



**BASIC ASSESSMENT REPORT  
IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107  
OF 1998) AND ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS  
AMENDED)**

**October 2017**

**PROJECT TITLE**

**PROPOSED ONION DEHYDRATION PLANT ON PORTION 26 OF FARM 817 MALMESBURY**

**FEBRUARY 2018**

<b>REPORT TYPE CATEGORY</b>	<b>REPORT REFERENCE NUMBER</b>	<b>DATE OF REPORT</b>
Draft Basic Assessment Report (if applicable) <sup>1</sup>	2218/17/DB	March 2018

**Notes:**

- In terms of Regulation 40(3) potential or registered interested and affected parties, including the Competent Authority, may be provided with an opportunity to comment on the Basic Assessment Report prior to submission of the application but must again be provided an opportunity to comment on such reports once an application has been submitted to the Competent Authority. The Basic Assessment Report released for comment prior to submission of the application is referred to as the "Pre-Application Basic Assessment Report". The Basic Assessment Report made available for comment after submission of the application is referred to as the "Draft Basic Assessment Report". The Basic Assessment Report together with all the comments received on the report which is submitted to the Competent Authority for decision-making is referred to as the "Final Basic Assessment Report".
- In terms of Regulation 19(1)(b) if significant changes have been made or significant new information has been added to the Draft Basic Assessment Report, which changes or information was not contained in the Draft Basic Assessment Report consulted on during the initial public participation process, then a Final Basic Assessment Report will not be submitted, but rather a "Revised Basic Assessment Report", which must be subjected to another public participation process of at least 30 days, must be submitted to the Competent Authority together with all the comments received.

**DEPARTMENTAL REFERENCE NUMBER(S)**

Pre-application reference number:	16/3/3/6/7/1/f5/16/2218/17
File reference number (EIA):	
NEAS reference number (EIA):	
File reference number (Waste):	
NEAS reference number (Waste):	
File reference number (Air Quality):	
NEAS reference number (Air Quality):	
File reference number (Other):	
NEAS reference number (Other):	

## CONTENT AND GENERAL REQUIREMENTS

### Note that:

1. The content of the Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System" and the Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended), any subsequent Circulars, and guidelines must be taken into account when completing this Basic Assessment Report Form.
2. This Basic Assessment Report is the standard report format which, in terms of Regulation 16(3) of the EIA Regulations, 2014 (as amended) must be used in all instances when preparing a Basic Assessment Report for Basic Assessment applications for an environmental authorisation in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the EIA Regulations, 2014 (as amended) and/or a waste management licence in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) ("NEM:WA"), and/or an atmospheric emission licence in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:AQA") when the Western Cape Government: Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority/Licensing Authority.
3. This report form is current as of October 2017. It is the responsibility of the Applicant/ Environmental Assessment Practitioner ("EAP") to ascertain whether subsequent versions of the report form have been released by the Department. Visit the Department's website at <http://www.westerncape.gov.za/eadp> to check for the latest version of this checklist.
4. The required information 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 tables may be expanded where necessary.
5. The use of "not applicable" in the report must be done with circumspection. All applicable sections of this report form must be completed. Where "not applicable" is used, this may result in the refusal of the application.
6. While the different sections of the report form only provide space for provision of information related to one alternative, if more than one feasible and reasonable alternative is considered, the relevant section must be copied and completed for each alternative.
7. Unless protected by law, all information contained in, and attached to this report, will become public information on receipt by the competent authority. If information is not submitted with this report due to such information being protected by law, the applicant and/or EAP must declare such non-disclosure and provide the reasons for believing that the information is protected.
8. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this report must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.
9. This Report must be submitted to the Department and the contact details for doing so are provided below.
10. Where this Department is also identified as the Licencing Authority to decide applications under NEM:WA or NEM:AQA, the submission of the Report must also be made as follows, for-
  - Waste management licence applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (tel: 021-483-2756 and fax: 021-483-4425) at the same postal address as the Cape Town Office.
  - Atmospheric emissions licence applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (tel: 021 483 2798 and fax: 021 483 3254) at the same postal address as the Cape Town Office.

## DEPARTMENTAL DETAILS

CAPE TOWN OFFICE		GEORGE REGIONAL OFFICE
REGION 1 (City of Cape Town & West Coast District)	REGION 2 (Cape Winelands District & Overberg District)	REGION 3 (Central Karoo District & Eden District)
Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1) Private Bag X 9086 Cape Town, 8000	Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 2) Private Bag X 9086 Cape Town, 8000	Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530
Registry Office 1 <sup>st</sup> Floor Utilitas Building 1 Dorp Street, Cape Town	Registry Office 1 <sup>st</sup> Floor Utilitas Building 1 Dorp Street, Cape Town	Registry Office 4 <sup>th</sup> Floor, York Park Building 93 York Street George
Queries should be directed to the Directorate: Development Management (Region 1) at: Tel.: (021) 483-5829 Fax: (021) 483-4372	Queries should be directed to the Directorate: Development Management (Region 2) at: Tel.: (021) 483-5842 Fax: (021) 483-3633	Queries should be directed to the Directorate: Development Management (Region 3) at: Tel.: (044) 805-8600 Fax: (044) 805-8650

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## ACRONYMS USED IN THIS BASIC ASSESSMENT REPORT AND APPENDICES:

BAR	Basic Assessment Report
CBA	Critical Biodiversity Area
DEA	National Department of Environmental Affairs
DEA&DP	Western Cape Government: Environmental Affairs and Development Planning
DWS	National Department of Water and Sanitation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
ESA	Ecological Support Area
HWC	Heritage Western Cape
I&APs	Interested and Affected Parties
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NEM:AQA	National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)
NEM:ICMA	National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008)
NEM:WA	National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008)
NHRA	National Heritage Resources Act, 1999 (Act No. 25 of 1999)
PPP	Public Participation Process

## DETAILS OF THE APPLICANT

Applicant / Organisation / Organ of State:	Du Toit Agri (Pty) Ltd / CBI Invest group		
Contact person:	Mr. Hennie du Toit		
Postal address:	P.O. Box 236, Ceres		
Telephone:	(023) 312 3136	Postal Code:	6835
Cellular:	NA	Fax:	(023) 316 1229
E-mail:	hennie@dutoit.com		

## DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

Name of the EAP organisation:	Eco Impact Legal Consulting (Pty) Ltd		
Person who compiled this Report:	Jessica Le Roux		
EAP Reg. No.:	400192/16		
Contact Person (if not author):	NA		
Postal address:	PO box 45070, Claremont		
Telephone:	(021) 671 1660	Postal Code:	7735
Cellular:	NA	Fax:	(021) 671 9976
E-mail:	admin@ecoimpact.co.za		
EAP Qualifications:	<p>Jessica has a BSc (Honours) in Environmental and Geographical Science in 2011 from the University of Cape Town and subsequently obtained her MSc in Zoology in 2013.</p> <ul style="list-style-type: none"> <li>•SACNASP - Professional Natural Scientist in the field of practice Environmental Science (Registration number 400192/16)</li> <li>•IAIAsa (Membership number 3740)</li> </ul>		

Please provide details of the lead EAP, including details on the expertise of the lead EAP responsible for the Basic Assessment process. Also attach his/her Curriculum Vitae to this BAR.

