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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 establishment of a Raisin processing and packaging facility on Erf 151, Blaauwskop Settlement, Keimoes, Northern Cape Province

A Raisin processing facility is proposed on Erf 151, Blaauwskop Settlement, near Keimoes in the Northern Cape.

The property (Erf 151) of Orange River Wine Cellar is located adjacent to the R359 national road approximately 25km south west of Upington and approximately 15km northeast from Keimoes. The proposed site is located off the R359 to the east with GPS Coordinates: 28°39'0.97"S, 21° 6'52.48"E.

The total Area of the property is 298 729m<sup>2</sup>, with the proposed site 34 414m<sup>2</sup> and the facility will have a footprint of 16 120m<sup>2</sup>.

The Scope of the project is to establish a Raisin processing facility with an initial capacity of 8000 tons and to increase this annually up to 16000 tons.

General Process steps include:

- Raw materials (raisins) receiving
- Storage
- Pre-cleaning (removal of dry waste)
- Size Grading
- Fumigation
- Wet Cleaning (washing)
- Packaging

Access to the site will be obtained from the existing R359 that is adjacent to the proposed site and already used for access to the property.

The purpose for the establishment of this project is to give producers and their workers of the Orange River area their own raisin processing facility and by doing that adding more value to their raisins, create a higher income for them and create more jobs.



Figure 1: Google Earth image of the proposed development locality.

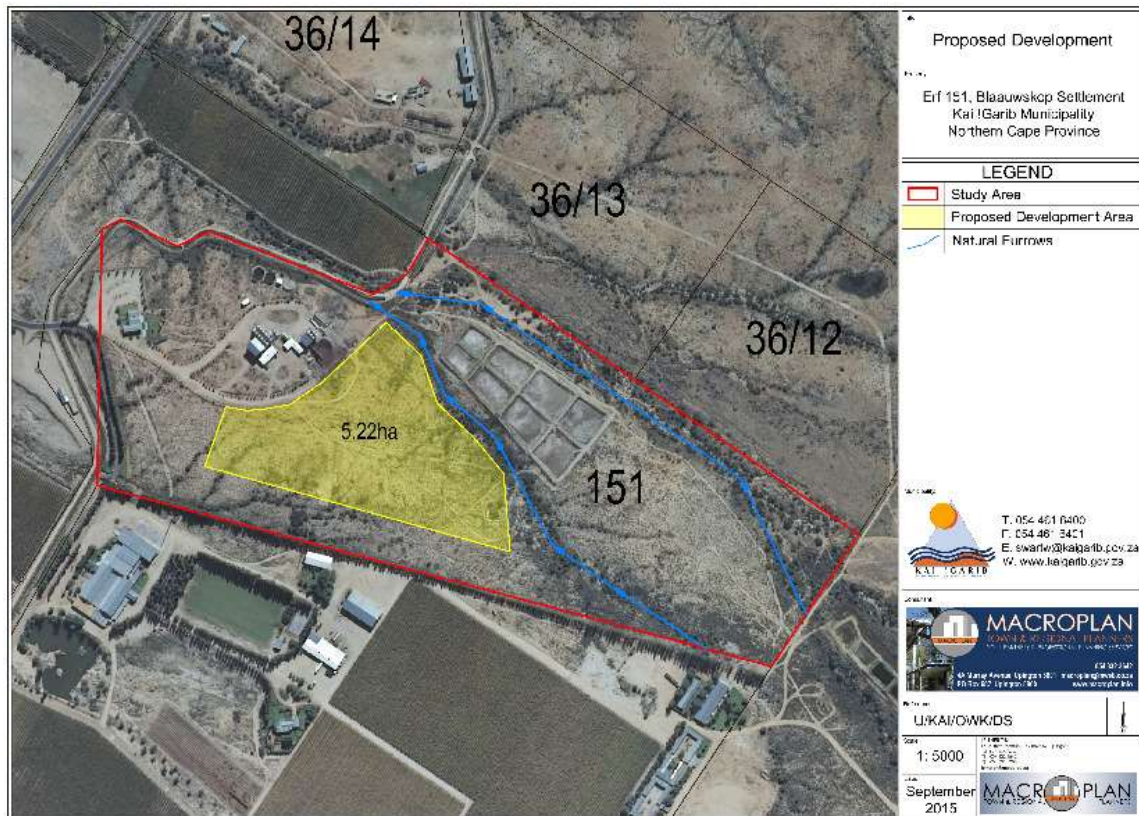


Figure 2: Locality of the site (yellow polygon) within the property.

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

Listed activity as described in GN 983, 984 and 984	Description of project activity
<p><b>Government Notice R983 (Listing Notice 1):</b>  <b>Activity No:</b></p>	
<p><b>8:</b> The development and related operation of hatcheries or <b>agri-industrial facilities</b> outside industrial complexes where the development footprint covers an area of 2 000 square metres or more.</p>	
<p>12: The <b>development</b> of;</p> <ul style="list-style-type: none"> <li>(i) canals exceeding 100 square metres in size;</li> <li>(ii) channels exceeding 100 square metres in size;</li> <li>(iii) bridges exceeding 100 square metres in size;</li> <li>(iv) dams, where the dam, including infrastructure and water surface area, exceeds 100 square metres in size;</li> <li>(v) weirs, where the weir, including infrastructure and water surface area, exceeds 100 square metres in size;</li> <li>(vi) bulk storm water outlet structures exceeding 100 square metres in size;</li> <li>(vii) marinas exceeding 100 square metres in size;</li> <li>(viii) jetties exceeding 100 square metres in size;</li> <li>(ix) slipways exceeding 100 square metres in size;</li> <li><b>(x) buildings exceeding 100 square metres in size;</b></li> <li>(xi) boardwalks exceeding 100 square metres in size; or</li> <li><b>(xii) infrastructure or structures with a physical footprint of 100 square metres or more;</b></li> </ul> <p>where such development occurs;</p> <ul style="list-style-type: none"> <li>(a) within a watercourse;</li> <li>(b) in front of a development setback; or</li> <li>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;</li> </ul> <p>Excluding:</p> <ul style="list-style-type: none"> <li>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</li> <li>(bb) where such development activities are</li> </ul>	<p>Infrastructure and buildings exceeding 100m<sup>2</sup> will be constructed within 32m of a watercourse.</p>

