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

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	(For official use only)
<b>File Reference Number:</b>	
<b>Application Number:</b>	
<b>Date Received:</b>	

**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 proposed development and expansion of grape vineyards on Portion 13 of Orange Falls Farm No. 16, Augrabies Falls Way, Northern Cape.

It is proposed that an area of 19.5 ha be cleared of vegetation for the proposed establishment of vineyards and dryland agricultural activities. It is proposed that a small reservoir be developed with a combined storage capacity of 2000m<sup>3</sup> and will have a development footprint of approximately 2827m<sup>2</sup>. This dam will be located on the north-western part of the property. No roads will be constructed as existing farm dirt roads will be used to gain access to the proposed site. The total development footprint will not exceed 20 ha. The proposed site is approximately 8.9 km north-west of the town of Augrabies. The property (Portion 13 of the Farm Orange Falls No. 13, Kenhardt) is located, just off the R359 (Augrabies Road) about 8.9 km north-west of the small town Augrabies within the Kai !Garib Local Municipality of the Northern Cape Province. The site co-ordinates are **28°39'42.28"S, 20°20'22.42"E**. Please refer to figures 1 – 2 below.

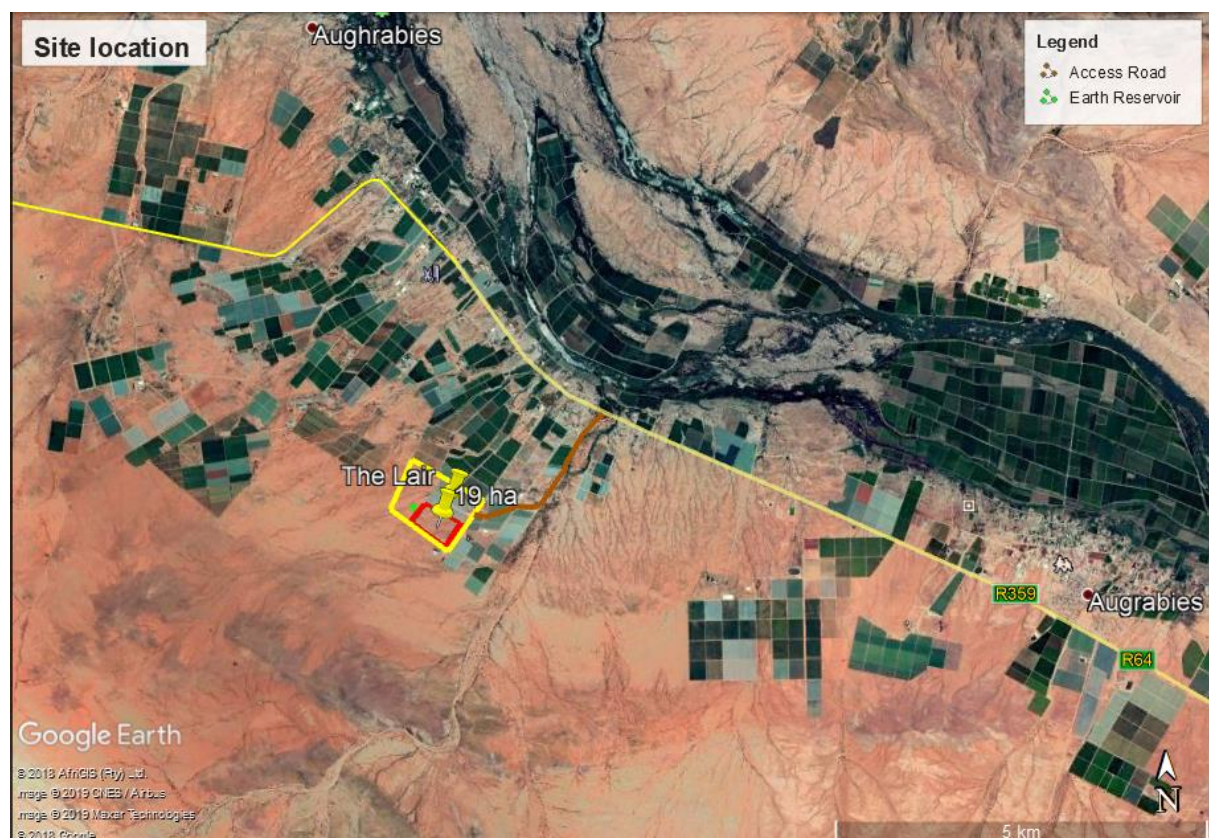


Figure 1: Google Earth aerial view of the proposed site (yellow rectangle) and surrounding area of Augrabies.

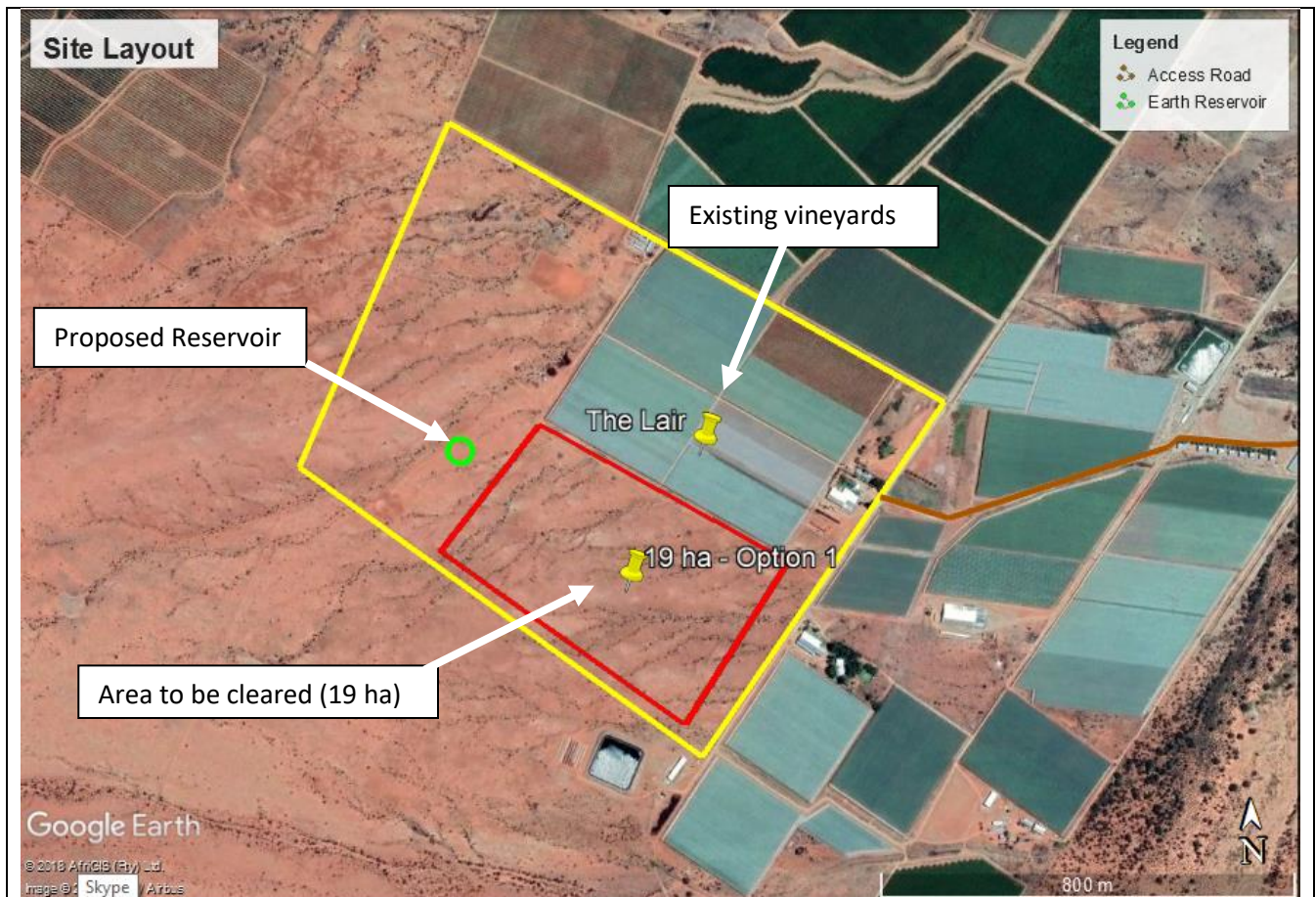


Figure 2: Showing the proposed site (yellow placemark) investigated as part of this study. The red rectangle is the 19 ha area to be cleared for vineyards. The green circle indicates the proposed 2000m<sup>3</sup> water reservoir.

**GOVERNMENT NOTICE R327 (LISTING NOTICE 1):**

**Activity No. 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—

- (i) the undertaking of a linear activity; or
- (ii) maintenance purposes undertaken in accordance with a maintenance management plan.