Jessica has a BSc (Honours) in Environmental and Geographical Science in 2011 from the University of Cape Town and subsequently obtained her MSc in Zoology in 2013. Jessica has trained as an Environmental Assessment Practitioner since 2013 and has been involved in the compilation, coordination and management of Basic Assessment Reports, Environmental Impact Assessments, Environmental Management Programmes, Waste Licence Applications, Water Use Licences.

CV attached in Appendix K.

## EXECUTIVE SUMMARY OF THE BASIC ASSESSMENT REPORT:

### ACTIVITY DESCRIPTION

#### BUILDINGS AND PROCESS

The proposed onion processing facility will be a steel framed structure of approximately 6300 m<sup>2</sup>, with an additional 7 395 m<sup>2</sup> of paving and concrete loading and circulation hardstanding. The building will comprise a main process shed, cold stores, finished product storage and dispatch as well as office, staff and plant facilities.

The proposed onion processing facility is designed to dehydrate 15 000 tons of fresh onions per annum. This translates to 3 000 kg of fresh onions per hour. Incoming onions have a moisture content of approximately 80 to 85% and final dehydrated product will have a moisture content of 5%. The intent is to process 100% of the incoming onions. The factory will produce dehydrated onion in three formats – granulated, minced and powdered. The raw materials consist of onions only. The onions will be

delivered in wooded crates containing about 420kg of onions. The onions will be delivered by truck which is offloaded by forklifts. The onions will be dumped from the bins into a receiving hopper where they will be elevated into a cleaning and washing process. The cleaning process will remove stones, sticks and other debris that was collected during harvesting. The washing process will remove other items that might cling to the onions. After washing the onions are inspected for quality – poor quality onions are manually removed and collected in waste bins. Poor quality onions will be returned to the suppliers on neighboring farms. After inspection the onions are conveyed to the top and tail section where the root and stem sections of the onions is removed. The tops and tails are collected for further processing later in the plant. The rest of the onion is then conveyed to the peeler. Peels are also collected for further processing. The peeled onions pass through a slicer to reduce the overall particle size to facilitate the drying process.

The drying process consists of heated air being passed through a layer of sliced onions – the heat removing the moisture by evaporation. The dryer comprises three stages; each subsequent stage having a lower temperature to prevent damage to the onions as the moisture content decreases. Three metal conveyor belts slowly transport the onion layer through the length of the dryer. The air is heated by passing steam through a heat exchanger on the air circulation loop. The air temperature, the belt speed, the layer thickness and other factors can be controlled to provide optimum drying to achieve the desired final moisture content.

Fresh air is continuously feed into the dryer and an equal amount of air is discharged through a filtration system to remove any dust particles.

After dehydration, the onion particles are conveyed to size reduction machines to produce three products. The size reduction machines use either a method of automated cutting or milling to achieve the required particle sizes. The particles are sieved to remove oversized or undersized particles. Both under- and oversized particles are reused. When a particular product is produced, the tops and tails and the skins which were previously collected are introduced to the dryer. The final particles of correct dimension are packed into either 1-ton bulk bags or 25 kg bags. Final products are stored in the finished goods store. Due to the loss of water, final plant output is approximately 500 kg per hour.

The factory will be designed to meet food production GMP standards and all building finishes and materials of construction are selected to be compliant with good food production standards.

#### STORMWATER

All stormwater run-off from the roofs of the buildings and the proposed new hard surfaces will be collected via a minor system of piped stormwater reticulation and directed to the new stormwater detention pond. The detention pond will be adequately sized to cope with a 1:50 year recurrence interval storm event and to attenuate the post-development inflow and release outflow at a pre-development rate. The stored volume in the detention facility will also be utilised for re-irrigation of the landscaped zones around and within the new facility. Overflow from the pond will be managed via a suitably graded and profiled vegetated swale, which will discharge into the existing box culvert below the N7.

#### BLACK/GREY SEWAGE

There will be a sewer system for black/grey sewage. Black and grey sewer from the staff ablutions, kitchens etc., will be reticulated via an underground piped system to a Scarab package treatment plant situated on the southern boundary. This plant will process the raw sewerage into a state that is suitable for irrigation. The purified outflow from the package plant will be conveyed through a dedicated open vegetated swale into the detention pond. The vegetated swale will further purify and aerate the treated outflow.

#### PROCESS EFFLUENT

The internal wash-down water and the liquid extracted from the dehydration process will discharge via an underground piped system to a small aeration pond. This effluent will be aerated by a pump and fountain to provide a degree of purification before passing through the vegetated open swale into the detention pond.

The anticipated flow of treated effluent water into the detention pond from the abovementioned systems (sewage and effluent) will be in the order of 1200 litres per hour.

#### WATER

There is no mains supply of potable water to the site. However, the site has two boreholes currently in use, both of which are producing groundwater for irrigation purposes. This groundwater will be filtered and harvested to a series of storage tanks. The stored groundwater will be treated with either a UV system or RO system to ensure that the water is suitable for human consumption. The water will be used for consumption as well as fresh product washing prior to dehydration.

#### ROADS

The new access to the du Toit farm "Skaapkraal" off the N7 will be relocated to the grade separated intersection presently being constructed. At this intersection, access will be provided off the N7 overpass to both the Du Toit farm (west side of N7) and the Rainbow Chicken facility (east side of N7), with on/off ramps and an underpass link. The access to the Onion Dehydration Facility on Portion 26 will be taken northwards off the new Du Toit farm entrance, within the farm property, and the access road will be aligned northwards and then westwards around existing onion plantations to the proposed site, approximately 900m from the main entrance. The internal access road to the facility is anticipated to be an 8m wide road, either paved or surfaced, and vehicles would circulate through the new facility before exiting via the same internal access. The new access road would be on farm no 817 portion 15.