<p>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; or</p> <p>(ee) where such development occurs within existing roads or road reserves.</p>	
<p>19: The <b>infilling or depositing</b> of any material of more than <b>5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from</b>;</p> <p>(i) a watercourse;</p> <p>(ii) the seashore; or</p> <p>(iii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater 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; or</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.</p>	
<p>27: The <b>clearance of an area</b> of 1 hectares or more, but less than 20 hectares of <b>indigenous vegetation</b>, except where such clearance of indigenous vegetation is required for;</p> <p>(i) the undertaking of a linear activity; or</p> <p>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</p>	<p>More than 1ha of indigenous vegetation will be cleared</p>
<p>28: Residential, mixed, retail, commercial, <b>industrial</b> or institutional <b>developments</b> where such land <b>was used for agriculture or afforestation</b> on or after 01 April 1998 and where such development:</p> <p>(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or</p> <p><b>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;</b></p> <p>excluding where such land has already been developed for residential, mixed, retail, commercial,</p>	<p>The activity can be considered an agri-industrial development on land zoned Agriculture, and exceeds 1ha</p>

industrial or institutional purposes.	
43: The <b>expansion</b> and related operation of hatcheries or <b>agri-industrial facilities</b> outside industrial complexes, where the development footprint of the hatcheries or agri-industrial facilities will be increased by 2 000 square metres or more.	
<b>Government Notice R984 (Listing Notice 2): Activity No:</b>	
None	
<b>Government Notice R985 (Listing Notice 3): Activity No:</b>	
None	

• **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**

Two other sites were investigated, one between Uppington and Keimoes and the other one at Kakamas.

However, these were deemed unfeasible. The reason why this premises was chosen is;

- The site already belong to Orange River Cellars
- The site have access roads
- The zoning of the piece of land is Agriculture 2 which is sufficient for this kind of business
- The services with regard to water and electricity is already available
- The site already have effluent disposal infrastructure
- The site is close to Kanoneiland town which can be the labour needed

<b>Alternative 1 (preferred alternative)</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
	28° 39' 02.3"	21° 06' 51.2"
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

<b>Alternative:</b>	<b>Latitude (S):</b>	<b>Longitude (E):</b>
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		

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)
No layout alternatives have been considered at this stage, as no change in layout will have any significant change or mitigation on any potential environmental impacts	28° 39' 02.3"	21° 06' 51.2"
<b>Alternative 2</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)
<b>Alternative 3</b>		
Description	Lat (DDMMSS)	Long (DDMMSS)

**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. The raisin facility would therefore not be constructed.

Although this option would result in no potential negative environmental impacts, the 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 construction of the proposed development on this site or in this area might potentially cause substantial detrimental harm to the environment.

According to the Botanical Scan (Appendix D1), 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 develop on a site like this (not pristine and with poor connectivity) before compromising pristine veld with good connectivity. 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 and regional area.

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)	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:

N/A

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):

• <b>Is the activity permitted in terms of the property's existing land use rights?</b>	YES	NO	Please explain
The property has been rezoned to Agricultural Zone II ( <b>Appendix J2</b> ), which allows for an industry or enterprise for the processing of agricultural products on a farm unit, as a result of the products, perishability and fragility and includes, amongst others, wine cellars and sheds, but excludes any form of abattoir.			
• <b>Will the activity be in line with the following?</b>			
<b>(a) Provincial Spatial Development Framework (PSDF)</b>	YES	NO	Please explain
According to the Northern Cape Spatial Development Framework the protection and appropriate use of high potential agricultural land (in particular the areas along the Orange River, Vaal River and Harts River and those falling within the existing irrigation scheme areas) is of critical importance for sustainable economic growth and food security. High potential agricultural land in close proximity to settlements are often subjected to non-agricultural development pressure, while negative social impacts associated with such settlements often have a significant detrimental impact on the production potential of such land. It is therefore imperative that the highest priority be given to the protection of high potential agricultural land and that measures be instituted to create and maintain circumstances conducive to sustainable agriculture.			
<b>(b) Urban edge / Edge of Built environment for the area</b>	YES	NO	Please explain
The site is located outside the urban edge			

<p><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></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>According to the Kai! Garib Municipality Integrated Development Plan (2016-2017), 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>There are also three wine cellars in the area at Keimoes, Kakamas and Kanoneiland. High quality table wine is produced at these wine cellars, as well as quality grape juice. Several permanent jobs are created through these wine cellars. Two major Raison export companies (Fruit da Sud &amp; Red Sun Raisin) also established in Kai! Garib Area.</p> <p>The emerging farmers focus more on small stock farming, lucern, cotton, corn, and nuts which are cultivated under irrigation from the Orange River. Kenhardt area is more known for small stock farming especially the dorper sheep. Abattoirs are available at Kenhardt and Kakamas.</p> <p>Major constraints for agricultural development include poor quality of access roads to and from farms, farming skills amongst the youth and finances for emerging farmers. Opportunities in the agricultural sector include the expansion of the production of Lucern and citrus fruits as well as the possible establishment of ostrich farming. Other sectors that show potential within the sector is agri-tourism which is not investigated or explored as yet.</p> <p>The municipality embarked on a process to become an active facilitator of local economic development when it established a LED Strategy with assistance from the Department of Economic Development and Tourism. The LED Strategy was adopted by council in December 2012.</p>			
<p><b>(d) Approved Structure Plan of the Municipality</b></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>Unknown</p>			
<p><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></p>	<p>YES</p>	<p>NO</p>	<p>Please explain</p>
<p>According to the Kai! Garib Municipality Integrated Development Plan (2016-2017), 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. Many of the towns are located in the proximity of the Orange River (e.g. Keimoes, Kakamas, Marchand and Augrabies). Other towns originated due to administrative posts (e.g.) Kenhardt) and settlements with regional rural support functions. The area is known for its hot days and cold nights. It is very dry with an average yearly rainfall of ±189mm /a. The sunshine in the area is very suitable for solar energy generation.</p>			

