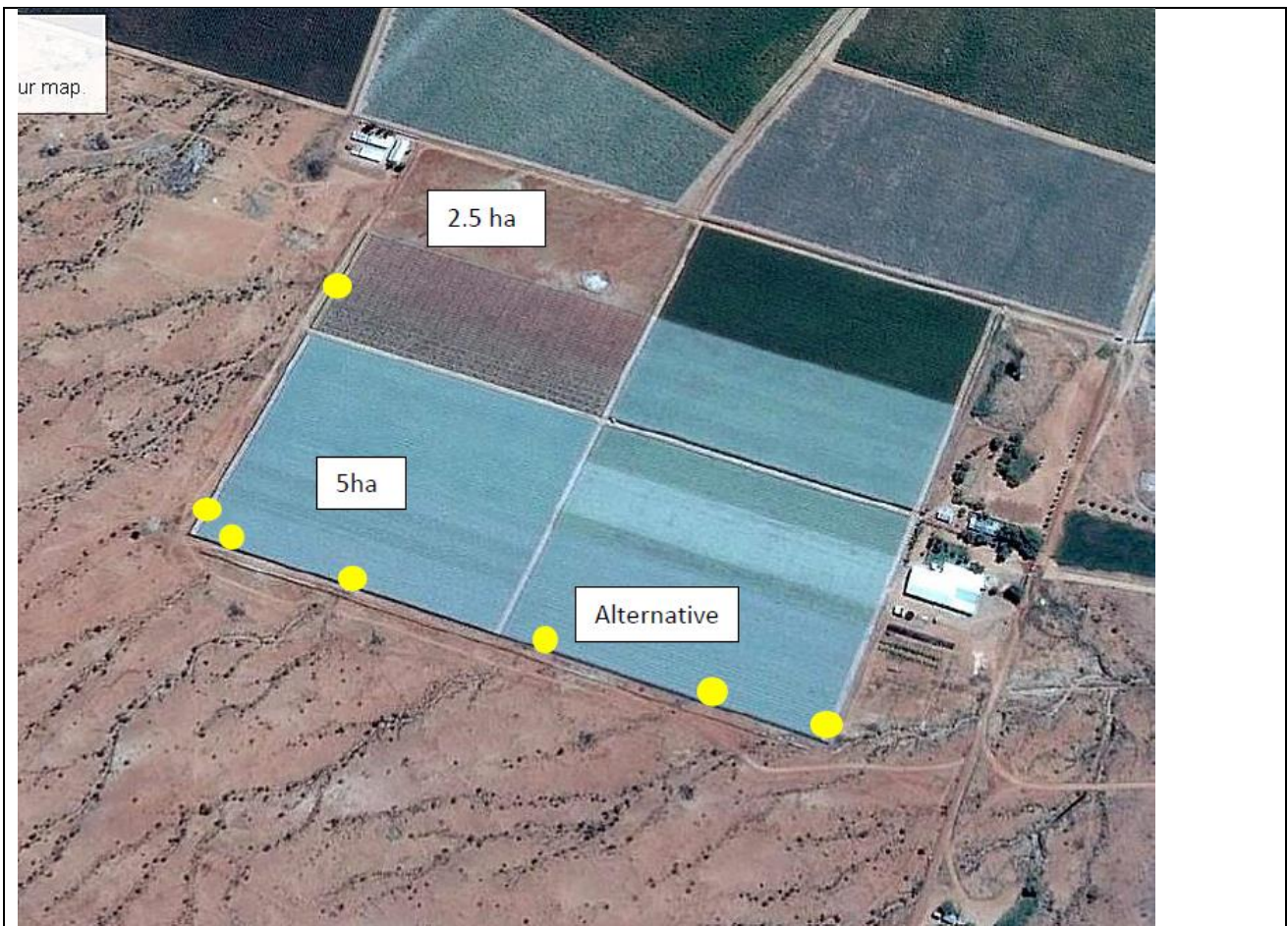


Figure 7: Drainage Lines Intersections. The drainage lines that intersect the current vineyards at Lair Trust Farm. There are at least 7 such intersections, as indicated by the yellow dots on figure 7. Also see appendix D3.