#### **ALTERNATIVE SUMMARY**

**Location alternatives** – Site Alternative 1 – Located in the northern corner of farm no 817 portion 26, Malmesbury along the N7. Site Alternative 2 – Located in the eastern corner of farm no 817 portion 26, Malmesbury along the N7. Site Alternative 3 (Preferred) – Located in the western corner of farm no 817 portion 26, Malmesbury.

**Activity alternatives**- No other activity alternatives were assessed as no feasible or reasonable activity alternative exists other than the no-go option. The surrounding land is agricultural land that produces onions. As such location factors favour agri-Industrial activities to process produce produced on the surrounding land.

**Layout alternatives** – The design took into consideration the volumes of onions to be processed. The layout has been informed by specialists and engineer inputs.

**Technology alternatives** – The only technological alternatives assessed and considered were the use of electricity and water wise technologies and green tips considered during the construction and operational phases. Solar power as a supplement to the Eskom power was identified as an alternative to simply using Eskom power from the grid. Solar Panels will be installed on the roof as shown on the enclosed drawings. This system will be used to supplement the Eskom Power. The power generated by the PV panels will be linked to the main distribution board to effectively "slow down" the incoming power required from the Eskom grid. The PV power will be utilised as it is available during daylight hours. The Eskom power will be used during the night time shifts. The exact value of the PV generated power is unknown at this stage. The North aspect of the roof is ideally orientated for this application. The use of boreholes was identified as an alternative to using municipal water. This groundwater will be filtered and harvested to a series of storage tanks. The stored groundwater will be treated with either a UV system or RO system to ensure that the water is suitable for human consumption. The water will be used for consumption as well as fresh product washing prior to dehydration. Dual flush toilet systems and energy efficient lighting.

**Operational alternatives** – No operational alternatives were considered as the proposed activity is for the onion dehydration plant. Onions are grown on nearby surrounding farm lands.

**The No-Go Option**- The No-Go option will result in the site remaining as is presently; vacant farm land. A look at the Need and Desirability as manifested in the local SDF supports the proposed development

on the identified site due to provision of jobs. The proposed development will provide temporary jobs to the community during the construction phase and permanent jobs during the operational phase.

### **IMPACT SUMMARY**

#### **ALTERNATIVE 3 – PREFERRED**

##### **DEVELOPMENT PHASE- ALTERNATIVE 3 – PREFERRED**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (low impact before mitigation and low impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (low impact before mitigation and low impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Impact on planning policies (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (low impact before mitigation and low impact with mitigation measures);

##### **OPERATIONAL PHASE- ALTERNATIVE 3 – PREFERRED**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (low impact before mitigation and low impact with mitigation measures);
- Emissions and air quality (medium impact before mitigation and low impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (low impact before mitigation and low impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Impact on planning policies (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Odours (medium impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (medium impact before mitigation and low impact with mitigation measures);

##### **DECOMMISSIONING AND CLOSURE PHASE- ALTERNATIVE 3 – PREFERRED**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);

- Surface and ground water pollution (low impact before mitigation and low impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (low impact before mitigation and low impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (low impact before mitigation and low impact with mitigation measures);

**No Go or No Development option:**

- The No-Go option will result in the site remaining as is presently.



## SECTION A: PROJECT INFORMATION

### 1. ACTIVITY LOCATION

Location of all proposed sites:	Portion 26 is a triangular parcel of land of approximately 50Ha, situated on the west side of the N7 national road, approximately 9km south west of Malmesbury.
Farm / Erf name(s) and number(s) (including Portions thereof) for each proposed site:	Farm no 817 portion 26, Malmesbury.
Property size(s) in m <sup>2</sup> for each proposed site:	52.10ha
Development footprint size(s) in m <sup>2</sup> :	27 565m <sup>2</sup> or 2.7565ha
Surveyor General (SG) 21-digit code for each proposed site:	C04600000000081700026

### 2. PROJECT DESCRIPTION

(a) Is the project a new development? If "NO", explain:

YES	NO
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NA

(b) Provide a detailed description of the scope of the proposed development (project).

#### BUILDINGS AND PROCESS

The proposed onion processing facility will be a steel framed structure of approximately 6300 m<sup>2</sup>, with an additional 7 395 m<sup>2</sup> of paving and concrete loading and circulation hardstanding. The building will comprise a main process shed, cold stores, finished product storage and dispatch as well as office, staff and plant facilities.

The proposed onion processing facility is designed to dehydrate 15 000 tons of fresh onions per annum. This translates to 3 000 kg of fresh onions per hour. Incoming onions have a moisture content of approximately 80 to 85% and final dehydrated product will have a moisture content of 5%. The intent is to process 100% of the incoming onions. The factory will produce dehydrated onion in three formats – granulated, minced and powdered. The raw materials consist of onions only. The onions will be delivered in wooded crates containing about 420kg of onions. The onions will be delivered by truck which is offloaded by forklifts. The onions will be dumped from the bins into a receiving hopper where they will be elevated into a cleaning and washing process. The cleaning process will remove stones, sticks and other debris that was collected during harvesting. The washing process will remove other items that might cling to the onions. After washing the onions are inspected for quality – poor quality onions are manually removed and collected in waste bins. Poor quality onions will be returned to the suppliers on neighboring farms. After inspection the onions are conveyed to the top and tail section where the root and stem sections of the onions is removed. The tops and tails are collected for further processing later in the plant. The rest of the onion is then conveyed to the peeler. Peels are also collected for further processing. The peeled onions pass through a slicer to reduce the overall particle size to facilitate the drying process.

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#### STORMWATER

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facility is anticipated to be an 8m wide road, either paved or surfaced, and vehicles would circulate through the new facility before exiting via the same internal access. The new access road would be on farm no 817 portion 15.

**Please note:** This description must relate to the listed and specified activities in paragraph (d) below.

(c) Please indicate the following periods that are recommended for inclusion in the environmental authorisation:

(i)	the period within which commencement must occur,	5 years from EA granted
(ii)	the period for which the environmental authorisation should be granted and the date by which the activity must have been concluded, where the environmental authorisation does not include operational aspects;	10 years
(iii)	the period that should be granted for the non-operational aspects of the environmental authorisation; and	10 years
(iv)	the period that should be granted for the operational aspects of the environmental authorisation.	Until Decommissioning or Closure

**Please note:** The Department must specify the abovementioned periods, where applicable, in an environmental authorisation. In terms of the period within which commencement must occur, the period must not exceed 10 years and must not be extended beyond such 10-year period, unless the process to amend the environmental authorisation contemplated in regulation 32 is followed.