The vegetation of the riparian habitats of the Orange River has been classified as Lower Gariep Alluvial Vegetation. This vegetation type is considered to be Endangered with more than 50% transformed by agriculture and only 6% conserved (in Augrabies Falls National Park) of a target of 31%.

In terms of environmental control, two aspects have been identified in the Orange River area that require specific attention, namely areas covered by the Lower Gariep Alluvial Vegetation and areas that consist of the water body of the river. In the instance of the Lower Gariep Alluvial vegetation, conservation is the only acceptable use of the area because it represents:

- An endangered vegetation type with a conservation target that cannot be attained anymore due to the extent of transformation that has already occurred; and
- Natural floodplain areas in the river system that is dynamic and subject to natural physical change over time due to the interaction between the alluvial nature of the area and flood events.

The EMF further indicates strategies focusing on the alleviation of potential key development / environment friction areas by providing direction in respect of how these friction areas should be dealt with. The following strategies have been compiled and in future Kai! Garib will align its own environmental planning to these:

- Strategy for the protection and conservation of high quality natural vegetation
- Strategy for development on sensitive areas in the Orange River floodplain
- Protection of sensitive environmental features on large properties
- Strategy for the protection of sensitive environmental features, surrounded or abutted by small properties.

<b>(f) Any other Plans (e.g. Guide Plan)</b>	YES	NO	Please explain
<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>	YES	NO	Please explain
The land use is consistent with the zoning of the property and the SDF			
<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>	YES	NO	Please explain
<p>The proposed development will also create temporary job opportunities during the construction phase, and permanent job opportunities during the operational phase.</p> <p>The purpose for the establishment of this project is to give producers and their workers of the Orange River area their own raisin processing facility and by doing that adding more value to their raisins, create a higher income for them and create more jobs.</p>			

<ul style="list-style-type: none"> <li>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.)</li> </ul>	YES	NO	Please explain
Sufficient services will be available for the development			
<ul style="list-style-type: none"> <li>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.)</li> </ul>	YES	NO	Please explain
Unknown			
<ul style="list-style-type: none"> <li>Is this project part of a national programme to address an issue of national concern or importance?</li> </ul>	YES	NO	Please explain
However, additional job opportunities and agricultural and economic development are a national importance			
<ul style="list-style-type: none"> <li>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.)</li> </ul>	YES	NO	Please explain
<p>The site is located outside the urban edge. The proposed site is also ideal since:</p> <ul style="list-style-type: none"> <li>The site already belong to Orange River Cellars</li> <li>The site have access roads</li> <li>The zoning of the piece of land is Agriculture 2 which is sufficient for this kind of business</li> <li>The services with regard to water and electricity is already available</li> <li>The site already have effluent disposal infrastructure</li> <li>The site is close to Kanoneiland town which can be the labour needed</li> </ul> <p>There are no significant negative environmental impacts that have been identified.</p>			
<ul style="list-style-type: none"> <li>Is the development the best practicable environmental option for this land/site?</li> </ul>	YES	NO	Please explain
<p>Although the proposed development will result in the loss of vegetation over the entire site, the site is not in an ecologically and botanically sensitive area.</p> <p>According to the Botanical Scan (<b>Appendix D1</b>), the proposed development is expected to result in a 4 ha footprint enlargement on the site. This footprint will overlap natural veld in relative good condition, but is unlikely to result in any significant impact on local or regional conservation targets or connectivity. It is also very unlikely that the property will be considered for inclusion in any conservation network (because of its "isolation" – being surrounded by agricultural land).</p> <p>The evaluation of the potential environmental impacts indicates the most significant potential impacts identified where:</p>			

<ul style="list-style-type: none"> <li>• The potential impact on NCNCA protected plant species, especially <i>Aloe</i> species.</li> <li>• The potential impact on a small portion of one of the seasonal drainage lines.</li> </ul> <p>However (with appropriate mitigation), it is considered highly unlikely that the proposed project will contribute significantly to any of the following:</p> <ul style="list-style-type: none"> <li>• Loss of vegetation type and associated habitat.</li> <li>• Loss of ecological processes (e.g. migration patterns, pollinators, river function etc.) due to development and operational activities.</li> <li>• Loss of local biodiversity and threatened plant species.</li> <li>• Loss of ecosystem connectivity</li> </ul>			
<ul style="list-style-type: none"> <li>• <b>Will the benefits of the proposed land use/development outweigh the negative impacts of it?</b></li> </ul>	YES	NO	Please explain
No significant negative environmental impacts are expected by the proposed development			
<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
Not necessarily, but the development is an agricultural development in an agricultural area			
<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
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 Kakamas area.			
<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
The development is located outside the urban edge			
<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
<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 proposed development will also create temporary job opportunities during the construction phase, and permanent job opportunities during the operational phase.</p> <p>The purpose for the establishment of this project is to give producers and their workers of the Orange River area their own raisin processing facility and by doing that adding more value to their raisins, create a higher income for them and create more jobs.</p>			
<ul style="list-style-type: none"> <li>• <b>Any other need and desirability considerations related to the proposed activity?</b></li> </ul>	Please explain		
N/A			
<ul style="list-style-type: none"> <li>• <b>How does the project fit into the National Development Plan for 2030?</b></li> </ul>	Please explain		
Economic development and job creation is a 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 taken into account through the following:

- The actual and potential impacts of the activity on the environment, socio-economic conditions and cultural heritage have been identified, predicted and evaluated, as well as the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impact, maximizing benefits and promoting compliance with the principles of environmental management – *please refer to Section D below.*
- The effects of the activity on the environment have been considered before actions taken in connection with them – *alternatives have been considered and investigated (please refer to Section A below).*
- Adequate and appropriate opportunity for public participation was ensured through the public participation process – *please refer to Section C for the public participation information, including the list of identified Interested and Affected parties, as well as the methods for identifying and informing I&APs of the application and proposed activity.*
- The environmental attributes have been considered in the management and decision-making of the activity – *an EMP 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 beneficial impact on people, as it will provide much needed additional housing 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 EMP.
- 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 EMP are implemented.*

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

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

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Water Act	Water Use Licence	DWS	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? <i>Unknown</i>	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? - <i>Solid waste volumes : 560 tonnes to 1120 tonnes per annum</i>	m <sup>3</sup>	

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

The general household solid waste generated will be collected by the municipality and will be disposed of at the nearest approved municipal landfill site.

Fruit waste is sold to local farmers as animal feed.

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

The general household solid waste generated will be collected by the municipality and will be disposed of at the nearest approved municipal landfill site.

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

N/A

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

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?	YES	NO
If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.		

Is the activity that is being applied for a solid waste handling or treatment facility?	YES	NO
If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.		

**b) Liquid effluent**

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO
If YES, what estimated quantity will be produced per month?	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:

<p>A new biological treatment plant will be installed to bring effluent water to standard to comply with Department of Water and Sanitation (DWS) General Standard. Please refer to <b>Appendix C1</b> for the effluent water reticulation plan.</p> <p>The system is described as follows:</p> <p>Design flow: 130 kilolitres per day. 6,000mg/l COD</p> <p>For the treatment of domestic sewage and biodegradable waste water it is proposed that a low energy biological treatment process be installed. The treatment plant comprises 8 x modified 12m shipping containers. Treated effluent can be re-used in a sustainable manner. The treatment process we favour is briefly described below.</p> <p>Treatment Processes:</p> <ul style="list-style-type: none"> <li>- Solids in the waste water is removed via an open channel spiral sieve screen</li> <li>- The screened waste water is collected at a pump sump, installed at ground level and near the treatment plant</li> <li>- waste water is then pumped to the flow balancing tank from where it overflows to the bioreactor. These processes are housed in 8 modified 12 meter shipping containers</li> </ul>
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<ul style="list-style-type: none"> <li>- A portion of one of the containers is converted into a control room</li> <li>- Water leaving the treatment plant is filtered, discharged under pressure and is disinfected with a dilute liquid chlorine solution</li> <li>- treated water to comply with SA Department of Water and Sanitation <i>General Standard</i></li> </ul> <p>The system is fully automated and includes supply of all process</p>

**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:		

**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
Describe the noise in terms of type and level:		
Noise levels are not expected to be unusually high, and due to the isolated location of the proposed development, is not expected to have any negative impacts.		

**• WATER USE**

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

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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<p>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:</p> <ul style="list-style-type: none"> <li>- Water will be sourced from the existing canal system as per existing agreement for premises</li> <li>- Volumes: 21000 KL to 43 000 KL per annum (15 000 KL to 30 000 KL if Biological effluent treatment plant installed)</li> </ul>	litres	
<p>Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?</p>	YES	NO
<p>If YES, please provide proof that the application has been submitted to the Department of Water Affairs.</p>		

• **ENERGY EFFICIENCY**

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

<p>The goal of sustainability is essential in the design of the facility.</p> <p>The following elements are implemented to reach such goals:</p> <ul style="list-style-type: none"> <li>- 75 kWp Photovoltaic Panels are included in the Capex (+-550 sqm)</li> <li>- Natural Light is used where possible</li> <li>- Solar and Heat Pumps for heated water</li> <li>- Thermal Insulation for wall and roof panels</li> <li>- 100% of Effluent regenerated to recyclable process-water and irrigation</li> </ul>
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Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

<p>The following elements are implemented to reach such goals:</p> <ul style="list-style-type: none"> <li>- 75 kWp Photovoltaic Panels are included in the Capex (+-550 sqm)</li> <li>- Solar and Heat Pumps for heated water</li> </ul>
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## 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.

<ul style="list-style-type: none"> <li>Has a specialist been consulted to assist with the completion of this section?</li> </ul>	YES	NO
If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.		

<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 Municipality
	<b>Ward Number(s)</b>	
	<b>Farm name and number</b>	Erf 151, Blaauwskop Settlement (Kanoneiland), Keimoes
	<b>Portion number</b>	
	<b>SG Code</b>	C03600010000015100000
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>	Agricultural zone II	
	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	<del>1:20 – 1:15</del>	<del>1:15 – 1:10</del>	<del>1:10 – 1:7,5</del>	<del>1:7,5 – 1:5</del>	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	x	2.8 Dune	
2.3 Side slope of hill/mountain		2.6 Plain		2.9 Seafront	
2.10 At sea					

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

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

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

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

- **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>	<del>Natural veld with scattered aliens<sup>E</sup></del>	<del>Natural veld with heavy alien infestation<sup>E</sup></del>	Veld dominated by alien species <sup>E</sup>	Gardens
<del>Sport field</del>	<del>Cultivated land</del>	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.

- **SURFACE WATER**

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

Perennial River	<del>YES</del>	NO	<del>UNSURE</del>
Non-Perennial River	YES	<del>NO</del>	<del>UNSURE</del>
Permanent Wetland	<del>YES</del>	NO	<del>UNSURE</del>
Seasonal Wetland	<del>YES</del>	NO	<del>UNSURE</del>
Artificial Wetland	<del>YES</del>	NO	<del>UNSURE</del>
Estuarine / Lagoonal wetland	<del>YES</del>	NO	<del>UNSURE</del>



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

There are no wetlands or perennial rivers or streams on the site. There are however, two seasonal drainage lines that cross the property, to the east of the proposed site.