- **LAND USE CHARACTER OF SURROUNDING AREA**

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

| | | |
|-----------------------------------|---|---|
| Natural area | Dam or reservoir | Polo fields |
| Low density residential | Hospital/medical centre | Filling station ^H |
| Medium density residential | School | Landfill or waste treatment site |
| High density residential | Tertiary education facility | Plantation |
| Informal residential ^A | Church | Agriculture |
| Retail commercial & warehousing | Old age home | River, stream or wetland – please see description above |
| Light industrial | Sewage treatment plant ^A | Nature conservation area |
| Medium industrial ^{AN} | Train station or shunting yard ^N | Mountain, koppie or ridge |
| Heavy industrial ^{AN} | Railway line ^N | Museum |
| Power station | Major road (4 lanes or more) ^N | Historical building |
| Office/consulting room | Airport ^N | Protected Area |

| | | |
|--|------------------|----------------------------|
| Military or police base/station/compound | Harbour | Graveyard |
| Spoil heap or slimes dam ^A | Sport facilities | Archaeological site |
| Quarry, sand or borrow pit | Golf course | Other land uses (describe) |

If any of the boxes marked with an "N" are ticked, how this impact will / be impacted upon by the proposed activity? Specify and explain:

N/A

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

N/A

Does the proposed site (including any alternative sites) fall within any of the following:

| | | |
|--|-----|----|
| Critical Biodiversity Area (as per provincial conservation plan) | YES | NO |
| Core area of a protected area? | YES | NO |
| Buffer area of a protected area? | YES | NO |
| Planned expansion area of an existing protected area? | YES | NO |
| Existing offset area associated with a previous Environmental Authorisation? | YES | NO |
| Buffer area of the SKA? | YES | NO |

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A ([The site does not fall within a CBA. The site, however, is located within an ESA](#)) (see [Appendix A & D1](#)).

• **CULTURAL/HISTORICAL FEATURES**

| | | |
|---|-----------|----|
| Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain: | YES | NO |
| | Uncertain | |
| <p>An Archaeological Screening Assessment was undertaken and found that it is unlikely that significant archaeological or heritage resources has been impacted by the development, since the affected lands had already been grazed prior to development of the vineyards; although it should be noted that relatively large numbers of banded ironstone Middle Stone Age tools were recorded during the study of undeveloped land immediately south of the unlawful vineyards. Please see Appendix D2.</p> | | |

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

An Archaeological Screening Assessment was undertaken and found that it is unlikely that significant archaeological or heritage has been impacted by the development, since the affected lands had already been grazed prior to development of the vineyards; although it should be noted that relatively large numbers of banded ironstone Middle Stone Age tools were recorded during the study of undeveloped land immediately south of the unlawful vineyards. Please see Appendix D2.

| | | |
|---|-----|----|
| Will any building or structure older than 60 years be affected in any way? | YES | NO |
| Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)? | YES | NO |
| If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority. | | |
| Please note that the site is larger than 5 000m ² and the character of the site has changed. The project is therefore subject to Section 38(1) of the NHRA. The project has been registered with SAHRA through SAHRIS. | | |

- **SOCIO-ECONOMIC CHARACTER**

- a) **Local Municipality**

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

According to Stat SA 30 949 people are economically active (employed or unemployed but looking for work), and of these, 10% are unemployed. Of the 19 375 economically active youth (15 – 35 years) in the area, 10% are unemployed.

Economic profile of local municipality:

Economic Profile According to the Kai! Garib Municipality IDP 2014:

Agriculture Sector

The agricultural sector is still the main economic sector who made the biggest contribution (51.8 %) to the economy of Kai !Garib in 2010. The Agriculture sector is also a major employer in the Municipality, providing 66.5% of all formal employment. It is also the sector with the largest potential for economic growth. The commercial farmers farm especially with grapes for export, raisins and wine, while citrus types of fruit are also becoming more prevalent in the area.

Tourism Sector

According to the Kai! Garib Municipality IDP 2014, the tourism sector still has a lot of potential and although Kai !Garib Municipality have been implementing marketing strategies and plans to stimulate the sector it has not reached its full potential. Popular tourism attractions like the Augrabies Water Falls and the Kokerboom Route attracts visitors to the area. Kai !Garib Municipal Area witnesses unique landscape with the Kalahari desert on the one side and the Orange River on the

other side. The area is also known for the variety of birds and animals also occur. The opportunity exists to utilise these natural treasures in order to draw tourists to the area.