(d) List all the listed activities triggered and being applied for.

**Please note:** The onus is on the applicant to ensure that all the applicable listed activities are applied for and assessed as part of the EIA process. Please refer to paragraph (b) above.

**EIA Regulations Listing Notices 1 and 3 of 2014 (as amended):**

Listed Activity No(s):	Describe the relevant Basic Assessment Activity(ies) in writing as per Listing Notice 1 (GN No. R. 983)	Describe the portion of the development that relates to the applicable listed activity as per the project description.	Identify if the activity is development / development and operational / decommissioning / expansion / expansion and operational.
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.	Proposed onion processing facility (agri-industrial facility) will be a steel framed structure of approximately 6300m <sup>2</sup> , with an additional 7395m <sup>2</sup> of paving and concrete loading and circulation hardstanding.	Development and related operation
28	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes 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	Proposed onion processing facility is an industrial development on land previously used for agriculture outside an urban area, where the total land to be developed is bigger than 1 hectare.	Development

	land to be developed is bigger than 1 hectare;		
Listed Activity No(s):	Describe the relevant Basic Assessment Activity(ies) in writing as per Listing Notice 3 (GN No. R. 985)	Describe the portion of the development that relates to the applicable listed activity as per the project description.	Identify if the activity is development / development and operational / decommissioning / expansion / expansion and operational.
NA			

**Waste management activities** in terms of the NEM: WA (GN No. 921):

Category A Listed Activity No(s):	Describe the relevant <u>Category A</u> waste management activity in writing as per GN No. 921	Describe the portion of the development that relates to the applicable listed activity as per the project description
NA		

**Note:** If any waste management activities are applicable, the **Listed Waste Management Activities Additional Information Annexure** must be completed and attached to this Basic Assessment Report as **Appendix I**.

**Atmospheric emission activities** in terms of the NEM: AQA (GN No. 893):

Listed Activity No(s):	Describe the relevant atmospheric emission activity in writing as per GN No. 893	Describe the portion of the development that relates to the applicable listed activity as per the project description.
NA		

- (e) Provide details of all components (including associated structures and infrastructure) of the proposed development and attach diagrams (e.g., architectural drawings or perspectives, engineering drawings, process flowcharts, etc.).

Buildings Provide brief description below:	YES	NO
<ul style="list-style-type: none"> <li>a steel framed structure of approximately 6300m<sup>2</sup></li> <li>an additional 7395m<sup>2</sup> of paving and concrete loading and circulation hardstanding</li> </ul>		
Infrastructure (e.g., roads, power and water supply/ storage) Provide brief description below:	YES	NO
<p><b>STORMWATER</b></p> <p>All stormwater run-off from the roofs of the buildings and the proposed new hard surfaces will be collected via a minor system of piped stormwater reticulation and directed to the new <b>stormwater detention pond</b>. The detention pond will be adequately sized to cope with a 1:50 year recurrence interval storm event and to attenuate the post-development inflow and release outflow at a pre-development rate. The stored volume in the detention facility will also be utilised for re-irrigation of the landscaped zones around and within the new facility. Overflow from the pond will be managed via a suitably graded and profiled vegetated swale, which will discharge into the existing box culvert below the N7.</p> <p><b>BLACK/GREY SEWAGE</b></p> <p>There will be a sewer system for black/grey sewage. Black and grey sewer from the staff ablutions, kitchens etc., will be reticulated via an underground piped system to a <b>Scarab package treatment plant</b> situated on the southern boundary. This plant will process the raw sewerage into a state that is suitable for irrigation. The purified outflow from the package plant will be conveyed through a dedicated open vegetated swale into the detention pond. The vegetated swale will further purify and aerate the treated outflow.</p> <p><b>PROCESS EFFLUENT</b></p> <p>The internal wash-down water and the liquid extracted from the dehydration process will discharge via an underground piped system to a small <b>aeration pond</b>. This effluent will be aerated by a pump and fountain to provide a degree of purification before passing through the vegetated open swale into the detention pond.</p> <p>The anticipated flow of treated effluent water into the detention pond from the abovementioned systems (sewage and effluent) will be in the order of 1200 litres per hour.</p>		

## ROADS

The new access to the du Toit farm "Skaapkraal" off the N7 will be relocated to the grade separated intersection presently being constructed. At this intersection, access will be provided off the N7 overpass to both the Du Toit farm (west side of N7) and the Rainbow Chicken facility (east side of N7), with on/off ramps and an underpass link. The access to the Onion Dehydration Facility on Portion 26 will be taken northwards off the new Du Toit farm entrance, within the farm property, and the access road will be aligned northwards and then westwards around existing onion plantations to the proposed site, approximately 900m from the main entrance. The internal access road to the facility is anticipated to be an 8m wide road, either paved or surfaced, and vehicles would circulate through the new facility before exiting via the same internal access. The new access road would be on farm no 817 portion 15.

## WATER SUPPLY

There is no mains supply of potable water to the site. However, the site has two boreholes currently in use, both of which are producing groundwater for irrigation purposes. This groundwater will be filtered and harvested to a series of storage tanks. The stored groundwater will be treated with either a UV system or RO system to ensure that the water is suitable for human consumption. The water will be used for consumption as well as fresh product washing prior to dehydration.

## POWER

ESKOM. The main Eskom substation in the area is situated at Kalbaskraal, approximately 6,0km to the south-east of the site. An 11kV feeder known as "Kalbaskraal Farmers 1" originates from Kalbaskraal and provides power to the irrigation pumps on the south-east corner of the site. The existing "Kalbaskraal Farmers 1"- feeder can provide a maximum 550kVA (0,55MVA) power supply without any upgrade of the overhead line. The transformer, 11kV switchgear, and metering equipment must be upgraded at the transformer on site.