According to the Botanical Scan (**Appendix D1**), both these seasonal drainage lines are heavily impacted (even reduced to channels in places) up and down stream of Erf 151. On Erf 151, both drainage lines are still in good condition. The proposed location of the new facilities is likely to be within 32m of the southern stream, but will not impact directly on these features. However, impact minimisation during construction should be a high priority (e.g. demarcation of these streams as “no-go” zones).



Figure 3: Google Earth image of the site, showing the seasonal drainage lines (blue dashed lines). The approximate location of the site is indicated by the yellow polygon.

- **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

- CULTURAL/HISTORICAL FEATURES**

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:	YES	NO
	Uncertain	
<p>According to the Archaeological Impact Assessment (<b>Appendix D2</b>), there were only Stone Age archaeological findings within the assessment area without any living heritage. The assessment area for development has no significant archaeological places or structures. The footprint area is clear and consists of an open field Kalahari Savannah vegetation. There are no colonial/historical or pre-historical structures 60 years and older, neither are there any places or equipment of significance. It is likely that places, structures and equipment has low heritage significance at the</p>		

community specific, local and regional levels at least for its historic values. Only Stone Age archaeological remains and material were detected on the site at three locations on the extended area surveyed. Places associated with archaeology have at least low heritage significance at the community specific and local levels for its cultural and historic values.

No traditional burial places were recorded in the proposed development site. In addition, consultation with several traditional local inhabitants revealed no oral history or evidence of any traditional graves and burial places within the site.

Louisvale village and Cannon Island have existing municipal cemeteries. Traditional burial places have at least low heritage significance for its cultural and historic values.

It is likely that living heritage has medium heritage significance at the community specific, local and regional levels at least for its historic and socio-political values.

Living heritage is absent on the development footprint, but surrounding areas like Cannon Island, Curries Camp and McTaggart's Camp have significant history which makes living heritage a possibility and a fact to be considered throughout the proposed development.

The impact on all heritage resources located within the proposed development site at Erf 151 Blaauwskop settlement is rated as low, due to the low density and low significance of archaeological material on the proposed development site, and the proposed development will possibly have no impact on such resources.

According to the Desktop Palaeontological Study (Appendix D3), the proposed development is situated in an area underlain by the granite Kanoneiland Formation, a formation with no sensitivity for impacts to palaeontological resources, as well as the Gordonia Formation, a formation with low sensitivity for impacts to palaeontological resources. This desktop analysis focuses on the Gordonia Formation due to its greater palaeontological sensitivity.

The Gordonia Formation is the youngest sub-unit of the Kalahari Group (Almond 2014) which is known for palynomorphs, root casts and burrows, rare vertebrate remains, diatom-rich limestones, freshwater stromatolites, freshwater and terrestrial shells, ostracods and charophytes (Almond & Pether, 2009). The Gordonia Formation at this site consists of near-surface, unconsolidated aeolian sands dating to the Quaternary. According to Almond (2014), the Gordonia dune sands are considered to range in age from the Late Pliocene/Early Pleistocene to present, dated in part from enclosed Middle to Later Stone Age stone tools. According to Almond (2014), the Gordonia dunes sands are not conducive to fossil preservation and as such, fossils within this formation tend to occur "sporadically and widely and the overall palaeontological sensitivity of the Gordonia Formation is therefore considered to be low". Fossils that may be identified within this formation include burrows and root casts, occasional terrestrial fossil remains including termitaria, ostrich egg shells and shells of land snails (Almond 2014). According to their report, no fossils of this nature were identified in the foot survey conducted by Ubique Heritage.

For this particular development very little of the proposed infrastructure will have a significant impact on the Gordonia Formation. The surface of the development footprint has already been severely disturbed through previous development activities. In addition, fossils within the Gordonia Formation tend to occur sporadically and widely and the overall palaeontological sensitivity of the Gordonia Formation is therefore considered to be low. Based on this desktop analysis, it is unlikely that the proposed development will impact on significant fossil heritage resources within the Gordonia Formation.

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:

According to the Archaeological Impact Assessment (**Appendix D2**), the impact on archaeological material will be significantly low.

There is no reason for the development not to continue, as it will improve the social opportunities in the region. It is however important to consider the proximity of the built environment as well as the historical tangible and intangible landscape.

The only mitigation recommended for this site prior to development is the collection of a representative sample of the stone tools identified on the site. These samples must be curated at Upington Museum.

Due to the low impact of development on heritage resources, we thus recommend the construction of raisin drier facilities as described by the specifications of the client. The assessment is however subject to the approval of SAHRA.

According to the Desktop Palaeontological Study (**Appendix D3**), Fossil Heritage Resources, although sporadic, are known from the Gordonia Formation. As such, it is recommended that a Fossil Finds Procedure be implemented during the construction phase of the proposed development to mitigate any impacts to palaeontological resources.

Heritage Western Cape has adopted a Fossil Finds Procedure (approved by HWC in June 2016) which is included in the EMP (Appendix G, appendix 13). It is recommended that a similar procedure be implemented for the development of the Raisin processing and packaging facility on the Kanoneiland premises of Orange River Cellars.

No further specialist palaeontological studies are required for this development as the heritage resources in the area proposed for development are sufficiently recorded - The surveys undertaken in the area adequately captured the heritage resources.

Will any building or structure older than 60 years be affected in any way?	YES	NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO
If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.		
Please note that the site is larger than 5 000m <sup>2</sup> and the character of the site will change. The project is therefore subject to Section 38(1) of the NHRA. The project has been registered with SAHRA through SAHRIS (please refer to Appendix J1 for Interim comment from SAHRA).		