Level of education:

According to the Municipalities of South Africa (www.localgovernment.co.za):

| Education (aged 20 +) | Year: 2016 | Year:2011 |
|-----------------------|------------|-----------|
| No schooling | 5.6% | 9.0% |
| Matric | 20.9% | 15.5% |
| Higher education | 3.6% | 3.9% |

Information obtained from the following website:
<https://www.localgovernment.co.za/locals/view/183/Kai-Garib-Local-Municipality#demographic>

b) Socio-economic value of the activity

| | |
|--|-------------------------------|
| What is the expected capital value of the activity on completion? | R10 000 000 |
| What is the expected yearly income that will be generated by or as a result of the activity? | Unknown at this stage |
| Will the activity contribute to service infrastructure? | YES NO |
| Is the activity a public amenity? | YES NO |
| How many new employment opportunities will be created in the development and construction phase of the activity/ies? | 20 |
| What is the expected value of the employment opportunities during the development and construction phase? | Unknown at this stage |
| What percentage of this will accrue to previously disadvantaged individuals? | 60% |
| How many permanent new employment opportunities will be created during the operational phase of the activity? | 80 (During Harvesting Season) |
| What is the expected current value of the employment opportunities during the first 10 years? | Unknown at this stage |
| What percentage of this will accrue to previously disadvantaged individuals? | 60% |

• BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

- a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

| Systematic Biodiversity Planning Category | | | | If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan |
|---|-------------------------------|--------------------------|---------------------------------|--|
| Critical Biodiversity Area (CBA) | Ecological Support Area (ESA) | Other Natural Area (ONA) | No Natural Area Remaining (NNR) | The north-eastern part of the site is located within a terrestrial ESA according to the SANBI BGIS (See figure 8 below). |

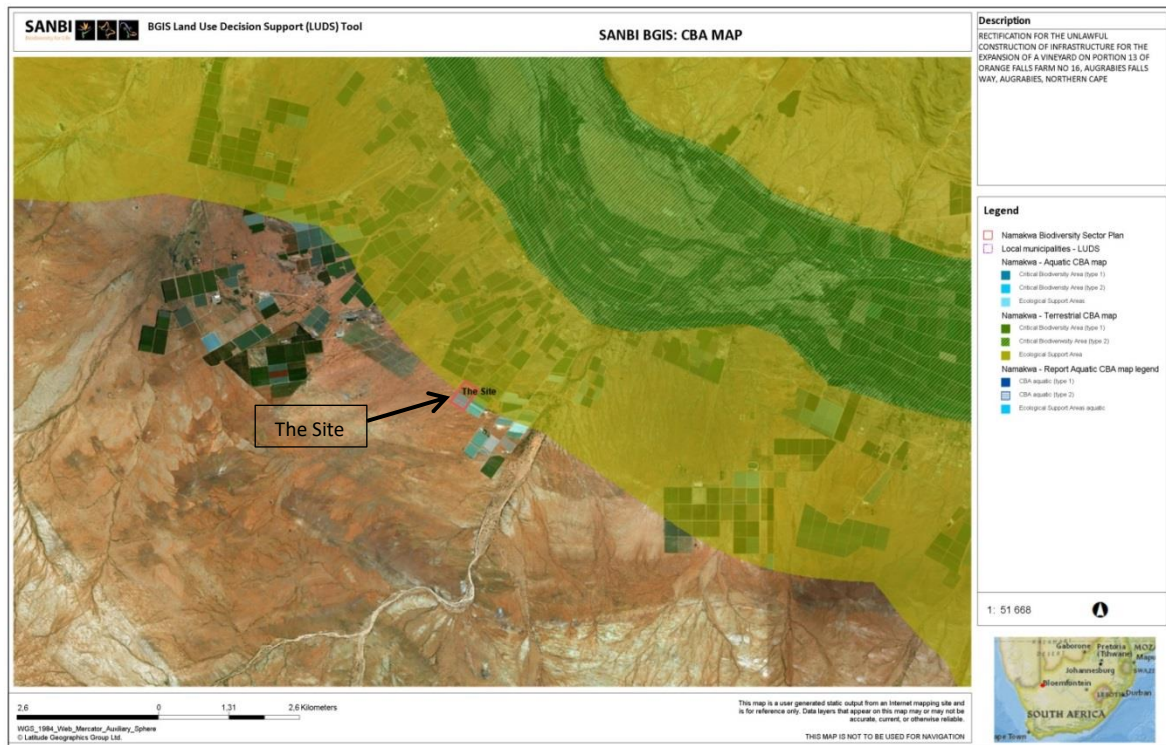


Figure 8: Threatened ecosystem map of the proposed site. The site is indicated by the pink rectangle. The north-eastern part of the site is located within a terrestrial ESA. According to Namakwa District Biodiversity Sector Plan (2008), the development borders on and slightly encroach on an ecological support area (ESA) which was established as a terrestrial migration corridor associated with the Orange River corridor. However, it must be noted that most of this corridor in this vicinity is compromised because of existing agricultural development. Most of the neighbouring areas to the west, north and east of the farm (site) have already been transformed into agricultural land. To the south of the property (falling outside of the ESA) natural vegetation is still encountered (Also see Appendix D1).