**Activity No. 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;

but excluding where such infilling, depositing, dredging, excavation, removal or moving—

- (a) will occur behind a development setback;
- (b) is for maintenance purposes undertaken in accordance with a maintenance management plan;
- (c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;
- (d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or
- (e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.

**Activity No. 12:** The development of—

- (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or
- (ii) infrastructure or structures with a physical footprint of 100 square metres or more;

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; —

excluding—

- (aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;
- (bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;
- (cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;
- (dd) where such development occurs within an urban area;
- (ee) where such development occurs within existing roads, road reserves or railway line reserves; or
- (ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.

**GOVERNMENT NOTICE R324 (LISTING NOTICE 3):**

**Activity No. 12:** The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.

**g. Northern Cape**

- i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;
- ii. Within critical biodiversity areas identified in bioregional plans;
- iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; or
- iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.

**SITE DESCRIPTION**

The proposed development footprint is located on private property, zoned for agriculture and is surrounded by agricultural land uses. The proposed vineyards will be located south of the existing vineyards. As is typical of this part of the Northern Cape, ephemeral drainage lines tend to criss-cross the landscape and the proposed site will cross a number of such drainage lines. The site is located within a Critical Biodiversity Area (CBA) and a number of protected plant species in terms of the NCNCA were observed. The land is currently fallow-land, sometimes used for livestock grazing. The vegetation on the property in general can be described as a sparse, slightly disturbed, low shrubland, with the small ephemeral drainage lines the most prominent feature, especially in the area to the west of the proposed site. Bushmanland Arid Grassland is not considered a threatened vegetation type (least threatened), with more than 99% remaining. However only 4% is formally conserved (Augrabies Falls National Park). No special features were observed on the property and the site itself is not considered of any special significance in terms of vegetation other than potential migration route and the fact that it supported a number of protected plant species.

**CIVIL AND ELECTRICAL SERVICES**

The electricity is supplied by Eskom. The sewerage on the farm gets emptied by a honey sucker by the Kai Garib Local Municipality when full, and the effluent disposed at a municipal safe zone.

## **ACCESS**

The R359 that passes the involved property will provide a high rate of visibility as well as accessibility to the proposed development. The proposed site will be accessed via existing farm roads on the property.

## **CONCLUSION**

The best environmental option would be the no-go alternative. However, the massive social benefits of the proposed project would not be realised. The development is relative small and may result in potential beneficial socio-economic gain, while the no-go option will not contribute significantly to national or provincial conservation targets.

Although the clearing of vegetation for the proposed agricultural development will cause some disturbance, with the implementation of the Environmental Management Programme (“EMPr”) and recommendations from the specialists, the proposed activity is expected to have a low negative impact. However, the benefits of the proposed activity are expected to outweigh any potential negative environmental impacts

It is therefore recommended that this application be authorised with the necessary conditions of approval as described throughout this Draft BAR for comment.

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

Listed activity as described in GN 327, 325 and 324	Description of project activity
<b>GN 327 Item 27:</b> The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for—  (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	The clearance of an area of approximately 19.5 hectares of indigenous vegetation to allow for the vineyard establishment and a small water reservoir as well as some dryland agricultural activities.
<b>GN 327 Item 12:</b> The development of— (i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or (ii) infrastructure or structures with a physical footprint of 100 square metres or more;  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; —  excluding— (aa) the development of infrastructure or	The proposed development of a small water reservoir that has a development footprint of approximately 2827m <sup>2</sup> and will be located within 32m of a watercourse.

<p>structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p> <p>(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</p> <p>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in Listing Notice 3 of 2014, in which case that activity applies;</p> <p>(dd) where such development occurs within an urban area;</p> <p>(ee) where such development occurs within existing roads, road reserves or railway line reserves; or</p> <p>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.</p>	
<p><b>GN 327 Item 19:</b> 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>but excluding where such infilling, depositing, dredging, excavation, removal or moving—</p> <p>(a) will occur behind a development setback;</p> <p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>	<p>The infilling or depositing of more than 10 cubic metres of soil within 32m of a watercourse.</p>
<p><b>GN 324 Item 12:</b> The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p><b>g. Northern Cape</b></p> <p><b>i.</b> Within any critically endangered or</p>	<p>The clearance of an area of approximately 19.5 hectares of indigenous vegetation to allow for the vineyard establishment and a small water reservoir.</p>

endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;

- ii. Within critical biodiversity areas identified in bioregional plans;
- iii. Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas; or
- iv. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.



• **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**

No other site alternatives were considered as the proposed site is located immediately south of existing grape vineyards. 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).

<b>Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative:	Latitude (S):	Longitude (E):
Alternative S1 (preferred)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S2 (if any)		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative S3 (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**

<b>Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<p>The proposed development and expansion of grape vineyards on Portion 13 of Orange Falls Farm No. 16, Augrabies Falls Way, Northern Cape.</p> <p>It is proposed that an area of 19.5 ha be cleared of vegetation for the proposed establishment of vineyards and dryland agricultural activities.</p> <p>It is proposed that a small reservoir be developed with a combined storage capacity of 2000m<sup>3</sup> and will have a development footprint of approximately 2827m<sup>2</sup>. This dam will be located on the north-western part of the property.</p> <p>No roads will be constructed as existing farm dirt roads will be used to gain access to the proposed site. The total development footprint will not exceed 20 ha.</p> <p>The proposed site is approximately 8.9 km north-west of the town of Augrabies. The property (Portion 13 of the Farm Orange Falls No. 13, Kenhardt) is located, just off the R359 (Augrabies Road) about 8.9 km north-west of the small town Augrabies within the Kai !Garib Local Municipality of the Northern Cape Province.</p> <p>The site co-ordinates are <b>28°39'42.28"S, 20°20'22.42"E</b>.</p>	<b>28° 39' 42.28"</b>	<b>20° 20' 22.42"</b>
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
No other alternatives were assessed because the proposed site		

is located adjacent to existing grape vineyards and was used for grazing livestock.		
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
N/A.		

**c) Technology alternatives**

No technology alternatives were considered.

<b>Alternative 1 (preferred alternative)</b>
<b>Alternative 2</b>
<b>Alternative 3</b>

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

N/A.

<b>Alternative 1 (preferred alternative)</b>
<b>Alternative 2</b>
<b>Alternative 3</b>

**e) No-go alternative**

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

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.

The development is relative small and may result in potential beneficial socio-economic gain, while the no-go option will not contribute significantly to national or provincial conservation targets.

**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):**

<b>Alternative:</b>	<b>Size of the activity:</b>
Alternative A1 (preferred activity alternative)	192900 m <sup>2</sup>
Alternative A2 (if any)	m <sup>2</sup>
Alternative A3 (if any)	m <sup>2</sup>

or, for linear activities:

<b>Alternative:</b>	<b>Length of the activity:</b>
Alternative A1 (preferred activity alternative)	m
Alternative A2 (if any)	m
Alternative A3 (if any)	m

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

<b>Alternative:</b>	<b>Size of the site/servitude:</b>
Alternative A1 (preferred activity alternative)	m <sup>2</sup>

Alternative A2 (if any)		m <sup>2</sup>
Alternative A3 (if any)		m <sup>2</sup>

- SITE ACCESS**

Does ready access to the site exist?	YES	NO
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

The site will be accessed via an existing dirt road leading towards the site, located off the R359 Road at Augrabies.

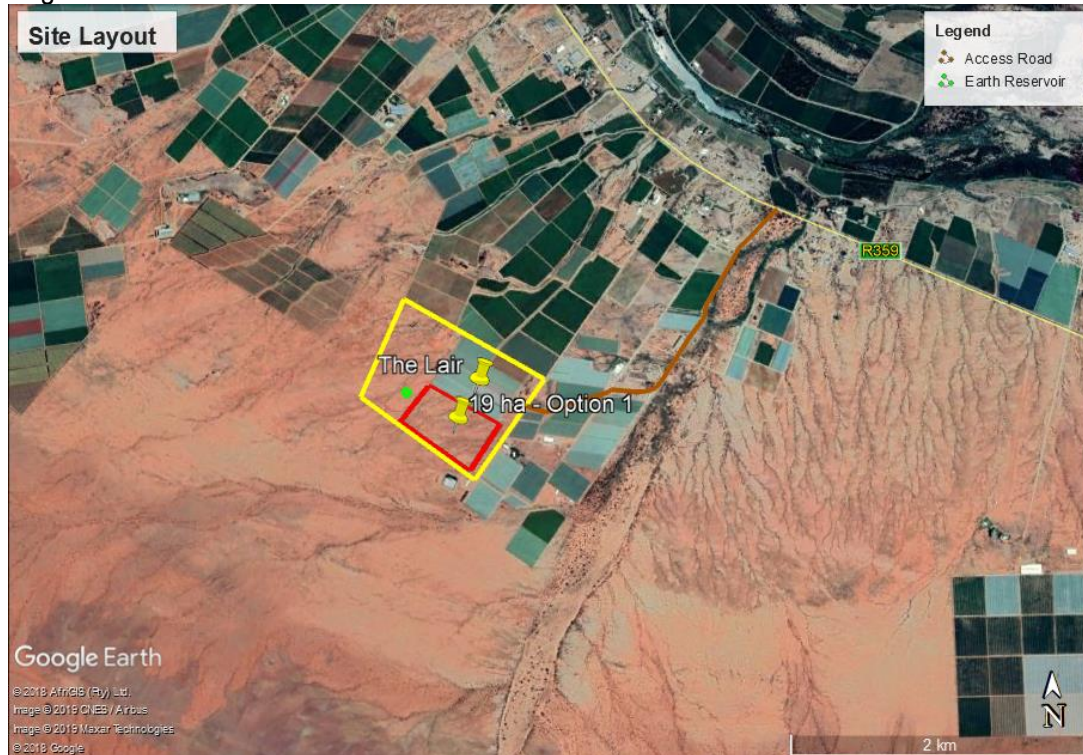


Figure 3: Access to the proposed site will be gained via an existing farm road (brown line) leading towards the site from the R359 Road to the west of the site.