Processing activities (e.g., manufacturing, storage, distribution)  
Provide brief description below:

YES

NO

The proposed onion processing facility is designed to dehydrate 15 000 tons of fresh onions per annum. This translates to 3 000 kg of fresh onions per hour. Incoming onions have a moisture content of approximately 80 to 85% and final dehydrated product will have a moisture content of 5%. The intent is to process 100% of the incoming onions. The factory will produce dehydrated onion in three formats – granulated, minced and powdered. The raw materials consist of onions only. The onions will be delivered in wooded crates containing about 420kg of onions. The onions will be delivered by truck which is offloaded by forklifts. The onions will be dumped from the bins into a receiving hopper where they will be elevated into a cleaning and washing process. The cleaning process will remove stones, sticks and other debris that was collected during harvesting. The washing process will remove other items that might cling to the onions. After washing the onions are inspected for quality – poor quality onions are manually removed and collected in waste bins. Poor quality onions will be returned to the suppliers on neighboring farms. After inspection the onions are conveyed to the top and tail section where the root and stem sections of the onions is removed. The tops and tails are collected for further processing later in the plant. The rest of the onion is then conveyed to the peeler. Peels are also collected for further processing. The peeled onions pass through a slicer to reduce the overall particle size to facilitate the drying process.

The drying process consists of heated air being passed through a layer of sliced onions – the heat removing the moisture by evaporation. The dryer comprises three stages; each subsequent stage having a lower temperature to prevent damage to the onions as the moisture content decreases. Three metal conveyor belts slowly transport the onion layer through the length of the dryer. The air is heated by passing steam through a heat exchanger on the air circulation loop. The air temperature, the belt speed, the layer thickness and other factors can be controlled to provide optimum drying to achieve the desired final moisture content.

Fresh air is continuously feed into the dryer and an equal amount of air is discharged through a filtration system to remove any dust particles.

<p>After dehydration, the onion particles are conveyed to size reduction machines to produce three products. The size reduction machines use either a method of automated cutting or milling to achieve the required particle sizes. The particles are sieved to remove oversized or undersized particles. Both under- and oversized particles are reused. When a particular product is produced, the tops and tails and the skins which were previously collected are introduced to the dryer. The final particles of correct dimension are packed into either 1-ton bulk bags or 25 kg bags. Final products are stored in the finished goods store. Due to the loss of water, final plant output is approximately 500 kg per hour.</p>		
<p>The factory will be designed to meet food production GMP standards and all building finishes and materials of construction are selected to be compliant with good food production standards.</p>		
Storage facilities for raw materials and products (e.g., volume and substances to be stored) Provide brief description below:	YES	NO
<p>The building will comprise a receiving area and a finished product storage area.</p> <p><u>RAW</u> The raw materials consist of onions only. The proposed onion processing facility is designed to dehydrate 15 000 tons of fresh onions per annum. This translates to 3 000 kg of fresh onions per hour. The onions will be delivered in wooded crates containing about 420kg of onions. The onions will be delivered by truck which is offloaded by forklifts. The onions will be dumped from the bins into a receiving hopper where they will be elevated into a cleaning and washing process.</p> <p><u>FINAL PRODUCT</u> The factory will produce dehydrated onion in three formats – granulated, minced and powdered. The final particles of correct dimension are packed into either 1-ton bulk bags or 25 kg bags. Final products are stored in the finished goods store. Due to the loss of water, final plant output is approximately 500 kg per hour.</p>		
Storage and treatment facilities for effluent, wastewater or sewage: Provide brief description below:	YES	NO
<p><u>STORMWATER</u></p> <ul style="list-style-type: none"> <li>• Piped stormwater reticulation and directed to <b>stormwater detention pond</b>.</li> <li>• Overflow from the pond will be managed via a suitably graded and profiled vegetated swale, which will discharge into the existing box culvert below the N7.</li> </ul> <p><u>BLACK/GREY SEWAGE</u></p> <ul style="list-style-type: none"> <li>• Underground piped system to a <b>Scarab package treatment plant</b>.</li> <li>• The purified outflow from the package plant will be conveyed through a dedicated open vegetated swale into the detention pond.</li> </ul> <p><u>PROCESS EFFLUENT</u></p> <ul style="list-style-type: none"> <li>• Underground piped system to a small <b>aeration pond</b>.</li> <li>• This effluent will be aerated by a pump and fountain to provide a degree of purification before passing through the vegetated open swale into the detention pond.</li> </ul> <p><u>WATER</u></p> <ul style="list-style-type: none"> <li>• Groundwater will be filtered and harvested to a series of storage tanks.</li> </ul>		
Storage and treatment of solid waste Provide brief description below:	YES	NO
<p>After washing the onions are inspected for quality – poor quality onions are manually removed and collected in waste bins. Poor quality onions will be returned to the suppliers on neighbouring farms.</p>		
Facilities associated with the release of emissions or pollution. Provide brief description below:	YES	NO
<p>Emissions from the process are:</p>		

<ul style="list-style-type: none"> <li>• Steam (excess) from the boiler.</li> <li>• Smoke from the coal / HFO boiler. <ul style="list-style-type: none"> <li>○ These emissions will be controlled with filters to reduce the contaminants.</li> </ul> </li> </ul> <p><b>Note on the boilers:</b></p> <ul style="list-style-type: none"> <li>▪ Boiler type: John Thompson 391 or 491, or similar.</li> <li>▪ Manufacturer: John Thompson Africa, or Cochrane Engineering, or Zozen</li> <li>▪ Fuel use: &gt; 90% of steam to be generated from coal (grade A peas), &lt;10% to be generated from HFO (standby boiler)</li> <li>▪ Net heat input: Maximum of 7.5 MW</li> </ul> <ul style="list-style-type: none"> <li>• Dust from the incoming products. This will be controlled by cyclones.</li> <li>• Dust from the cutting and milling. This will be controlled by cyclones.</li> <li>• Onion fumes from the peeling and drying process. <ul style="list-style-type: none"> <li>○ The added washing steps will keep this to a minimum.</li> </ul> </li> </ul>		
Other activities (e.g., water abstraction activities, crop planting activities) – Provide brief description below:	YES	NO
The site has two boreholes currently in use, both of which are producing groundwater for irrigation purposes. This groundwater will be filtered and harvested to a series of storage tanks. The stored groundwater will be treated with either a UV system or RO system to ensure that the water is suitable for human consumption. The water will be used for consumption as well as fresh product washing prior to dehydration.		