- b) Indicate and describe the habitat condition on site

| Habitat Condition | Percentage of habitat condition class (adding up to 100%) | Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc). |
|-------------------|---|---|
| | | |

| | | |
|--|------|---|
| Natural | 0% | The land/site was previously grazed by livestock, hence the already disturbed status of the site. Alien invasive species encroached onto the site. The site is currently totally developed. |
| Near Natural (includes areas with low to moderate level of alien invasive plants) | 0% | The land/site was previously grazed by livestock, hence the already disturbed status of the site. Alien invasive species encroached onto the site. The site is currently totally developed. |
| Degraded (includes areas heavily invaded by alien plants) | 20 % | The land/site was previously grazed by livestock, hence the already disturbed status of the site. Alien invasive species encroached onto the site. To the south of the property (falling outside of the ESA) natural vegetation is still encountered. |
| Transformed (includes cultivation, dams, urban, plantation, roads, etc) | 80 % | The land/site was previously grazed by livestock, hence the already disturbed status of the site. Alien invasive species encroached onto the site. The site is totally transformed due to the establishment of vineyards for grape production. |

c) **Complete the table to indicate:**

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

| Terrestrial Ecosystems | | Aquatic Ecosystems | | | | | | | | |
|--|------------------|---|----|--------|---------|----|-----------|----|--|--|
| Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) | Critical | Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands) | | | Estuary | | Coastline | | | |
| | Endangered | | | | | | | | | |
| | Vulnerable | | | | | | | | | |
| | Least Threatened | | | | | | | | | |
| | | YES | NO | UNSURE | YES | NO | YES | NO | | |

- d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

Vegetation

In accordance with the National Vegetation map 2012 beta2 of South Africa, the vegetation types expected in the vicinity of the proposed site is Bushmanland Arid Grassland (*Least Threatened*) vegetation type. The area along the Orange river falls in the Lower Gariep Alluvial Vegetation (*Vulnerable*) vegetation type.

The proposed site is not located within a Critical Biodiversity Area (“CBA”). However, the north-eastern part of the site falls within a terrestrial Ecological Support Area (“ESA”). The site fall in the Bushmanland Arid Grassland vegetation type that covers large areas in the region and its status is “least threatened”. Little of this type is transformed. Being well represented and not threatened, the impact on vegetation type per se will be of low significance, with mitigation. (See figure 8 & Appendix D1).

Watercourses

A number of smaller seasonal ephemeral drainage lines are likely to have been impacted by the development, but they were considered insignificant, especially since there remains no downstream linkage (linkage beyond the property itself). However, the establishment of vineyards had a low negative impact on some small ephemeral drainage lines. Please refer to Appendix D3 (Technical Report).