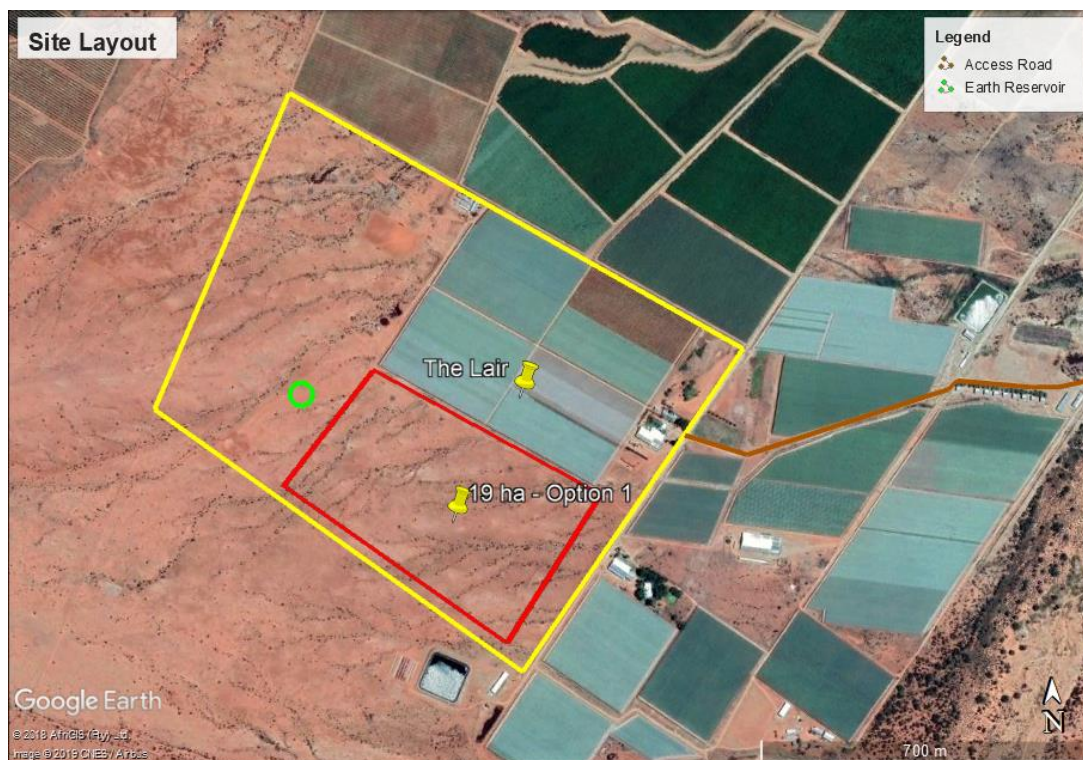


Figure 4: Access to the proposed site will be gained via an existing farm road (brown line) leading towards the site from the R359 Road to the west of the site.

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):

<ul style="list-style-type: none"> <li>• <b>Is the activity permitted in terms of the property's existing land use rights?</b></li> </ul>	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 for Agriculture and is being used for agricultural purpose.</p>			
<ul style="list-style-type: none"> <li>• <b>Will the activity be in line with the following?</b></li> </ul>			
<ul style="list-style-type: none"> <li>(a) <b>Provincial Spatial Development Framework (PSDF)</b></li> </ul>	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.</p> <p>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"> <li>1. All land-uses allow people to live with dignity and improve the integrity of the environment.</li> <li>2. Innovative management and technology is used to balance resource use with the carrying capacity of the environment.</li> <li>3. The comparative and competitive advantages in the province are developed and utilised sustainably.</li> </ol> <p>The NCSDF therefore emphasises development that is ecologically sustainable in the long-term.</p> <p>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</p>			



Trust therefore is to ensure that this development is undertaken in the most effective and sustainable manner possible.			
<b>(b) Urban edge / Edge of Built environment for the area</b>	YES	NO	Please explain
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.			
<b>(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?).</b>	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.</p> <p>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>			
<b>(d) Approved Structure Plan of the Municipality</b>	YES	NO	Please explain
The activity will have 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.			
<b>(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?)</b>	YES	NO	Please explain
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.			
<b>(f) Any other Plans (e.g. Guide Plan)</b>	YES	NO	Please explain
N/A.			

<ul style="list-style-type: none"> <li>• <b>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)?</b></li> </ul>	<p style="text-align: center;">YES</p>	<p>NO</p>	<p style="text-align: center;">Please explain</p>
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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 are 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.

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.

<ul style="list-style-type: none"> <li>• <b>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.)</b></li> </ul>	<p style="text-align: center;">YES</p>	<p>NO</p>	<p style="text-align: center;">Please explain</p>
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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 the 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.

The town of Augrabies is known for its agricultural sector. Therefore the establishment of vineyards (grape production) on Portion 13 of Orange Farm No. 16, Augrabies Falls Way, will be in line with the surrounding agricultural land uses.

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.

In addition, the proposed 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”.

<ul style="list-style-type: none"> <li>• <b>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.)</b></li> </ul>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
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The availability of services with adequate capacity (sewerage, solid waste disposal and water) still needs to be confirmed. Although there are limited services available, it must first be determined what the maximum amount of people the existing infrastructure can service.

The municipality is expected to be the service provider, although additional service providers may be required. Currently there is sufficient water availability from the recently constructed vineyards.

Waste is disposed of at a disposal site on the farm that is fenced, locked and secured. The farm on which the site is located passes the Global Gap and Tesco Audits every year. The sewage is disposed of in a drain that is emptied by a honey sucker by the Kai !Garib Local Municipality when it is full. In addition, Eskom is the electricity provider on the farm.

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 in order to supply the other 10ha of developed vineyards.

<ul style="list-style-type: none"> <li>• <b>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.)</b></li> </ul>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
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This development is not expected to have any significant impact on infrastructure plans for the Municipality. The proposed site is located within an agricultural area of Augrabies, and the surrounding area are known for intensive agricultural production. The Lower Orange River is surrounded by agricultural land uses. It is not envisaged that the proposed development would have a negative impact on the municipality’s infrastructure planning for the area.

<ul style="list-style-type: none"> <li>• <b>Is this project part of a national programme to address an issue of national concern or importance?</b></li> </ul>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
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No, however, additional job opportunities and economic development are of national importance. In addition, the proposed 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>• <b>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.)</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
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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-west 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>• <b>Is the development the best practicable environmental option for this land/site?</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
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Although the proposed development will result in and expected to have some potential environmental impacts, these are considered insignificant at this stage.

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.

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.

<p>• <b>Will the benefits of the proposed land use/development outweigh the negative impacts of it?</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
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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 will impact on approximately 19ha 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.

The main impact associated with the proposed activity will be the potential impact on the Critical Biodiversity Area (CBA), connectivity and protected plant species. However, the impact on connectivity should be insignificant and the impact on the CBA will be more related to migration corridors than to vegetation itself. The impact on protected species is also relatively low and can be mitigated to some extent.

In addition, the proposed site is zoned for Agriculture and is surrounded by agricultural land uses.

<ul style="list-style-type: none"> <li>• <b>Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?</b></li> </ul>	YES	NO	Please explain
<p>Not necessarily. However, Augrabies and the surrounding areas are predominantly agricultural in nature. The proposed site is surrounded with agricultural land uses. 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).</p>			
<ul style="list-style-type: none"> <li>• <b>Will any person's rights be negatively affected by the proposed activity/ies?</b></li> </ul>	YES	NO	Please explain
<p>No person's rights are expected to be negatively affected by the proposed development. The activity is expected to have a general positive impact on the residents of the area (through employment opportunities). Could also indirectly contribute to the local economic development within the surrounding area.</p>			
<ul style="list-style-type: none"> <li>• <b>Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?</b></li> </ul>	YES	NO	Please explain
<p>The development is located outside the urban edge. The site is located within an existing agricultural area of Augrabies, along the Orange River.</p>			
<ul style="list-style-type: none"> <li>• <b>Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?</b></li> </ul>	YES	NO	Please explain
<p>Yes, the proposed 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&amp;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"> <li>• <b>What will the benefits be to society in general and to the local communities?</b></li> </ul>	Please explain		
<p>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.</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, will be 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</p>			

becoming more prevalent in the area.