### 3. PHYSICAL SIZE OF THE PROPOSED DEVELOPMENT

(a) Property size(s): Indicate the size of all the properties (cadastral units) on which the development proposal is to be undertaken	52.10	ha
(b) Size of the facility: Indicate the size of the facility where the development proposal is to be undertaken	27565	m <sup>2</sup>
(c) Development footprint: Indicate the area that will be physically altered as a result of undertaking any development proposal (i.e., the physical size of the development together with all its associated structures and infrastructure)	27565	m <sup>2</sup>
(d) Size of the activity: Indicate the physical size (footprint) of the development proposal	27565	m <sup>2</sup>
(e) For linear development proposals: Indicate the length (L) and width (W) of the development proposal	(L)	m
	(W)	m
(f) For storage facilities: Indicate the volume of the storage facility	Unknown	m <sup>3</sup>
(g) For sewage/effluent treatment facilities: Indicate the volume of the facility (Note: the maximum design capacity must be indicated)	The anticipated flow of treated effluent water into the detention pond from the abovementioned systems will be in the order of 1200 litres per hour.	m <sup>3</sup>

### 4. SITE ACCESS

(a) Is there an existing access road?	YES	NO
(b) If no, what is the distance in (m) over which a new access road will be built?	Approx.. 900m	

(c) Describe the type of access road planned:

The access to the Onion Dehydration Facility on Portion 26 will be taken northwards off the new Du Toit farm entrance, within the farm property, and the access road will be aligned northwards and then westwards around existing onion plantations to the proposed site, approximately 900m from the main entrance. The internal access road to the facility is anticipated to be an 8m wide road, either paved or surfaced, and vehicles would circulate through the new facility before exiting via the same internal access. The new access road would be on farm no 817 portion 15.

**Please note:** The position of the proposed access road must be indicated on the site plan.

**5. DESCRIPTION OF THE PROPERTY(IES) ON WHICH THE LISTED ACTIVITY(IES) ARE TO BE UNDERTAKEN AND THE LOCATION OF THE LISTED ACTIVITY(IES) ON THE PROPERTY**

5.1 Provide a description of the property on which the listed activity(ies) is/are to be undertaken and the location of the listed activity(ies) on the property, as well as of all alternative properties and locations (duplicate section below as required).

Portion 26 is a triangular parcel of land of approximately 50Ha, situated on the west side of the N7 national road, approximately 9km south west of Malmesbury.

3 alternative sites have been identified on the 50ha property (one in each corner of the triangle). The sites are ploughed farm land.

Alternative 1						
Coordinates of all the proposed activities on the property or properties (sites):	Latitude (S): (deg.; min.; sec)			Longitude (E): (deg.; min.; sec.)		
	33°	30'	53.95"	18°	39'	13.78"

Alternative 2						
Coordinates of all the proposed activities on the property or properties (sites):	Latitude (S): (deg.; min.; sec)			Longitude (E): (deg.; min.; sec.)		
	33°	31'	19.44"	18°	38'	52.82"

Alternative 3 – Preferred Alternative						
Coordinates of all the proposed activities on the property or properties (sites):	Latitude (S): (deg.; min.; sec)			Longitude (E): (deg.; min.; sec.)		
	33°	31'	16.36"	18°	38'	41.77"

**Note:** For land where the property has not been defined, the coordinates of the area within which the development is proposed must be provided in an addendum to this report.

5.2 Provide a description of the area where the aquatic or ocean-based activity(ies) is/are to be undertaken and the location of the activity(ies) and alternative sites (if applicable).

NA

Coordinates of the boundary /perimeter of all proposed aquatic or ocean-based activities (sites) (if applicable):	Latitude (S): (deg.; min.; sec)			Longitude (E): (deg.; min.; sec)		
	°	'	"	°	'	"
	°	'	"	°	'	"
	°	'	"	°	'	"
	°	'	"	°	'	"

5.3 For a linear development proposal, please provide a description and coordinates of the corridor in which the proposed development will be undertaken (if applicable).

NA

For linear activities:	Latitude (S): (deg.; min.; sec)			Longitude (E): (deg.; min.; sec)		
● Starting point of the activity	°	'	"	°	'	"
● Middle point of the activity	°	'	"	°	'	"
● End point of the activity	°	'	"	°	'	"

**Note:** For linear development proposals longer than 1000m, please provide an addendum with co-ordinates taken every 250m along the route. All-important waypoints must be indicated and the GIS shape file provided digitally.

5.4 Provide a location map (see below) as **Appendix A** to this report that shows the location of the proposed development and associated structures and infrastructure on the property; as well as a detailed site development plan / site map (see



below) as **Appendix B** to this report; and if applicable, all alternative properties and locations. The GIS shape files (.shp) for maps / site development plans must be included in the electronic copy of the report submitted to the competent authority.

<p>Locality Map:</p>	<p>The scale of the locality map must be at least 1:50 000.  For linear development proposals 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:</p> <ul style="list-style-type: none"> <li>• an accurate indication of the project site position as well as the positions of the alternative sites, if any;</li> <li>• road names or numbers of all the major roads as well as the roads that provide access to the site(s)</li> <li>• a north arrow;</li> <li>• a legend;</li> <li>• a linear scale;</li> <li>• the prevailing wind direction (during November to April and during May to October); and</li> <li>• GPS co-ordinates (to 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).</li> </ul> <p>For an ocean-based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken.</p> <p>Coordinates must be provided in degrees, minutes and seconds using the Hartebeesthoek94; WGS84 co-ordinate system.</p>
<p>Site Plan:</p>	<p>Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following:</p> <ul style="list-style-type: none"> <li>• The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be indicated on the plan, preferably together with a linear scale.</li> <li>• The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan.</li> <li>• The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be indicated on the site plan.</li> <li>• The position of each element of the application as well as any other structures on the site must be indicated on the site plan.</li> <li>• Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the development <u>must</u> be indicated on the site plan.</li> <li>• Servitudes and an indication of the purpose of each servitude must be indicated on the site plan.</li> <li>• Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): <ul style="list-style-type: none"> <li>○ Watercourses / Rivers / Wetlands - including the 32 meter set back line from the edge of the bank of a river/stream/wetland;</li> <li>○ Flood lines (i.e., 1:100 year, 1:50 year and 1:10 year where applicable);</li> <li>○ Ridges;</li> <li>○ Cultural and historical features;</li> <li>○ Areas with indigenous vegetation (even if degraded or infested with alien species).</li> </ul> </li> <li>• Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted.</li> <li>• North arrow</li> </ul> <p>A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.</p> <p>The GIS shape file for the site development plan(s) must be submitted digitally.</p>

## 6. SITE PHOTOGRAPHS

Colour photographs of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached as **Appendix C** to this report. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.