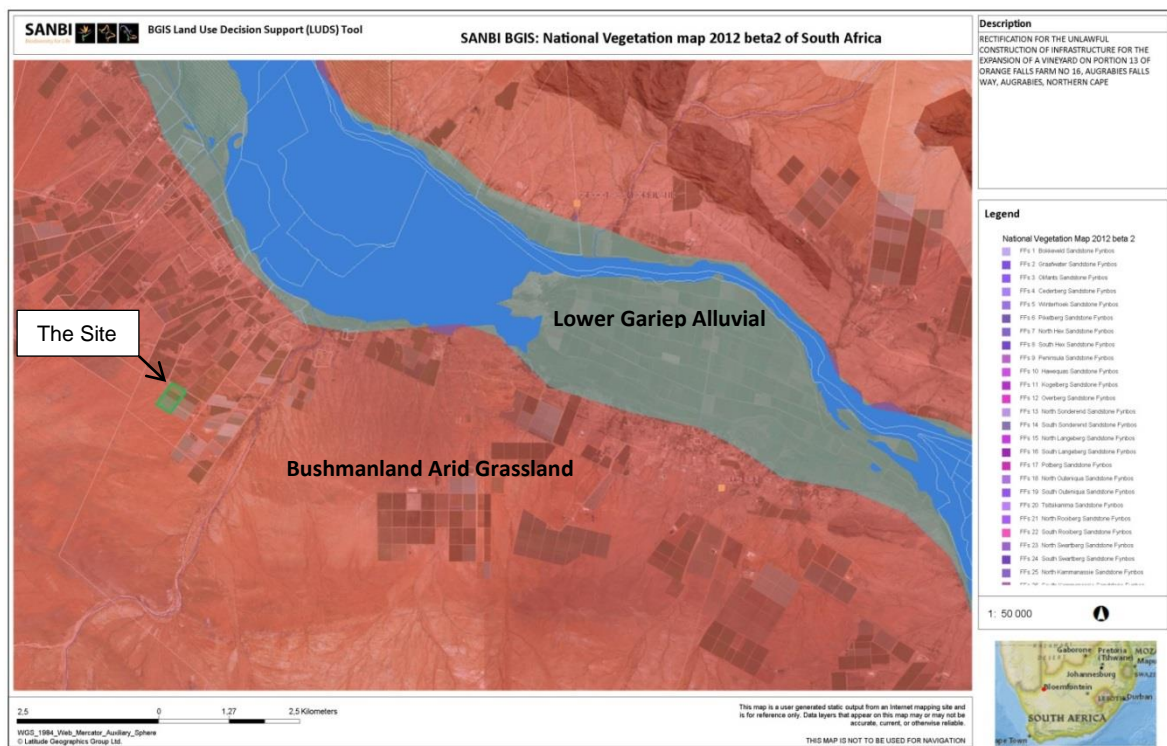


Figure 8: SANBI BGIS map showing the vegetation cover of the site (green rectangle) and surrounding area.

SECTION C: PUBLIC PARTICIPATION

- **ADVERTISEMENT AND NOTICE**

| | | |
|-----------------------------|---|------------------|
| Publication name | Die Gembok | |
| Date published | 02 June 2017 | |
| Site notice position | Latitude | Longitude |
| | | |
| | Posters were placed at the entrance gate of the Farm. | |
| Date placed | 23 May 2017 (See Appendix E6(b)) | |

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

- **DETERMINATION OF APPROPRIATE MEASURES**

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 733.

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 733: [Please refer to Appendix E5 \(I&APs List\)](#).

| Title, Name and Surname | Affiliation/ status | key stakeholder | Contact details (tel number or e-mail address) |
|-------------------------|---------------------|-----------------|--|
| | | | |
| | | | |
| | | | |

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority. [Please see Appendices E2 & E4.](#)

- **ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES**

| Summary of main issues raised by I&APs | Summary of response from EAP |
|---|------------------------------|
| Please refer to Appendix E3 | |

- **COMMENTS AND RESPONSE REPORT**

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

- **AUTHORITY PARTICIPATION**

Authorities and organs of state identified as key stakeholders: [Please refer to Appendix E5.](#)

| Authority/Organ of State | Contact person (Title, Name and Surname) | Tel No | Fax No | e-mail | Postal address |
|--|--|---------------|----------------|--------|---|
| NC Department of Agriculture & Land Reform | W. Mothibi (HOD) | (053)838 9102 | (053) 838 3635 | | Private Bag X5018, Kimberley, 8300 |
| Department of Roads and Public Works | S. Moholo | (053)838 5202 | 053 832 7380 | | P O Box 3132, Kimberley, 8300 |
| Department of Agriculture, Forestry & Fisheries | J. Mans | 054 338 5909 | 054 334 0030 | | PO Box 2782, Upington, 8800 |
| Department of Water Affairs-Northern Cape (Kimberly) | R. Mazwi | 053 830 8800 | 053 831 5438 | | Private Bag X6101, Kimberley, 8300 |
| Department of Water Affairs-Northern Cape (Upington) | J. van Wyk-Towell | 053 338 5819 | 053 334 0205 | | Private Bag X6101, Kimberley, 8300 |
| SAHRA | C. Scheermeyer/ N. Higgitt | 021 462 4502 | 021 462 4509 | | P.O.Box 4637, Cape Town, 8000 |
| Northern Cape Department of Environment and Nature Conservation (Upington) | O. Riba | 060 991 4817 | 053 831 3530 | | Provincial Building (First Floor), Corner of Rivier & Nelson Mandela Road, Upington, 8800 |
| Northern Cape Department of Environment and Nature Conservation (Kimberly) | T. Tsimakwane | 053 807 7300 | 053 807 7328 | | Private Bag X6102, Kimberley, 8300 |

| | | | | | |
|-------------------------|-------------|--------------|--------------|--|--------------------------------|
| Kai !Garib Municipality | JG. Lategan | 054 431 6328 | 054 461 6401 | | Private Bag X 6, Kakamas, 8870 |
|-------------------------|-------------|--------------|--------------|--|--------------------------------|

Include proof that the Authorities and Organs of State received written notification of the proposed activities as appendix E4.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

- **CONSULTATION WITH OTHER STAKEHOLDERS**

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as appendix E5.