In addition, the proposed 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”.

• **Any other need and desirability considerations related to the proposed activity?**

Please explain

The activity is in line with the zoning of the farm. The farm is zoned agriculture 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 will be constructed as there are existing gravel roads to gain access to the site. Electricity is obtained from Eskom.

The main impact associated with the proposed activity will be the potential impact on the CBA, connectivity and protected plant species. However, the impact on connectivity should be insignificant and the impact on the CBA will be more related to the migration corridors than to vegetation itself. The impact on protected species is also relatively low and can be mitigated to some extent.

Even without mitigation the cumulative impact is expected to be borderline **Low**, but it can be reduced with mitigation.

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

- Significant loss of vegetation type and associated habitat;
- Loss of ecological processes (e.g. migration patterns, pollinators, river function etc.) due to construction and operational activities;
- Loss of local biodiversity and threatened plant species; and
- Loss of ecosystem connectivity (see Appendix D1).

• **How does the project fit into the National Development Plan for 2030?**

Please explain

Economic development and job creation are a priority of National Importance.

• **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 considered 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.* Please refer to Appendix E.
- 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
Northern Cape Nature	Flora Permit required from	Department:	Not Yet

Conservation Act (NCNCA) Act 9 of 2009	DENC	Environment and Nature Conservation (DENC)	
National Water Act (NWA, Act 36 of 1998).	WULA	Department of Water and Sanitation (DWS)	Not yet
Conservation of Agricultural Resources Act, 1983 (Act 43 of 1983).	Plough Certificate	Department of Agriculture, Forest and Fisheries (DAFF)	Not yet
National Heritage Resources Act, 1999 (Act 25 of 1999)	Permit / Comment	SAHRA	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
If YES, what estimated quantity will be produced per month? <b>Unknown</b>	m <sup>3</sup>	

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

The general solid waste generated during construction will be 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 will be 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?	YES	NO
If YES, what estimated quantity will be produced per month? <b>Unknown at this stage</b>	m <sup>3</sup>	
How will the solid waste be disposed of (describe)?		

The solid waste generated by the farm especially in the packing season of the grapes 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.

To be confirmed. Only domestic waste going into the Municipal Waste stream.

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 in the packing season of the grapes 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
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 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
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 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?	m <sup>3</sup>	
Will the activity produce any effluent that will be treated and/or disposed of on site?	YES	NO
<i>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.</i>		

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:		
<b>Facility name:</b>		
<b>Contact person:</b>		
<b>Postal address:</b>		
<b>Postal code:</b>		
<b>Telephone:</b>	<b>Cell:</b>	
<b>E-mail:</b>	<b>Fax:</b>	

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

N/A. The proposed activity is not expected to produce any significant amounts of wastewater during the operational phase.
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**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:		
The proposed development entails the clearance of vegetation for vineyard establishment and the small water reservoir on site. Minimal amounts of dust will be created during the clearing and construction phase, which would be managed through the implementation of the Environmental Management Programme (“EMPr”). Appropriate dust suppression mitigation measures were included into the EMPr. Please refer to Appendix G for the EMPr.		

**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
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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
Noise Control Regulations, 1998 (Environment Conservation Act, 1989 (Act 73 of 1989). National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004). The SANS noise standards.		
Describe the noise in terms of type and level:		
The activity would create localised noise during the construction stage (earthworks) and 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 that would be 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):

<input type="checkbox"/> Municipal	<input type="checkbox"/> Water board	<input type="checkbox"/> Groundwater	<input type="checkbox"/> River, stream, dam or lake	<input type="checkbox"/> Other	<input type="checkbox"/> The activity will not use water
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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: 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.	litres	
	YES	NO
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. Drainage lines will have to be ploughed over, for which a Water Use License Application ("WULA") is required. Please note that a WULA application was lodged with DWS. Please refer to Appendix J6 an Appendix J7 of the BAR.		

- ENERGY EFFICIENCY**

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

N/A. The property on which the site is located receives electricity from Eskom, and the young vines would be covered with netting in order protect it against the natural elements. The most appropriate energy efficient measures would be implemented.

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
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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.

<b>Property description/physical address:</b>	<b>Province</b>	Northern Cape
	<b>District Municipality</b>	ZF Mgcawu District Municipality
	<b>Local Municipality</b>	Kai !Garib Local Municipality
	<b>Ward Number(s)</b>	1
	<b>Farm name and number</b>	Portion 13 of Orange Falls Farm No. 16
	<b>Portion number</b>	13
	<b>SG Code</b>	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.		
<b>Current land-use zoning as per local municipality IDP/records:</b>	Agriculture zoned	

	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
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**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
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**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
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• **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):	
	YES	NO	YES	NO	YES	NO
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.

Geology is dominated by mudstones and shales of the Ecca Group (Prince Albert and Volksrust Formations) and Dwyka tillites, both of the early Karoo age. About 20% of rock outcrops are formed by Jurassic intrusive dolerite sheets and dykes. Please refer to **Appendix D1 and Appendix J4** for more detail.

• **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 - good condition <sup>E</sup>	Natural veld with scattered aliens <sup>E</sup>	Natural veld with heavy alien infestation <sup>E</sup>	Veld dominated by alien species <sup>E</sup>	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 proposed new vineyards will be located on an area currently still covered by natural veld in relative good condition, although historic stock grazing practices is expected to have impacted on the vegetation composition. The vegetation at the proposed site is expected to be Bushmanland Arid Grassland, which is considered a “*Least Threatened*” in terms of the National list of ecosystems that are threatened and in need of protection. The proposed dam will be located on an area already disturbed / transformed and will not result in any additional impact on vegetation.

As with almost all areas in the Northern Cape the site is criss-crossed by small drainage lines, which is the result of draining these relative level landscapes during of thunderstorm events. These drainage lines are often associated with slightly larger shrubs and small trees that are only found near such water ways. In this case the vegetation encountered was typical of what was expected on gravelly soils with a shallow sandy layer sometimes present. Please refer to **Appendix D1** for the Botanical Impact Assessment. Refer to **Appendix B** for the site photographs.

• **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	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO	UNSURE

As with almost all areas in the Northern Cape the site is criss-crossed by small drainage lines, which is the result of draining these relative level landscapes during of thunderstorm events. These drainage lines are often associated with slightly larger shrubs and small trees that are only found near such water ways. In this case the vegetation encountered was typical of what was expected on gravelly soils with a shallow sandy layer sometimes present. Please refer to **Appendix D1** for the Botanical Impact Assessment, **Appendix D3** for the Freshwater Impact Assessment, and **Appendix B** for the site photographs.

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

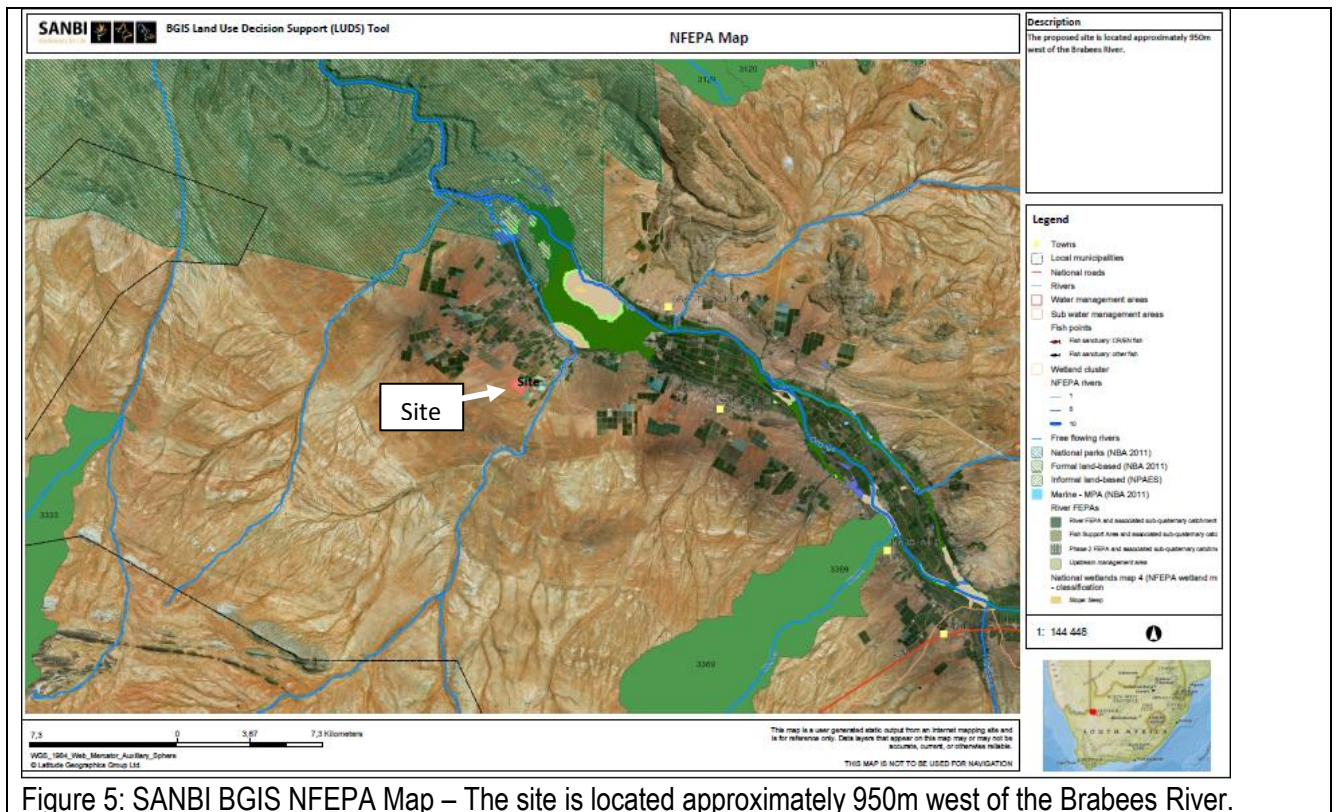
The Lower Orange River is lined with vineyards. These vineyards often cut off the flow from the numerous water courses that enter the Orange River. These are small tributaries that only flow during the occasional summer time heavy thunder storm. These tributaries are mostly dry drainage lines. Scouring and erosion are obvious in these drainage lines and closer to the confluence with the Orange River, some of these are deeply incised.