- **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 StatSA30 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:**

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.

Construction accounts for 2.5%, Community and Government Services 15.9% and Wholesale and retail trade 11.3%

**Level of education:**

Unknown

**b) Socio-economic value of the activity**

What is the expected capital value of the activity on completion?	R147 000 000
What is the expected yearly income that will be generated by or as a result of the activity?	R266 666 667
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?	250
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?	Unknown at this stage
How many permanent new employment opportunities will be created during the operational phase of the activity?	45
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?	Unknown at this stage

**• 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)	N/A. No CBAs were identified on SANBI BGIS

- 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	%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	55%	<p>A large portion of the proposed development site is in a relatively good condition and near natural, showing very little signs of disturbance.</p> <p>According to the Botanical Scan (<b>Appendix D1</b>), the preferred footprint for the new development includes the disturbed area, but also some natural veld and is also very near to the one of the drainage lines (probably within 32m).</p> <p>The remainder (of the site that has not been transformed or degraded by activities on the property) is in fairly good condition and the vegetation encountered can be described mostly as an open low shrubland with grassland patches in between. The average canopy height was approximately 0.4 m, with larger bush sometimes forming a sparse second layer of up to 0.8 m. However, a much higher and mostly very prominent riparian vegetation zone was encountered next to the seasonal drainage lines (including a number of tree species). In arid and semi-arid regions, there typically is a strong visual contrast between the riparian and surrounding vegetation zones (as was encountered on site).</p>
Degraded (includes areas heavily invaded by alien plants)	45 %	Portions of the proposed site have been severely impacted by activities and existing infrastructure on the property
Transformed (includes cultivation,		

dams, urban, plantation, roads, etc)		
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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						
<b>Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)</b>	Critical	Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	Endangered							
	Vulnerable							
	Least Threatened	YES	NO	UNSURE	YES	NO	YES	NO

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

The site would historically have been covered in Bushmanland Arid Grassland (Least Threatened), and large parts of the proposed site are in a Near Natural condition.

According to Botanical Scan (**Appendix D1**), Bushmanland Arid Grassland is described as extensive to irregular plains on a slightly sloping plateau sparsely vegetated by grassland dominated by white grasses (*Stipagrostis* species) giving this vegetation type the character of semi-desert “steppe”. Sometimes low shrubs of *Salsola* change the vegetation structure. In years of abundant rainfall rich displays of annual herbs can be expected (Mucina & Rutherford, 2006). Acocks (1953) described this vegetation as Arid Karoo and Desert False Grassland or Orange River Broken Veld while Low & Rebelo (1996) described this vegetation as Orange River Nama Karoo.

Bushmanland Arid Grassland is normally described as a sparsely vegetated, grassland dominated vegetation type, sometimes structurally transformed into a low shrubs vegetation layer. In this case the grassy layer was indeed sparse while the vegetation was rather dominated by a low hardy shrub layer, as is often associated with shallow calcrete (which was also evident in many cases).

About 15 – 20% of the property can be described as transformed as a result of existing activities (including roads, parking areas and open storage sites), while another 5 – 6% can be described as impacted as a result of associated activities (waste material disposal and open storage areas).

The remainder, however, is in fairly good condition and the vegetation encountered can be described mostly as an open low shrubland with grassland patches in between. The average canopy height was approximately 0.4 m, with larger bush sometimes forming a sparse second layer of up to 0.8 m. However, a much higher and mostly very prominent riparian vegetation zone was encountered next to the seasonal drainage lines (including a number of tree species). In arid and semi-arid regions, there typically is a strong visual contrast between the riparian and surrounding vegetation zones (as was encountered on site).

The open shrubland vegetation was typically dominated by *Tetraena decumbens* (*Zygophyllum decumbens*) in combination with *Rhigozum trichotomum*, *Monechma genistifolium*, *Kali* species and *Aptosimum spinescens*. The following species were also observed: *Aloe claviflora* (patches), *Aloe hereroensis*, *Atriplex semibaccata*, *Boscia foetida*, *Euphorbia braunsii*, *Kleinia longiflora*, *Lycium hirsutum*, *Mesembryanthemum guerichianum*, *Monsonia* cf. *crassicaulis*, *Pteronia* cf. *pallens*, *Roepera cordifolia* and *Senegalia mellifera* (= *Acacia mellifera*). The grassy patches were dominated by white grasses with the shrub layer much reduced.

The riparian vegetation associated with the small seasonal drainage lines was dominated by a combination of small to medium trees, with *Senegalia mellifera* (= *Acacia mellifera*) prominent in combination with *Boscia foetida*, *Parkinsonia africana* and *Searsia pendulina* sometimes present. The shrub *Lycium cinereum* and grass *Stipagrostis namaquensis* was also frequently found and the parasite *Tapinanthus oleifolius* often associated with *Senegalia mellifera*. A number of the protected tree *Vachellia erioloba* (= *Acacia erioloba*) was observed, but mostly outside the boundaries of the property. None will be impacted by the proposed development.



To the south west of one of the small streams a patch of what is presumed to be *Stoeberia arborea* was encountered. Unfortunately, no flowers or fruit were present, which made positive identification impossible.

A number of the alien tree, *Prosopis glandulosa*, was also observed in association with the northern drainage line.

Please refer to Section 8.1 and Table 1 of the Botanical Scan for a summary full list of flora encountered.