Copies of any correspondence and minutes of any meetings held must be included in Appendix E6.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

- ### IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

| Activity | Impact summary | Significance | Proposed mitigation |
|--|---|------------------------------|--|
| Alternative 1 (preferred alternative) | | | |
| | <p>Direct impacts:</p> <p>Potential impact on freshwater ecosystems</p> <ul style="list-style-type: none"> Ephemeral drainage lines are present on the property, but no significant watercourses were observed. However, the establishment of vineyards had a low negative impact on some small ephemeral drainage lines. | Insignificant - Low negative | <ul style="list-style-type: none"> Vehicles to used existing roads and tracks as far as possible. Storm water management will be implemented with the EMPr. No roads have been constructed. |
| | <p>Potential impact on Flora</p> <ul style="list-style-type: none"> <i>Boscia albitrunca</i> – It is possible that a small number of these trees might have been removed to make way for the development. <i>Aloe claviflora</i> - It is likely that the development would have impacted on a number of these plants. <i>Boscia foetida</i> - it is likely that some of these plants might also have | Low Negative | <ul style="list-style-type: none"> A management plan for the control of invasive and exotic plant species needs to be implemented. Specialist advice should be used in this regard. The EMPr will be implemented to mitigate the low negative impact and to improve the condition of the site. Indiscriminate clearing of areas will be avoided (all remaining areas to remain as natural as possible). |

| | | | |
|--|---|--|--|
| | <p>been impacted by the development.</p> <p>No red-listed species was encountered but a few protected species is likely to have been impacted. This resulted in a low negative impact, without mitigation, and without the required flora permits.</p> | | |
| | <p>Potential impact on Fauna</p> | Insignificant | <ul style="list-style-type: none"> Activities on site must comply with the regulations of the Animal Protection Act 1962 (Act No. 71 of 1962). Workers should also be advised on the penalties associated with the needless destruction of wildlife, as set out in this act. |
| | <p>Biodiversity</p> <ul style="list-style-type: none"> A portion of the property falls within an ecological support area which aims at the protection of terrestrial migration corridors associated with the Orange River corridor. But the property itself is located within and agricultural landscape. The property was previously used for livestock grazing. | Insignificant - Low negative | <ul style="list-style-type: none"> Vehicles used existing roads and tracks as far as possible. No roads will be constructed. Indiscriminate clearing of areas will be avoided (all remaining areas to remain as natural as possible). A management plan for the control of invasive and exotic plant species needs to be implemented. Specialist advice should be used in this regard. The EMPr will be implemented to mitigate the low negative impact and to improve the condition of the site. |
| | <p>Potential Impacts on Socio-economic aspects</p> <ul style="list-style-type: none"> Creation of employment during construction and operational phases; and Benefits to local Agricultural sector associated with operational phase. | <p>Medium – Positive</p> <p>Low – Positive</p> | <p>Labourers from surrounding areas to be employed on the farm.</p> <p>The applicant would be able to compete with international markets for Grape Export to other countries. Thereby indirectly benefitting the local agricultural economy.</p> |
| | <p>The loss of cultural or historic aspects during construction</p> | Very Low – Neutral | <ul style="list-style-type: none"> If any archaeological remains (including but not limited to fossil bones and fossil shells, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts and bone remains, structures and other built features, rock art and rock engravings) are discovered during construction they must immediately be reported to SAHRA and must not be disturbed further until the necessary approval has been obtained from SAHRA. |

| | | | |
|----------------------|--|-----------------------|---|
| | | | <ul style="list-style-type: none"> Should any human remains/burial or archaeological material be disturbed, exposed or uncovered during construction, these should immediately be reported to the South African Heritage Resources Agency. The ECO and Engineer are also to be informed. |
| | Noise Impact | Low - Negative | No construction activities will take place during night time. All construction activities will be limited to normal working hours. |
| | Visual Impact | Very – Low - Negative | The activity is not expected to cause a significant visual impact given the fact that the site is located next to existing vineyards; in an agricultural area. |
| | <p>Indirect impacts: It is unlikely that the development contributed significantly to 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; and Loss of ecosystem connectivity. (Please see Appendix D1).</p> <p>The development had an insignificant indirect impact on the small ephemeral drainage lines.</p> | Low negative | <p>The EMPr will be implemented during the construction and operational phases.</p> <ul style="list-style-type: none"> Vehicles to use existing roads and tracks as far as possible. No roads will be constructed. Indiscriminate clearing of areas will be avoided (all remaining areas to remain as natural as possible). A management plan for the control of invasive and exotic plant species needs to be implemented. Specialist advice should be used in this regard. The EMPr will be implemented to mitigate the low negative impact and to improve the condition of the site. Activities on site must comply with the regulations of the Animal Protection Act 1962 (Act No. 71 of 1962). Workers should also be advised on the penalties associated with the needless destruction of wildlife, as set out in this act. |
| | <p>Cumulative impacts: The activity is not considered to cause a significant environmental impact during the operational phase.</p> | Very low negative | Recommendations mentioned above will be implemented together with the EMPr. |
| Alternative 2 | | | |
| | <p>Direct impacts: Potential impact on freshwater ecosystems</p> <p>Ephemeral drainage lines are present on the property. A large part of this site consists of ephemeral drainage lines.</p> | Low negative | <ul style="list-style-type: none"> Vehicles to use existing roads and tracks as far as possible. Storm water management will be implemented with the EMPr. <p>No roads will be constructed.</p> |