Water velocity down these small water courses can be quite fast and hence the erosion potential is great. If allowed to cross a vineyard, it stands to reason that the damage can be extensive. For this reason, these small water courses and even there bigger reaches lower down have been straightened and canalised since the onset of the table grape industry in the Lower Orange River valley many years ago.

The drainage lines have been cut off with berms and trenches to divert their flow around blocks of vineyards. Some of these trenches are substantial and the network of cut-offs extensive. These storm water diversions have been constructed long before the promulgation of current environmental legislation.

Lower down closer to the Orange River these once natural tributaries have lost all their riverine characteristics and ecological function. This, however, is the trade-off that must be made for having a table grape industry. The drainage lines are dense over the landscape, despite of the semi-desert conditions and it cannot be avoided not to divert them when blocks of vines are planted, along with the access roads, irrigation and other infrastructure. The drainage lines at the Lair Trust vineyards are not any different. The top end of these vineyards is marked by cut -off trenches. Please refer to **Appendix D1** and **Appendix D3** for more detail.

As is typical of this part of the Northern Cape, ephemeral drainage lines tend to criss-cross the landscape and the proposed site will cross a number of such drainage lines. In terms of vegetation, most of these drainage lines are probably not significant, apart from larger indigenous trees that sometimes associated with these features. Please refer to **Appendix D1** and **Appendix D3** for more detail.



• **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 <sup>H</sup>
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential <sup>A</sup>	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant <sup>A</sup>	Nature conservation area
Medium industrial <sup>AN</sup>	Train station or shunting yard <sup>N</sup>	Mountain, koppie or ridge
Heavy industrial <sup>AN</sup>	Railway line <sup>N</sup>	Museum
Power station	Major road (4 lanes or more) <sup>N</sup>	Historical building
Office/consulting room	Airport <sup>N</sup>	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam <sup>A</sup>	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 proposed site is located within a Critical Biodiversity Area (CBA). Please refer to figure 6 below, **Appendix A1** for the Biodiversity Sensitivity Map and **Appendix D1** for the Botanical Impact Assessment.



Figure 6: Northern Cape Critical Biodiversity Areas Map. The site (red box) is located within a Critical Biodiversity Area (CBA).



• **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
<p>According to the Archaeological Impact Assessment (Appendix D2), the study area has captured a good record of the archaeological heritage present on the proposed development site. No settlement sites or evidence of human occupation was noted, although a small activity area (Site 4591) was recorded in the north-eastern portion of the proposed development site, on sheet washed gravels/sediments between two drainage channels.</p> <p>Overall, the results of the filed assessment indicate that the proposed activity (i.e. a vineyard development) will not have an impact of great significance on pre-colonial archaeological heritage. Apart from one small in-situ scatter of lithics (Site 4591), a relatively small number of mixed MSA and LSA tools were documented which, occur mostly in an isolated, and degraded context.</p> <p>No graves or typical grave markers were encountered during the field study. In terms of the built environment, no old buildings, structures or features, or any old equipment was found on the proposed development site.</p> <p>Indication are that, in terms of archaeological heritage, the receiving environment is not a sensitive or threatened landscape. The impact significance of the proposed vineyard development on important archaeological heritage was assessed and is of low significance.</p>	Uncertain	

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:
<p>According to the Archaeological Impact Assessment (Appendix D2), the study area has captured a good record of the archaeological heritage present on the proposed development site. No settlement sites or evidence of human occupation was noted, although a small activity area (Site 4591) was recorded in the north-eastern portion of the proposed development site, on sheet washed gravels/sediments between two drainage channels.</p> <p>Overall, the results of the filed assessment indicate that the proposed activity (i.e. a vineyard development) will not have an impact of great significance on pre-colonial archaeological heritage. Apart from one small in-situ scatter of lithics (Site 4591), a relatively small number of mixed MSA and LSA tools were documented which, occur mostly in an isolated, and degraded context.</p> <p>No graves or typical grave markers were encountered during the field study. In terms of the built environment, no old buildings, structures or features, or any old equipment was found on the proposed development site.</p> <p>Indication are that, in terms of archaeological heritage, the receiving environment is not a sensitive or threatened landscape. The impact significance of the proposed vineyard development on important archaeological heritage was assessed and is of low significance.</p>

Will any building or structure older than 60 years be affected in any way?	YES	NO
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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 a copy of the Basic Assessment Report will be provided to the South African Heritage Resource Agency (SAHRA) and will be loaded onto the SAHRIS system.		

- **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](http://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](mailto: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)	<p>Bushmanland Arid Grassland is not considered a threatened vegetation type, with more than 99% remaining. However only 4% is formally conserved (Augrabies Falls National Park). Further conservation options must thus be investigated.</p> <p>Botanically the proposed site is not considered sensitive, but it does overlap a proposed CBA and will impact on a small number of protected species.</p> <p>According to the National list of ecosystems that are threatened and in need of protection (GN 1002, December 2011), Bushmanland Arid Grassland, remains classified as <i>Least Threatened</i>.</p>
				<p><b>Critical Biodiversity Areas (CBA's)</b> are terrestrial and aquatic features in the landscape that are critical for retaining biodiversity and supporting continued ecosystem functioning and services (SANBI 2007). The primary purpose of CBA's is to inform land-use planning in order to promote sustainable development and protection of important natural habitat and landscapes. CBA's can also be used to inform protected area expansion and development plans.</p>
				<p><b>Critical Biodiversity Areas (CBA's)</b> are areas of the landscape that need to be maintained in a natural or near-natural state in order to ensure the continued existence and functioning of species and ecosystems and the delivery of ecosystem services. In other words, if these areas are not maintained in a natural or near-natural state then biodiversity conservation targets cannot be met. Maintaining an area in a natural state can include a variety of biodiversity-compatible land uses and resource uses.</p>
				<p><b>Ecological support areas (ESA's)</b> are areas that are not essential for meeting biodiversity representation targets/thresholds but which nevertheless play an important role in supporting the ecological functioning of critical biodiversity areas and/or in delivering ecosystem services that support socio-economic development, such as water provision, flood mitigation or carbon sequestration. The degree of restriction on land use and resource use in these areas may be lower than that recommended for critical biodiversity areas.</p>