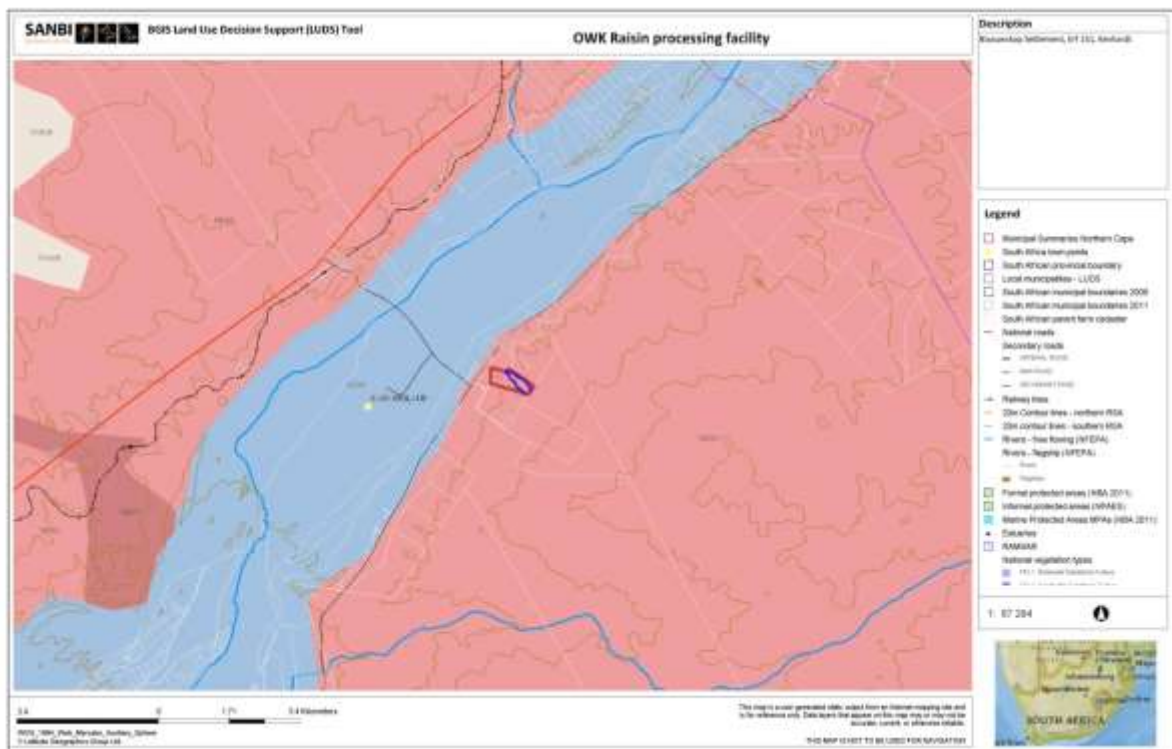


Figure 5: SANBI BGIS map showing the vegetation cover of the area.



Figure 6: General view of the near natural vegetation on part of the site.



Figure 7: General view of the degraded part of the site.

## SECTION C: PUBLIC PARTICIPATION

### • ADVERTISEMENT AND NOTICE

<b>Publication name</b>	Die Gemsbok	
<b>Date published</b>	23 October 2015	
<b>Site notice position</b>	<b>Latitude</b>	<b>Longitude</b>
<b>Date placed</b>	See Appendix E1	

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

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

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

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

### • ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
<p>Currently we have a concern regarding the evaporation dams, which at certain times produces very very bad odours.</p> <p>We would like to get full details of all the infrastructure that need to be erected, specially dams and waste water, and any other waste from the operation.</p>	<p>A new biological treatment plant will be installed to bring effluent water to standard to comply with Department of Water and Sanitation (DWS) General Standard and/or the expansion of existing Evaporation ponds to meet new plant requirements, should mean that the system operates more efficiently, thereby decreasing the nuisance of odours</p>

- **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	W. Mothibi (HOD)	(053)838 9102			Private Bag X5018, Kimberley, 8300
Department of Cooperative Governance, Human Settlements and Traditional Affairs (NC)	Gladys Botha	053 830 9513			Private bag X5005, Kimberley, 8300
Department of Roads and Public Works	K. Nogwili (HOD)	(053)839 2241			P O Box 3132, Kimberley, 8300
Directorate Forestry Management	J. Mans	054 338 5909			PO Box 2782, Upington, 8800
Department of Water and Sanitation	A Abrahams	053 830 8803	053 831 4534		28 Central Road, Beaconsfield, Kimberley, 8301
Department of Water Affairs-Northern Cape	R. Mazwi	053 7731239			Private Bag X6101, Kimberley, 8300
SAHRA	Natasha Higgitt	021 462 4509			P.O.Box 4637, Cape Town, 8000

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</p>	Negligible	<ul style="list-style-type: none"> <li>Any excess material (and concrete slabs and pipes) should not be dumped into the riparian zones and must be removed from site;</li> <li>Any exotic trees and alien vegetation currently growing in the riparian zones should be cut and the stumps treated with herbicide to prevent re-growth;</li> <li>Appropriate construction methods should be deployed to ensure the prevention of erosion of the canal.</li> <li>The development should aim at minimising the impact on the seasonal drainage lines and should stay at least 10 m away from these features.</li> <li>The seasonal stream must be marked on site layout plans and demarcated as No-Go zones, before construction commence. This is likely to mean that access must be from the west.</li> </ul>
	<p>The loss of cultural or historic aspects during construction</p>	Low	<ul style="list-style-type: none"> <li>If any archaeological remains (including but not limited to fossil bones and fossil shells, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts and bone remains, structures and other built features, rock art and rock engravings) are discovered during construction they must immediately be reported to SAHRA and must not be disturbed further until the necessary approval has been obtained from SAHRA.</li> </ul>