| | | | |
|--|---|----------------------------|--|
| | <p>Potential impact on Flora</p> <ul style="list-style-type: none"> - <i>Boscia albitrunca</i> – It is possible that a small number of these trees might have been removed to make way for the development. - <i>Aloe claviflora</i> - It is likely that the development would have impacted on a number of these plants. - <i>Boscia foetida</i> - it is likely that some of these plants might also have been impacted as a result of the development. <p>No red-listed species was encountered but a number of protected species is likely to have been impacted. This resulted in a low negative impact, without mitigation, and without the required flora permits.</p> | | |
| | <p>Potential impact on Fauna</p> | <p>Low negative</p> | <ul style="list-style-type: none"> • Activities on site must comply with the regulations of the Animal Protection Act 1962 (Act No. 71 of 1962). Workers should also be advised on the penalties associated with the needless destruction of wildlife, as set out in this act. |
| | <p>Biodiversity</p> <ul style="list-style-type: none"> - A portion of the property falls within an ecological support area which aims at the protection of terrestrial migration corridors associated with the Orange River corridor. But the property itself is located within and agricultural landscape. A part of the area (alternative2) consists of intact natural vegetation. | <p>Low-medium negative</p> | <ul style="list-style-type: none"> • Vehicles to use existing roads and tracks as far as possible. • No roads will be constructed. • Indiscriminate clearing of areas will be avoided (all remaining areas to remain as natural as possible). • A management plan for the control of invasive and exotic plant species needs to be implemented. Specialist advice should be used in this regard. • The EMPr will be implemented to mitigate the low negative impact and to improve the condition of the site. |

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| | <p>Potential Impacts on Socio-economic aspects</p> <ul style="list-style-type: none"> - Creation of employment and business opportunities during the event planning and preparation phase - Benefits to local Agricultural sector associated with operational phase. | <p>Medium – Positive</p> <p>Low – Positive</p> | <ul style="list-style-type: none"> • The movement of workers on and off the site should be closely managed and monitored by the contractors. In this regard the contractors should be responsible for making the necessary arrangements for transporting workers to and from site on a daily basis; <p>The applicant would be able to compete with international markets for Grape Export to other countries. Thereby indirectly benefitting the local agricultural economy.</p> |
| | <p>The loss of cultural or historic aspects during construction</p> | <p>Very Low Neutral –</p> <p>Very Low Negative -</p> | <ul style="list-style-type: none"> • If any archaeological remains (including but not limited to fossil bones and fossil shells, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts and bone remains, structures and other built features, rock art and rock engravings) are discovered during construction they must immediately be reported to SAHRA and must not be disturbed further until the necessary approval has been obtained from SAHRA. • Should any human remains/burial or archaeological material be disturbed, exposed or uncovered during construction, these should immediately be reported to the South African Heritage Resources Agency. The ECO and Engineer are also to be informed. |
| | <p>Noise Impact</p> | <p>Low - Negative</p> | <p>No construction activities will take place during night time. All construction activities will be limited to normal working hours.</p> |
| | <p>Visual Impact</p> | <p>Low - Negative</p> | <p>The activity is not expected to cause a significant visual impact given the fact that the site is located next to existing vineyards; in an agricultural area.</p> |
| | <p>Indirect impacts: It is unlikely that the development would result in unacceptable environmental impacts.</p> | <p>Low negative</p> | <p>The EMPr will be implemented during the construction and operational phases.</p> <ul style="list-style-type: none"> • Vehicles to use existing roads and tracks as far as possible. • No roads will be constructed. |