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	90%	<p>The land is currently fallow-land, sometimes used for livestock grazing. However, the vegetation on the property is still well connected to the south and west, but agricultural practises to the north and east of the site compromised connectivity in that direction. It must be noted that the proposed site is located within in an area almost surrounded by similar intensive agriculture. The additional impact on connectivity is not seen as significant, since the vegetation to the north and east of the proposed site is already subject to agricultural related pressure.</p> <p>According to the Botanical Impact Assessment (Appendix D1), the vegetation cover in the proposed footprint area can be described as a sparse open low shrubland dominated by white grasses (e.g. <i>Schmidtia kalahariensis</i>, <i>Stipagrostis</i> species) and low growing species like <i>Justicia australis</i>, <i>Kleinia longiflora</i>, <i>Rhigozum trichotomum</i> and <i>Galenia africana</i> (Photo 1 &amp; 2), with species like <i>Acanthopsis disperma</i>, <i>Aloe claviflora</i> (occasionally), <i>Aptosimum spinescens</i>, <i>Blepharis furcata</i>, <i>Hirpicium cf. echinus</i>, <i>Limeum aethiopicum</i>, <i>Rogeria longiflora</i>, <i>Salsola aphylla</i>, <i>Thesium lineatum</i>, <i>Tribulus cristatus</i> and <i>Zaluzianskya cf. benthamiana</i> also encountered, but less common. The small <i>Acanthopsis disperma</i> was often observed as large patches of small “verneuk-halfmenseie” patches (Photo 4). Vegetation cover was generally between 20 – 30%, except near the ephemeral drainage lines where the vegetation composition and cover changed to a denser and slightly larger (reaching 1 m in height) shrub dominated vegetation.</p> <p>According to the Botanical Impact Assessment (Appendix D1), the following protected or endangered species was encountered / expected on site:</p> <ul style="list-style-type: none"> <li>• No red-listed species;</li> <li>• No NEM:BA protected plants;</li> <li>• No NFA protected plant species; and</li> <li>• Four NCNCA protected plant species, most notably a number of <i>Aloe claviflora</i> and <i>Boscia Foetida</i> individuals.</li> </ul> <p>The land is currently fallow-land, sometimes used for livestock grazing.</p>
Near Natural (includes areas with low to moderate level of alien invasive plants)	10%	The land is currently fallow-land and sometimes used for livestock grazing.
Degraded (includes areas heavily invaded by alien plants)	0%	

Transformed (includes cultivation, dams, urban, plantation, roads, etc)	0%	
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- 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

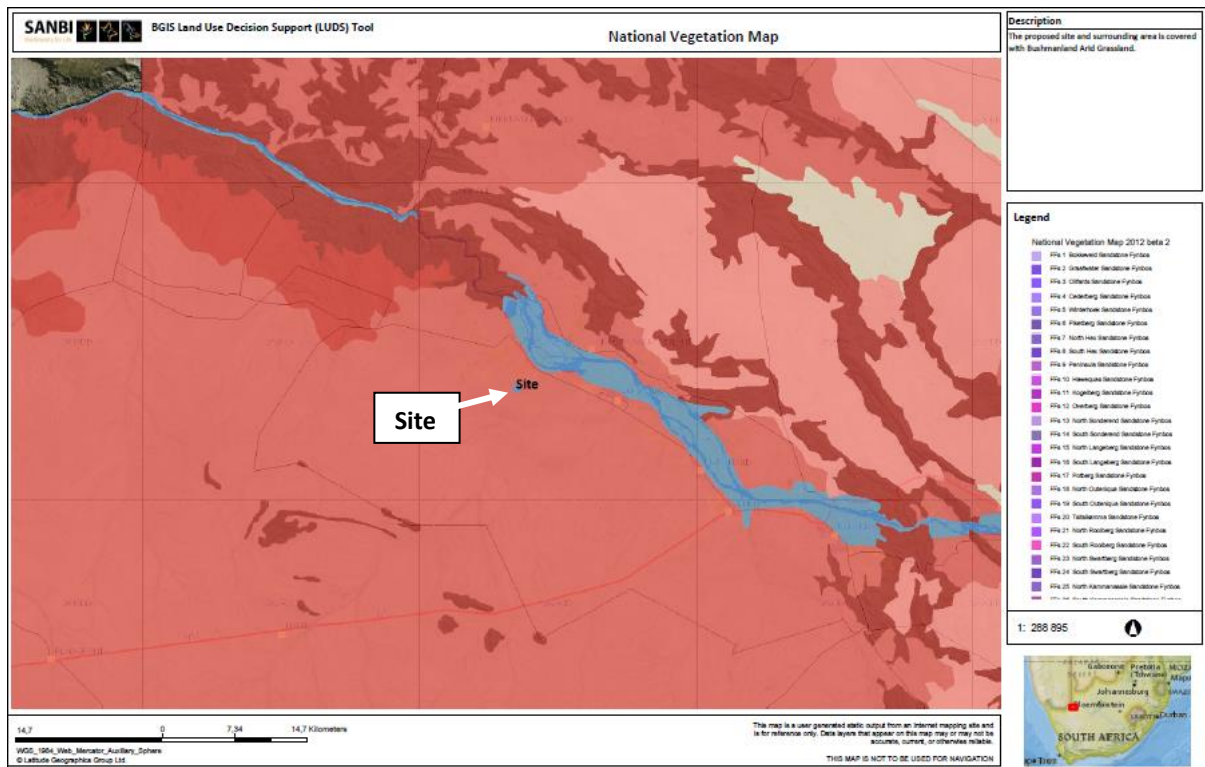


Figure 7: National Vegetation Map – The site is covered with Bushmanland Arid Grassland. This vegetation has a threat status that is **Least Threatened**.

- 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)

According to SANBI BGIS National Vegetation Map (Appendix 2) as well as the Botanical Impact Assessment (Appendix D1), the vegetation type expected at the proposed site and its immediate vicinity, is Bushmanland Arid Grassland. Bushmanland Arid Grassland is not considered a threatened vegetation type (least threatened), with more than 99% remaining. However only 4% is formally conserved (Augrabies Falls National Park). Botanically the proposed site is not considered sensitive, but it does overlap a proposed CBA and will impact on a small number of protected species.

According to the Botanical Impact Assessment (Appendix D1), the vegetation cover in the proposed footprint area can be described as a sparse open low shrubland dominated by white grasses (e.g. *Schmidtia kalahariensis*, *Stipagrostis* species) and low growing species like *Justicia australis*, *Kleinia longiflora*, *Rhigozum trichotomum* and *Galenia africana* (Photo 1 & 2), with species like *Acanthopsis disperma*, *Aloe claviflora* (occasionally), *Aptosimum spinescens*, *Blepharis furcata*, *Hirpicium cf. echinus*, *Limeum aethiopicum*, *Rogeria longiflora*, *Salsola aphylla*, *Thesium lineatum*, *Tribulus cristatus* and *Zaluzianskya cf. benthamiana* also encountered, but less common. The small *Acanthopsis disperma* was often observed as large patches of small “verneuk-halfmensie” patches (Photo 4). Vegetation cover was generally between 20 – 30%, except near the ephemeral drainage lines where the vegetation composition and cover changed to a denser and slightly larger (reaching 1 m in height) shrub dominated vegetation.

The following protected or endangered species was encountered / expected on site:

- No red-listed species;
- No NEM:BA protected plants;
- No NFA protected plant species; and
- Four NCNCA protected plant species, most notably a number of *Aloe claviflora* and *Boscia Foetida* individuals.

In addition, the proposed development footprint is located on private property, zoned for agriculture. As is typical of this part of the Northern Cape, ephemeral drainage lines tend to criss-cross the landscape and the proposed site will cross a number of such drainage lines. The vegetation on the property in general can be described as a sparse low shrubland, with vegetation associated with the small ephemeral drainage lines almost the most prominent feature, especially in the area to the west of the proposed site. No special features were observed on the property and the site itself is not considered of any special significance in terms of vegetation other than potential migration route and the fact that it supported a number of protected plant species. Please refer to Appendix D1 for more detail.

The area to the north-east, along the Orange River, is characterised by Lower Gariep Alluvial Vegetation. Lower Gariep Alluvial Vegetation is threatened vegetation type, with a threat status that is *Endangered*.

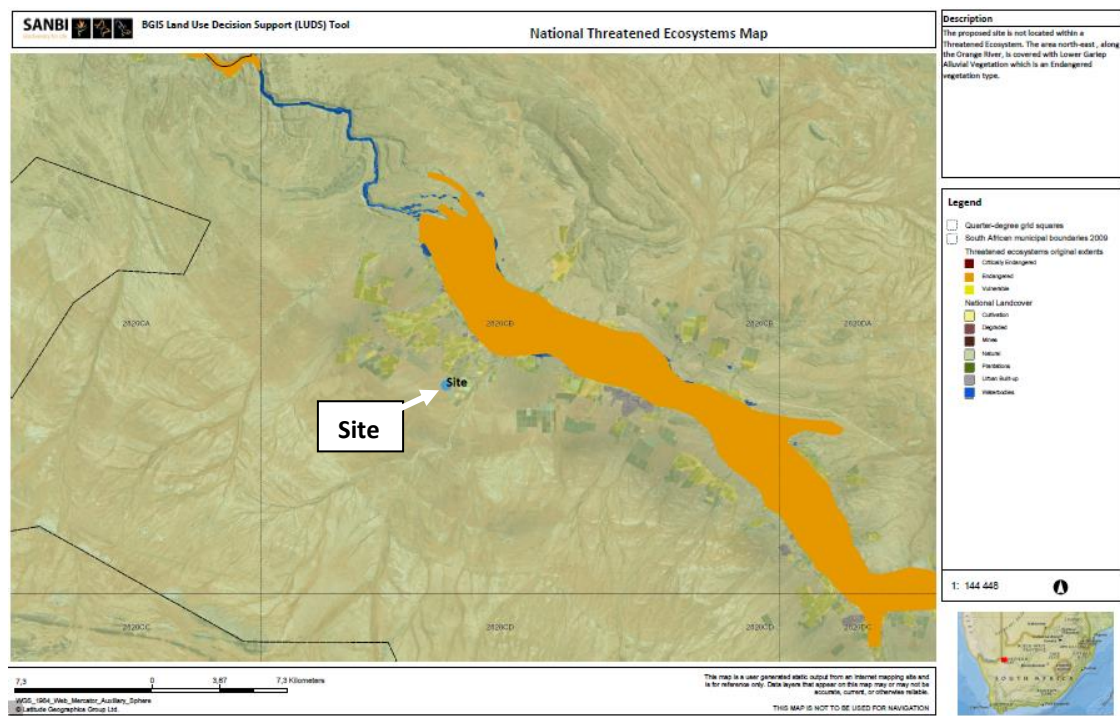


Figure 8: National Threatened Ecosystems Map – The site is not located within a threatened Ecosystem. The area to the north-east of the proposed site, along the Orange River, is covered with Lower Gariep Alluvial Vegetation which has a threat status that’s *Endangered*.