			<ul style="list-style-type: none"> <li>Should any human remains/burial or archaeological material be disturbed, exposed or uncovered during construction, these should immediately be reported to the South African Heritage Resources Agency. The ECO and Engineer are also to be informed.</li> <li>Collection of a representative sample of the stone tools identified on the site. These samples must be curated at Upington Museum.</li> <li>A Fossil Finds Procedure be implemented during the construction phase of the proposed development to mitigate any impacts to palaeontological resources.</li> </ul>
	<p><b>Indirect impacts:</b> Temporary jobs will be created in the construction industry during the construction phase.</p>	Low - positive	<p>No mitigation measures are required.</p> <p>Temporary jobs will be created during the construction phase</p>
	<b>Cumulative impacts:</b>		
	<p><b>Direct impacts:</b> <b>Vegetation</b></p> <ul style="list-style-type: none"> <li>Physical Footprint</li> </ul>	Low	<ul style="list-style-type: none"> <li>Moving the proposed footprint towards the southwest, can slightly reduce the impact (moving it away from the seasonal drainage line) as indicated by the green arrow in <b>Error! Reference source not found.</b> of <b>Appendix D1.</b></li> </ul>
	<p><b>Vegetation</b></p> <ul style="list-style-type: none"> <li>Impact on connectivity</li> </ul>	Negligible	<ul style="list-style-type: none"> <li>Moving the proposed footprint towards the southwest, can slightly reduce the impact (moving it away from the seasonal drainage line) as indicated by the green arrow in <b>Error! Reference source not found.</b> of <b>Appendix D1.</b></li> </ul>
	<p><b>Vegetation</b></p> <ul style="list-style-type: none"> <li>Impact on Vegetation type</li> </ul>	Negligible	<ul style="list-style-type: none"> <li>Search &amp; rescue of <i>Aloe-</i> and <i>Euphorbia</i> species (Refer to rare &amp; endangered species list in Appendix D1).</li> </ul>
	<p><b>Vegetation</b></p> <ul style="list-style-type: none"> <li>Impact on Protected species</li> </ul>	Negligible	<ul style="list-style-type: none"> <li>Search and rescue all <i>Aloe-</i> and <i>Euphorbia braunsii</i> individuals that might be impacted by the proposed development.</li> </ul>
	<p><b>Vegetation</b> General</p>	Negligible	<ul style="list-style-type: none"> <li>Indiscriminate clearing of areas must be avoided (all remaining areas to remain as natural as possible).</li> <li>All topsoil (at all excavation sites) must be removed and stored separately for re-use for rehabilitation purposes. The topsoil and vegetation should be replaced over the disturbed soil to</li> </ul>

			<p>provide a source of seed and a seed bed to encourage re-growth of the species removed during construction.</p> <ul style="list-style-type: none"> <li>• Once the construction is completed all further movement must be confined to the access tracks to allow the vegetation to re-establish over the excavated areas.</li> <li>• Rehabilitation must be done after construction.</li> <li>• All construction must be done in accordance with an approved construction and operational phase</li> <li>• Environmental Management Plan (EMP), which must be developed by a suitably experienced Environmental Assessment Practitioner.</li> <li>• A suitably qualified Environmental Control Officer must be appointed to monitor the construction phase in terms of the EMP and the Biodiversity study recommendations as well as any other conditions which might be required by the Department of Environmental Affairs.</li> <li>• An integrated waste management system must be implemented during the construction phase.</li> <li>• 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 should be removed from all associated footprints within the various construction sites</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>		
	<b>Indirect impacts:</b>		
	<b>Cumulative impacts:</b>		
<b>Alternative 3</b>			
	<b>Direct impacts:</b>		



	<b>Indirect impacts:</b>		
	<b>Cumulative impacts:</b>		
	<b>Direct impacts:</b>		
	<b>Indirect impacts:</b>		
	<b>Cumulative impacts:</b>		
<b>No-go option</b>			
	<p><b>Direct impacts:</b></p> <p>This would mean that no-development would take place and the proposed site will remain as is. The raisin facility would therefore not be constructed.</p> <p>The social benefits from implementing the activity would not be achieved.</p> <p>The short and long term benefits with regards to job creation, which are likely to have a positive impact on the local and regional area, will not be realised.</p>	Low - negative	N/A
	<b>Indirect impacts:</b>		
	<b>Cumulative impacts:</b>		

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.

<p><b>Alternative A (preferred alternative)</b></p> <p>The following is a summary of the potential impacts, and their ratings after mitigation, and probability of occurrence:</p> <p><b><u>Construction phase.</u></b></p> <p>Freshwater ecosystems – <b>Negligible possible.</b></p> <p>Loss of vegetation– <b>Negligible, possible.</b></p> <p>Potential impacts on heritage resources – <b>Low, Possible.</b></p> <p>Job creation – <b>Low (Positive), definite.</b></p> <p>Noise impact - <b>Negligible, definite, only during construction phase.</b></p> <p>Visual impact – <b>Low (negative), definite, during construction</b></p> <p><b><u>Operational Phase</u></b></p> <p>Geographical and/or physical aspects - <b>No impact expected</b></p> <p>Freshwater ecosystems – <b>No impact expected</b></p> <p>Potential impacts on archaeological heritage – <b>No impact expected</b></p> <p>Socio-economic (additional job opportunities – <b>Low (Positive), Probable</b></p> <p>Noise impact - <b>No impact expected</b></p> <p>Visual impact – <b>No impact expected</b></p> <p>Odours - <b>Negligible</b></p> <p><b><u>Decommissioning</u></b></p> <p>The project as proposed does not require ‘decommissioning’ or ‘closure’, as such the potential impacts thereof is considered irrelevant.</p>
<p><b>Alternative B</b></p>
<p><b>Alternative C</b></p>
<p><b>No-go alternative (compulsory)</b></p> <p>This would mean that no-development would take place and the proposed site will remain as is. The raisin facility would therefore not be constructed.</p> <p>The social benefits from implementing the activity would not be achieved.</p> <p>The short and long term benefits with regards to job creation, which are likely to have a positive impact on the local and regional area, will not be realised. - <b>Low – negative, Probable</b></p>

## 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).

N/A

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

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

Is an EMPr attached?	YES	NO
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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