## SECTION B: DESCRIPTION OF THE RECEIVING ENVIRONMENT

### Site/Area Description

For linear development proposals (pipelines, etc.) as well as development proposals that cover very large sites, it may be necessary to complete copies of 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 that is covered by each copy on the Site Plan.

#### 1. GRADIENT OF THE SITE

Indicate the general gradient of the sites (highlight the appropriate box).

Flat	Flatter than 1:10	1:10 – 1:4	Steeper than 1:4
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#### 2. LOCATION IN LANDSCAPE

(a) Indicate the landform(s) that best describes the site (highlight the appropriate box(es)).

Ridgeline	Plateau	Side-slope of hill / mountain	Closed valley	Open valley	Plain	Undulating plain/low-hills	Dune	Sea-front
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(b) Provide a description of the location in the landscape.

Portion 26 is a triangular parcel of land of approximately 50Ha, situated on the west side of the N7 national road, approximately 9km south west of Malmesbury.

3 alternative sites have been identified on the 50ha property (one in each corner of the triangle). The sites are ploughed farm land. The development site is located in an open valley where the groundcover type is primarily bare soil. Ploughed agricultural lands used for grazing of livestock.

#### 3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

(a) Is the site(s) located on or near any of the following (highlight the appropriate boxes)?

Shallow water table (less than 1.5m deep)	YES	NO	UNSURE
Seasonally wet soils (often close to water bodies)	YES	NO	UNSURE
Unstable rocky slopes or steep slopes with loose soil	YES	NO	UNSURE
Dispersive soils (soils that dissolve in water)	YES	NO	UNSURE
Soils with high clay content	YES	NO	UNSURE
Any other unstable soil or geological feature	YES	NO	UNSURE
An area sensitive to erosion	YES	NO	UNSURE
An area adjacent to or above an aquifer	YES	NO	UNSURE
An area within 100m of a source of surface water	YES	NO	UNSURE
An area within 500m of a wetland	YES	NO	UNSURE
An area within the 1:50 year flood zone	YES	NO	UNSURE
A water source subject to tidal influence	YES	NO	UNSURE

(b) If any of the answers to the above is "YES" or "UNSURE", specialist input may be requested by the Department. (Information in respect of the above will often be available at the planning sections of local authorities. The 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

(c) Indicate the type of geological formation underlying the site.

Granite	Shale	Sandstone	Quartzite	Dolomite	Dolerite	Other (describe)
Provide a description.						

**Soil**

Grey regic sands and other soils

**Geology**

Mainly surficial cover formed in situ on Malmesbury rocks as well as greywacke and phyllite of the Moorreesburg Formation, Malmesbury Group; occasional Quaternary quartz sand of the Springfontein Formation.

*\*Source: Soils and Geology ENPAT, CapeFarmMapper, 22 January 2018.*

**4. SURFACE WATER**

(a) Indicate the surface water present on and or adjacent to the site and alternative sites (highlight the appropriate boxes)?

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoon	YES	NO	UNSURE

(b) Provide a description.

Non-Perennial River – On portion 26 there is a watercourse (ESA).

- 100m from site alternative 1
- 150m from site alternative 2
- 450m from site alternative 3

Artificial Wetland - On portion 9 of farm 817 there is an artificial wetland

- 800m from site alternative 1
- 150m from site alternative 2
- 500m from site alternative 3

**5. THE SEAFRONT / SEA**

(a) Is the site(s) located within any of the following areas? (highlight the appropriate boxes).

If the site or alternative site is closer than 100m to such an area, please provide the approximate distance in (m).

AREA	YES	NO	UNSURE	If "YES": Distance to nearest area (m)
An area within 100m of the high water mark of the sea	YES	NO	UNSURE	
An area within 100m of the high water mark of an estuary/lagoon	YES	NO	UNSURE	
An area within the littoral active zone	YES	NO	UNSURE	
An area in the coastal public property	YES	NO	UNSURE	
Major anthropogenic structures	YES	NO	UNSURE	
An area within a Coastal Protection Zone	YES	NO	UNSURE	
An area seaward of the coastal management line	YES	NO	UNSURE	
An area within the high risk zone (20 years)	YES	NO	UNSURE	
An area within the medium risk zone (50 years)	YES	NO	UNSURE	
An area within the low risk zone (100 years)	YES	NO	UNSURE	
An area below the 5m contour	YES	NO	UNSURE	
An area within 1km from the high water mark of the sea	YES	NO	UNSURE	
A rocky beach	YES	NO	UNSURE	

A sandy beach	YES	NO	UNSURE	
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- (b) If any of the answers to the above is "YES" or "UNSURE", specialist input may be requested by the Department. (The 1:50 000 scale Regional Geotechnical Maps prepared by Geological Survey may also be used).

## 6. BIODIVERSITY

**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 development. 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, Tel.: (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) must be provided as an overlay map on the property/site plan as **Appendix D** to this report.

- (a) Highlight the applicable biodiversity planning categories of all areas on preferred and alternative sites and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category. Also describe the prevailing level of protection of the Critical Biodiversity Area ("CBA") and Ecological Support Area ("ESA") (how many hectares / what percentages are formally protected).

Systematic Biodiversity Planning Category	CBA	ESA	Other Natural Area ("ONA")	No Natural Area Remaining ("NNR")
If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan and the conservation management objectives	NA			
Describe the site's CBA/ESA quantitative values (hectares/percentage) in relation to the prevailing level of protection of CBA and ESA (how many hectares / what percentages are formally protected locally and in the province)	NA			

- (b) Highlight and describe the habitat condition on site.

Habitat Condition	Percentage of habitat condition class (adding up to 100%) and area of each in square metre (m <sup>2</sup> )		Description and additional comments and observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing/harvesting regimes, etc.)
Natural	0%	0m <sup>2</sup>	NA
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	0m <sup>2</sup>	NA
Degraded (includes areas heavily invaded by alien plants)	0%	0m <sup>2</sup>	NA
Transformed (includes cultivation, dams, urban, plantation, roads, etc.)	100%	27 565m <sup>2</sup>	Each of the 3 alternative sites is 27 565m <sup>2</sup> in size. Each of the 3 alternative sites is 100% ploughed farm land with no natural vegetation remaining.

- (c) Complete the table to indicate:  
 (i) the type of vegetation present **on the site**, including its ecosystem status; and  
 (ii) whether an aquatic ecosystem is present on/or adjacent to the site.