## SECTION C: PUBLIC PARTICIPATION

- **ADVERTISEMENT AND NOTICE**

<b>Publication name</b>	<b>Gemsbok</b>	
<b>Date published</b>	<b>27 July 2018</b>	
<b>Site notice position</b>	<b>Latitude</b>	<b>Longitude</b>
	<b>Please refer to Appendix E</b>	
<b>Date placed</b>	<b>23 August 2018</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

<b>Title, Name and Surname</b>	<b>Affiliation/ key stakeholder status</b>	<b>Contact details (tel number or e-mail address)</b>
W. Mothibi (HOD)	Northern Cape Department: Agriculture, Land Reform and Rural Development	(053) 838 9100
K. Nogwili	Department of Roads and Public Works	(053) 839 2100
J. Mans	Department of Agriculture, Forestry & Fisheries	054 338 5909
S. Shibambu	Department of Water and Sanitation - Northern Cape (Upington)	054 338 5819
V. Ramugondo	Department of Water Affairs- Northern Cape (Kimberley)	053 836 7600
N. Higgitt	South African Heritage Resource Agency (SAHRA)	021 462 4502
O. Riba	Northern Cape Department of Environment and Nature Conservation (Upington)	060 991 4817 / 054 338 4800
I. De Waal	Kai !Garib Municipality	054 431 6300

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.



- ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES**

Summary of main issues raised by I&APs	Summary of response from EAP
No comments received during the initial PPP.	

- 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:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
NC Department of Agriculture, Land Reform and Rural Development	W. Mothibi (HOD)	(053) 838 9100	(053) 831 3635	<a href="mailto:synthiafortune@ncpg.gov.za">synthiafortune@ncpg.gov.za</a>	Private Bag X5018, Kimberley, 8300
Department of Roads and Public Works	K. Nogwili	(053) 839 2100	053 839 2291	<a href="mailto:KNogwili@ncpg.gov.za">KNogwili@ncpg.gov.za</a>	PO Box 3132, Kimberley, 8000
Department of Agriculture, Forestry & Fisheries	J. Mans	054 338 5909	054 334 0030	<a href="mailto:JacolineMa@daff.gov.za">JacolineMa@daff.gov.za</a>	PO Box 2782, Upington, 8800
Department of Water Affairs-Northern Cape (Upington)	R. Shibambu	053 338 5819	086 699 2007	<a href="mailto:shibambus@dws.gov.za">shibambus@dws.gov.za</a>	Private Bag X5912, Upington, 8800
Department of Water Affairs-Northern Cape (Kimberley)	V. Ramugondo	053 836 7600	053 842 3258	<a href="mailto:ramugondov@dws.gov.za">ramugondov@dws.gov.za</a>	Louisevale Road, Upington, 8800
SAHRA	N. Higgitt	021 462 4502	021 462 4509	<a href="mailto:nhiggitt@sahra.org.za">nhiggitt@sahra.org.za</a>	P.O.Box 4637, Cape Town, 8001
Northern Cape Department of Environment and Nature Conservation (Upington)	O. Riba	060 991 4817	053 831 3530	<a href="mailto:oriba.denc@gmail.com">oriba.denc@gmail.com</a> <a href="mailto:ORiba@ncpg.gov.za">ORiba@ncpg.gov.za</a>	Provincial Building (First Floor), Corner of Rivier & Nelson Mandela Road,

					Uppington, 8800
Kai !Garib Municipality	I. De Waal	054 431 6300	054 461 6401	<a href="mailto:mm@kaigarib.gov.za">mm@kaigarib.gov.za</a> <a href="mailto:dewaali@kaigarib.gov.za">dewaali@kaigarib.gov.za</a>	Private Bag X 6, Kakamas, 8870
Kakamas Water Users Association	Marina Jordaan	054 431 0725	054 431 0348	<a href="mailto:marinakwgv@isat.co.za">marinakwgv@isat.co.za</a>	Private Bag X4, 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
<b>Alternative 1 (preferred alternative)</b>			
	<p><b>Direct impacts:</b></p> <p>Potential impact on freshwater ecosystems (small drainage lines on site).</p>	Medium - Low	<ul style="list-style-type: none"> <li>According to the Freshwater Assessment (Appendix D3), the significance of the impact on the small drainage lines is regarded as low because only short sections of the drainage lines are impacted.</li> <li>The impact is very much local.</li> <li>It is not foreseen that the vineyard will even be rehabilitated and allowed to some state closer to the original prior to development, but that it would rather be re-planted after many years, once the vines become too old to be render the expected yield.</li> <li>There is not much that can be done in the line of mitigation of the environmental impact when the soil is prepared and the vines planted. The only significant mitigation that can be implemented is to make sure that vineyards are not over-irrigated and that as little as possible agricultural return flow is created.</li> <li>The impact of a couple of new blocks of vineyard is negligible.</li> </ul>

			<ul style="list-style-type: none"> <li>• The mitigating measures that are available indeed lower the significance of impacts from “medium” to “low.</li> <li>• Do not disturb any land outside of designated agricultural area.</li> <li>• Construction must not commence during the rainy season.</li> <li>• Stay away 9m from main drainage line (9m buffer area).</li> <li>• Prevent over-use of agri-chemicals and fertilizers</li> <li>• Prevent plant remnants to wash down drainage line following pruning season</li> <li>• Do now work outside of the footprint of the proposed dam.</li> <li>• Landscape the surroundings of the completed dam</li> </ul>
	<p><b>The loss of cultural or historic aspects during construction</b></p>	<p>Low</p>	<ul style="list-style-type: none"> <li>• No archaeological mitigation is required is prior to construction activities commencing.</li> <li>• Should any unmarked human burials/remains or ostrich eggshell water flask caches be uncovered, or exposed during construction activities, these must immediately be reported to the archaeologist (Jonathan Kaplan 082 321 0172), or the South African Heritage Resources Agency (SAHRA) (Att Ms Natasha Higgitt 021 462 4502). Burials, etc. must not be removed or disturbed until inspected by the archaeologist.</li> <li>• During construction, any possible discovery of finds such as stone tools scatters, artefacts, human remains, or fossils are made, the operations must be stopped, and the ECO in charge of these developments ought to be alerted immediately.</li> <li>• These discoveries ought to be protected (preferably in situ), and the ECO must</li> </ul>

		<p>report to SAHRA so that appropriate mitigation (e.g. recording, collection) can be carried out by a professional archaeologist or palaeontologist. SAHRA Contact details: South African Heritage Resources Agency, 111 Harrington Street, PO Box 4637, Cape Town 8000, South Africa. Email: Phone: +27 (0)21 462 4502. Fax: +27 (0)21 462 4509 Web: www.sahra.org.za). The ECO and Engineer are also to be informed.</p> <ul style="list-style-type: none"> <li>• If unmarked human burials are uncovered, the SAHRA Burial Grounds and Graves (BGG) Unit (Thingahangwi Tshivhase/ Mimi Seetelo – 021 320 8490), must be alerted immediately as per section 36(6) of the NHRA and item 5 of the Schedule.</li> <li>• If any heritage resources are uncovered during the course of the development, a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contracted as soon as possible to inspect the heritage resources. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation may be required subject to permits issued by SAHRA.</li> <li>• Note that the Contractor may not, without a permit issued by the responsible heritage resource authority; destroy, damage, excavate, alter, deface or otherwise disturb any archaeological resources.</li> <li>• The Environmental Management Programme (EMPr) must be implemented and an Environmental Control Officer (ECO) must be appointed.</li> </ul>
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	<p><b>Indirect impacts:</b>  <b>Temporary jobs will be created in the construction industry during the construction phase.</b></p>	Low - positive	<p>No mitigation measures are required.</p> <p>Temporary jobs will be created during the construction phase.</p>
	<p><b>Cumulative impacts:</b></p>		
	<p><b>Direct impacts:</b>  <b>Loss of vegetation</b>          Direct loss of vegetation type and associated habitat due to construction and operational activities.</p>	Low	<ul style="list-style-type: none"> <li>• Before any work is done the final construction footprint and access routes must be clearly demarcated (with the aim at minimal width/smallest footprint).</li> <li>• The demarcation must include the total footprint necessary to execute the work but must aim at minimising disturbance.</li> <li>• All construction must be done in accordance with an approved construction and operational phase Environmental Management Programme (EMPr), which must be developed by a suitably experienced Environmental Assessment Practitioner (EAP).</li> <li>• A suitably qualified Environmental Control Officer (ECO) must be appointed to monitor the construction phase in terms of the EMPr and the recommendations made in the Biodiversity Assessment, as well as any other conditions which might be DENC.</li> <li>• An application must be made to DENC for a flora permit in terms of the Northern Cape Nature Conservation Act, Act 9 of 2009) (NCNCA) with regards to impacts on species protected in terms of the act.</li> <li>• All Aloe species within the construction footprint must be searched &amp; rescued and transplanted in nearby remaining natural veld. A watering programme for searched and rescued plants must be implemented and maintained until these plants have re-established themselves.</li> </ul>