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| | | | <ul style="list-style-type: none"> • Indiscriminate clearing of areas will be avoided (all remaining areas to remain as natural as possible). • A management plan for the control of invasive and exotic plant species needs to be implemented. Specialist advice should be used in this regard. • The EMPr will be implemented to mitigate the low negative impact and to improve the condition of the site. • Activities on site must comply with the regulations of the Animal Protection Act 1962 (Act No. 71 of 1962). Workers should also be advised on the penalties associated with the needless destruction of wildlife, as set out in this act. |
| | <p>Cumulative impacts: The activity is not considered to cause a significant environmental impact during the operational phase.</p> | low negative | Recommendations mentioned above will be implemented together with the EMPr. |
| | Direct impacts: | | |
| | Indirect impacts: | | |
| | Cumulative impacts: | | |
| Alternative 3 | | | |
| | Direct impacts: | | |
| | Indirect impacts: | | |
| | Cumulative impacts: | | |
| | Direct impacts: | | |
| | Indirect impacts: | | |
| | Cumulative impacts: | | |
| No-go option | | | |
| | <p>Direct impacts: The no-development option would result in a lost opportunity for The Lair Trust and the local economy.</p> | Low – negative, Probable | N/A |
| | Indirect impacts: | | |
| | Cumulative impacts: | | |

A complete impact assessment in terms of Regulation 19(3) of GN 733 must be included as Appendix F.

• **ENVIRONMENTAL IMPACT STATEMENT**

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

The following is a summary of the potential impacts, and their ratings after mitigation, and probability of occurrence:

Construction phase.

Freshwater ecosystems – Low Negative

Impact on Flora - Low Negative

A part of the site falls within an ESA. However, the site was degraded due to past agricultural activities (grazing).

Impact on Fauna – Low - Negative

Socio-economic aspects

- ❖ Creation of employment opportunities – **low Positive.**

Potential impacts on cultural - heritage resources

- ❖ Impacts at the proposed development: **Low negative**

The Archaeological Impact Assessment concluded that it is unlikely that significant archaeological heritage has been impacted by the established vineyards, since the site had already been grazed by livestock prior to development of the vineyards; although it should be noted that relatively large number of banded ironstone Middle Stone Age Tools were recorded on undeveloped land south of the unlawful vineyards.

Noise impact – Low negative

Visual impact – Very Low Negative

The site is situated next to existing vineyards.

Operational Phase

Freshwater ecosystems

- ❖ Stormwater run-off: **Very Low Negative**

Impact on Flora - Very Low Negative

Impact on Fauna – negligible

Socio-economic aspects

- ❖ Creation of on and off-site employment – **Medium Positive**
Seasonal employment opportunities (during harvesting of grapes).

Potential impacts on cultural - heritage resources – No impacts expected

Noise impact - **Very Low Negative**

Visual impact – **No impact expected**

Alternative B

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Alternative C

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No-go alternative (compulsory)

This would mean that no development would take place and the proposed site will remain as is (degraded).

According to the Kai !Garib Municipality IDP 2014, the agricultural sector is still the main economic sector who made the biggest contribution (51.8 %) to the economy of Kai !Garib in 2010. The Agriculture sector is also a major employer in the Municipality, providing 66.5% of all formal employment. It is also the sector with the largest potential for economic growth. The commercial farmers farm especially with grapes for export, raisins and wine, while citrus types of fruit are also becoming more prevalent in the area.

The capital value on completion of the activity (establishment of vineyards and grape production) as well as the expected yearly income and value of the employment opportunities would not be achieved. Although this option would result in no potential negative environmental impacts, the significant social benefits from implementing the activity would not be achieved.

The no-go option would only have been recommended if it were found that the proposed activities on this site or in this area might potentially cause substantial detrimental harm to the surrounding environment.

The No-Development option would therefore represent a lost opportunity for Augrabies and the local economy. This would represent a negative social cost.

The No-Development option would therefore represent a significant missed opportunity and is therefore not considered to be the most feasible or reasonable alternative. No development of a vineyards will be done - **Low – negative, Probable.**

SECTION E. RECOMMENDATION OF PRACTITIONER

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| Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)? | YES | NO |
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If “NO”, indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

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|---------------------------------|
| No further assessments required |
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If “YES”, please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

Compliance with the EMPr and appointment of an ECO during the construction phase.

The general recommendations and mitigation measures outlined in the S24G EIR, EMPr and specialist reports should be implemented.

It must also be noted that if any other listed activities in terms of the NEMA EIA Regulations are triggered by the established vineyards that are not included in this application (S24G Rectification Application), then an application for an environmental authorisation will need to be obtained first.

| | | |
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| Is an EMPr attached? | YES | NO |
|----------------------|-----|----|

The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

Emile Esquire

NAME OF EAP

SIGNATURE OF EAP

DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

Appendix I: Specialist's declaration of interest

Appendix J: Additional Information