

**PROPOSED RAISIN PROCESSING AND
PACKAGING FACILITY, ERF 151,
BLAAUWSKOP SETTLEMENT, KEIMOOES,
KAI! GARIB MUNICIPALITY,
NORTHERN CAPE**

DENC REFERENCE: NC/BA/35/ZFM/KAI!/KEI1/2016



FINAL BASIC ASSESSMENT REPORT

November 2016

**PROPOSED RAISIN PROCESSING AND
PACKAGING FACILITY, ERF 151,
BLAAUWSKOP SETTLEMENT, KEIMOES,
KAI! GARIB MUNICIPALITY, NORTHERN
CAPE**

PREPARED FOR:

Orange River Wine Cellar

**P.O. Box 544,
Upington,
8800**

PREPARED BY:

EnviroAfrica

**P.O. Box 5367
Helderberg
7135**

Tel: 021 – 851 1616

Fax: 086 – 512 0154

EXECUTIVE SUMMARY

Introduction

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 729m², with the proposed site 34 414m² and the facility will have a footprint of 16 120m².

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.

Services:

The services to the proposed development are described as follows:

- Water:

Water will be sourced from the existing canal system as per existing agreement for premises.

Volumes: 21000 KL to 43 000 KL per annum (15 000 KL to 30 000 KL if Biological effluent treatment plant installed)

- Effluent:

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 **Appendix C1** for the effluent water reticulation plan.

The system is described as follows:

Design flow: 130 kilolitres per day. 6,000mg/l COD

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.

Treatment Processes:

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- Solids in the waste water is removed via an open channel spiral sieve screen
- The screened waste water is collected at a pump sump, installed at ground level and near the treatment plant
- 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
- A portion of one of the containers is converted into a control room
- Water leaving the treatment plant is filtered, discharged under pressure and is disinfected with a dilute liquid chlorine solution
- treated water to comply with SA Department of Water and Sanitation *General Standard*

The system is fully automated and includes supply of all process

- Solid waste:

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.

- Electricity:

Combination Currently installed Eskom Infrastructure on Premises and new Photovoltaic Installation (75KW)

Environmental Requirements

The National Environmental Management Act (NEMA, Act 107 of 1998), as amended, makes provision for the identification and assessment of activities that are potentially detrimental to the environment and which require authorisation from the competent authority based on the findings of an Environmental Assessment. NEMA is a national act, which is enforced by the Department of Environmental Affairs (DEA). According to the regulations of Section 24(5) of NEMA, authorisation is required for the following:

Government Notice R983 (Listing Notice 1)::

8: The development and related operation of hatcheries or **agri-industrial facilities** outside industrial complexes where the development footprint covers an area of 2 000 square metres or more.

12: The **development** of;

- (i) canals exceeding 100 square metres in size;
- (ii) channels exceeding 100 square metres in size;
- (iii) bridges exceeding 100 square metres in size;
- (iv) dams, where the dam, including infrastructure and water surface area, exceeds 100 square metres in size;
- (v) weirs, where the weir, including infrastructure and water surface area, exceeds 100 square metres in size;
- (vi) bulk storm water outlet structures exceeding 100 square metres in size;
- (vii) marinas exceeding 100 square metres in size;
- (viii) jetties exceeding 100 square metres in size;
- (ix) slipways exceeding 100 square metres in size;
- (x) buildings exceeding 100 square metres in size;
- (xi) boardwalks exceeding 100 square metres in size; or
- (xii) **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;

19: The infilling or depositing of any material of more than 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;

(i) a watercourse;

(ii) the seashore; or

(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;

(a) will occur behind a development setback;

(b) is for maintenance purposes undertaken in accordance with a maintenance management plan; or

(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies.

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.

28: Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development:

(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or

(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;

excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.

43: The expansion and related operation of hatcheries or agri-industrial facilities outside industrial complexes, where the development footprint of the hatcheries or agri-industrial facilities will be increased by 2 000 square metres or more.

Site Description

A large portion of the proposed development site is in a relatively good condition and near natural, showing very little signs of disturbance.

According to the Botanical Scan (**Appendix D1**), 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).

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).

Portions of the proposed site have been severely impacted by activities and existing infrastructure on the property

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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).

According to the Archaeological Impact Assessment (**Appendix D2**), 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.

According to the Palaeontological Study Exemption letter (**Appendix D4**), the Precambrian granitoid basement rocks underlying the OKW Raisin Facility study area are entirely unfossiliferous. The overlying aeolian sands and stream gravels of the Kalahari Group mantling the older bedrocks are generally of low to very low palaeontological sensitivity. The footprint of the proposed facility is very small. It is concluded that construction of the proposed OKW Raisin Processing and Packaging Facility near Keimoes is unlikely to have significant impacts on local palaeontological heritage resources.

Need and Desirability

The proposed development will also create temporary job opportunities during the construction phase, and permanent job opportunities during the operational phase.

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.

Conclusion

The overall environmental impact is expected to be low (negative).

Considering all the information, it is not envisaged that this proposed development will have a significant negative impact on the environment, and the environmental and socio-economic benefits are expected to outweigh any negative impacts.

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