		<ul style="list-style-type: none"><li>• Apply for an NCNCA permit for the search and rescue of Aloe Species.</li><li>• Topsoil must be removed to a depth of 15 – 20 cm and protected and stored separately for re-use during rehabilitation.</li><li>• All topsoil (at all excavation sites) must be removed and stored separately for re-use for rehabilitation purposes. Topsoil and vegetation must be replaced over the disturbed soil to provide a source of seed and seed bed to encourage re-growth of the species removed during construction.</li><li>• An application must be made to DENC for a flora permit in terms of the NCNCA with regards to impacts on species protected in terms of the Act.</li><li>• Access must be limited to routes approved by the Environmental Control Officer (ECO).</li><li>• Lay-down areas or construction sites must be located within already disturbed areas or areas of low ecological value and must be pre-approved by the ECO.</li><li>• Indiscriminate clearing of any area outside of the construction footprint must be avoided.</li><li>• Erosion control measures must be implemented in accordance with the EMPr.</li><li>• All areas impacted as a result of construction must be rehabilitated on completion of the project.</li><li>• An Integrated waste management approach must be implemented during construction. All rubble and rubbish (if applicable) must be collected and removed from the site to a suitable registered waste disposal site.</li><li>• All alien vegetation must be</li></ul>
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			cleared from all associated footprints within the various construction sites
	<b>Increased dust during construction (earth moving equipment)</b>	Very-low	<ul style="list-style-type: none"> <li>Excessive dust during construction, can be reduced by spraying water regularly to control dust generation. Other suitable dust control mitigation measures can also be considered.</li> <li>The Contractor must take all reasonable measures to minimize the generation of dust as a result of construction activities resulting from along-construction-route activities (but must also take into account possible water constrictions of the area).</li> <li>The onsite construction site agent must take into account prevailing wind strength and wind direction and must have preventative measures on standby to minimize dust pollution that may cause damage to people and property.</li> <li>The liberation of dust into the surrounding environment shall be effectively controlled by the use of, inter alia, water spraying and/or other dust-allaying agents. The speed of haul trucks and other vehicles must be strictly controlled to avoid dangerous conditions, excessive dust or excessive deterioration of the road being used.</li> <li>The implementation of the EMPr.</li> </ul>
	<b>Increased noise levels during construction</b>	Low	<ul style="list-style-type: none"> <li>The SANS noise standards must be adhered to.</li> <li>Existing speed limits should be adhered to.</li> <li>The potential impacts associated with construction related activities and heavy vehicles can be effectively mitigated.</li> <li>The proposed development should be phased and site clearing confined to the specific areas under</li> </ul>



			<p>construction;</p> <ul style="list-style-type: none"> <li>• Dust suppression measures must be implemented when site clearing takes place, such as wetting of exposed areas and access roads;</li> <li>• Construction related activities should comply with all relevant building regulations.</li> <li>• Construction only to take place during normal working hours.</li> <li>• No work must be permitted on Sundays or Public Holidays;</li> <li>• Drivers should be made aware of the potential dust and noise impacts.</li> <li>• The Contractor shall endeavour to keep noise generating activities to a minimum.</li> <li>• Dust suppression measures must be implemented to reduce impacts associated with the movement of construction vehicles, including wetting of gravel roads and ensuring that vehicles used to transport sand and building materials are fitted with tarpaulins or covers;</li> <li>• All vehicles must be road-worthy and drivers must be qualified, made aware of the potential road safety issues, and need for strict speed limits.</li> <li>• By keeping vehicles in good condition, loud noise can be prevented.</li> <li>• The implementation of the EMPr.</li> </ul>
	<p><b>Visual aspect - Unsightly views due to construction site</b></p>	<p>Low</p>	<ul style="list-style-type: none"> <li>• The EMPr must be enforced and monitored by the ECO.</li> <li>• The Contractor shall restrict all his activities, materials, equipment and personnel to within the area specified.</li> <li>• Construction material must be stored in areas designated by the site agent and in a neat and orderly manner.</li> </ul>

			<ul style="list-style-type: none"> <li>• The Contractor must ensure that all structures, equipment, materials and facilities used or created on site for or during construction activities are removed once the project has been completed. The construction site must be cleared and cleaned to the satisfaction of the ECO.</li> <li>• Immediately after the demolition of the camp site, the contractor shall restore the site to its original state, paying particular attention to its appearance relative to the general landscape.</li> <li>• Existing speed limits must be adhered to.</li> <li>• The potential impacts associated with construction related activities and heavy vehicles can be effectively mitigated.</li> <li>• The proposed development should be phased and site clearing confined to the specific areas under construction.</li> <li>• Dust suppression measures must be implemented when site clearing takes place, such as wetting of exposed areas and access roads.</li> <li>• Construction related activities must comply with all relevant building regulations.</li> <li>• Construction only to take place during normal working hours.</li> <li>• No work must be permitted on Sundays or Public Holidays.</li> </ul>
	<b>Indirect impacts:</b>		
	<b>Cumulative impacts:</b>		
<b>Alternative 2</b>			
	<b>Direct impacts:</b>		
	<b>Indirect impacts:</b>		
	<b>Cumulative impacts:</b>		
	<b>Direct impacts:</b>		

	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
<b>Alternative 3</b>			
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
<b>No-go option</b>			
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		

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.

<b>Alternative A (preferred alternative)</b>
The following is a summary of the potential impacts, and their ratings after mitigation, and probability of occurrence:
<b><u>Construction phase</u></b>
Freshwater ecosystems – <b>Medium-low (negative), definite, local, during construction</b>
Loss of vegetation– <b>Low (negative), definite, local, during construction phase.</b>
Potential impacts on heritage / cultural or historic aspects – <b>Low (negative), probable, local, during construction phase.</b>
Socio-economic (Job creation) – <b>Low (positive), definite, local, during construction phase.</b>

Noise Impact – **Low (negative), definite, local, during construction.**

Dust Impact – **Very low (negative), definite, local, during construction.**

Visual impact – **Low (negative), definite, local, during construction.**

### **Operational Phase**

Geographical and/or physical aspects - **No impact expected.**

Loss of Vegetation – **No impact expected as no vegetation will be cleared during the operational phase.**

Freshwater ecosystems – **Low (negative), definite, local.**

Potential impacts on heritage / cultural or historic aspects – **No impact expected.**

Socio-economic (additional job opportunities) – **Low (Positive), Probable, local.**

Noise impact - **No impact expected.**

Dust impact – **No impact expected.**

Visual impact – **No impact expected. The site is surrounded by intensive agricultural land uses.**

### **Decommissioning**

The project as proposed does not require 'decommissioning' or 'closure', as such the potential impacts thereof is considered irrelevant.

### **Alternative B**

### **Alternative C**

### **No-go alternative (compulsory)**

No agricultural development will take place on the site, and the associated socio-economic benefits such as job opportunities, will not be provided - **Low – negative, probable, local.**

The "No-Go" alternative will ensure that none of the negative environmental impacts will occur. However, the property is not pristine and it should be preferable to development on a site like this (not pristine and with poor connectivity) before compromising pristine veld with good connectivity. The additional impact on connectivity is not seen as significant, since the vegetation to the north and east are already subject to agricultural related pressures. It must be noted that the proposed site is located in an area almost surrounded by similar intensive agriculture. The proposed development is also sure to have short and long term benefits with regards to job creation, which are likely to have a positive impact on the local economy. The no-go option will not contribute significantly to national or provincial conservation targets.

## SECTION E. RECOMMENDATION OF PRACTITIONER

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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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.

<a href="#">Compliance with the EMPr and appointment of an ECO during the construction phase.</a>		
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.

\_\_\_\_\_  
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