Terrestrial Ecosystems		Description of Ecosystem, Vegetation Type, Original Extent, Threshold (ha, %), Ecosystem Status
Ecosystem threat status as per the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)	Critically	Historically the sites had Atlantis Sand Fynbos and Swartland Granite Renosterveld present.  The type of vegetation present on the site is 100% transformed due to farming activities (ploughed).
	Endangered	
	Vulnerable	
	Least Threatened	

Aquatic Ecosystems						
Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
YES	NO	UNSURE	YES	NO	YES	NO

- (d) Provide a description of the vegetation type and/or aquatic ecosystem **present on the site**, including any important biodiversity features/information identified on the site (e.g. threatened species and special habitats). Clearly describe the biodiversity targets and management objectives in this regard.

Each of the 3 alternative sites is 100% ploughed farm land with no natural vegetation remaining.

## 7. LAND USE OF THE SITE

**Note:** The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed development.

Untransformed area	Low density residential	Medium density residential	High density residential	Informal residential
Retail	Commercial & warehousing	Light industrial	Medium industrial	Heavy industrial
Power station	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Tourism and Hospitality facility
Open cast mine	Underground mine	Spoil heap or slimes dam	Quarry, sand or borrow pit	Dam or reservoir
Hospital/medical centre	School	Tertiary education facility	Church	Old age home
Sewage treatment plant	Train station or shunting yard	Railway line	Major road (4 lanes and more)	Airport
Harbour	Sport facilities	Golf course	Polo fields	Filling station
Landfill or waste treatment site	Plantation	Agriculture	River, stream or wetland	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archaeological site
Other land uses (describe):	NA			

- (a) Provide a description.

Ploughed agricultural lands used for grazing of livestock.

## 8. LAND USE CHARACTER OF THE SURROUNDING AREA

- (a) Highlight the current land uses and/or prominent features that occur within +/- 500m radius of the site and neighbouring properties if these are located beyond 500m of the site.

**Note:** The Department may request specialist input/studies depending on the nature of the land use character of the area and potential impact(s) of the proposed development.

Untransformed area	Low density residential	Medium density residential	High density residential	Informal residential
Retail	Commercial & warehousing	Light industrial	Medium industrial	Heavy industrial
Power station	Office/consulting room	Military or police base/station/compound	Casino/entertainment complex	Tourism and Hospitality facility
Open cast mine	Underground mine	Spoil heap or slimes dam	Quarry, sand or borrow pit	Dam or reservoir
Hospital/medical centre	School	Tertiary education facility	Church	Old age home
Sewage treatment plant	Train station or shunting yard	Railway line	Major road (4 lanes and more)	Airport
Harbour	Sport facilities	Golf course	Polo fields	Filling station
Landfill or waste treatment site	Plantation	Agriculture	River, stream or wetland	Nature conservation area
Mountain, koppie or ridge	Museum	Historical building	Graveyard	Archaeological site
Other land uses (describe):	NA			

- (b) Provide a description, including the distance and direction to the nearest residential area, industrial area, agri-industrial area.

Agriculture on all boundaries with the N7 on the eastern boundary. Some farm houses (low density residential) are located within 500m of the proposed site.

- residential area – 2km to Abbotsdale (NNE)
- industrial area – 7km to Malmesbury (NE)
- agri-industrial – 7km to Malmesbury (NE)

## 9. SOCIO-ECONOMIC ASPECTS

- a) Describe the existing social and economic characteristics of the community in the vicinity of the proposed site, in order to provide baseline information (for example, population characteristics/demographics, level of education, the level of employment and unemployment in the area, available work force, seasonal migration patterns, major economic activities in the local municipality, gender aspects that might be of relevance to this project, etc.).

Malmesbury is the administrative centre, as well as a commercial centre in the Swartland municipality. The town has a diversified economic base, which includes agriculture, a well-diversified industrial sector and infrastructure. According to the Growth Potential of Towns in the Western Cape (2004) study, its growth potential is ranked high and its human need low (the towns people are considered well off).

The town's location, being approximately 60km from the Cape Metropole, increases its market potential. It has sufficient land for future residential development. While tourism does not currently play a major role, this avenue can also be explored (Growth Potential of Towns in the Western Cape, 2004). The study found the smaller towns in the Swartland area to have low development potential, while Malmesbury, Moorreesburg and Kalbaskraal scored high on development potential. Kalbaskraal and Koringberg scored high on human need, while all the other towns included in the study, namely Malmesbury, Moorreesburg, Darling, Riebeeck-Kasteel, Riebeeck-West and Yzerfontein, scoring low on human needs (Growth Potential of Towns in the Western Cape, 2004).

The N7 is a major road linking the areas with Cape Town. Rail transport for freight runs from Malmesbury, Kalbaskraal and Riebeeck-Kasteel. The largest sectors within the municipality were Manufacturing (20,8%), Finance & Business Services (20,2%) and Agriculture, Forestry & Fishing (19,9%) sectors. Swartland was the second largest contributor to the West Coast District accounting for 29,1 per cent of the district's GDP or R1,6 billion in 2004. Its contribution to district GDP per sector (contribution of local to district sector totals) was particularly strong in the Finance & Business Services (44,0%), Electricity & Water (40,4%), Construction (30,7%), Agriculture, Forestry & Fishing (29,8%) and Manufacturing (29,4%) sectors within the district.

Swartland grew the fastest of all municipalities in the district for the period 1995 to 2004. The average annual growth rate was 3,6 per cent for the municipality compared to 2,4 per cent for the district. Overall, the linear growth trend over this period for Swartland was positive. For all years, Swartland's growth was above that of the district but exhibited a similar trend.

About 34.5% of the total population is unemployed. The municipality has already done much and spent millions to improve the living conditions of people in the town area by providing infrastructure. Economic conditions of residents also alternate between the different income sources, such as farm work on plots around the town, commuters working in Malmesbury (20km) or Cape Town (about 50km), small business entrepreneurs and a small number of artisans such as electricians, bricklayers, et cetera. The youth struggles with the same issues as in most other towns, such as drug abuse and worsening crime as there is not much to keep them constructively occupied.

## 10. HISTORICAL AND CULTURAL ASPECTS

- (a) Please be advised that if section 38 of the NHRA is applicable to your proposed development, you are requested to furnish this Department with written comment from Heritage Western Cape as part of your public participation process. Heritage Western Cape must be given an opportunity, together with the rest of the I&APs, to comment on any Pre-application BAR, a Draft BAR, and Revised BAR.

Section 38 of the NHRA states the following:

"38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

- (a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- (b) the construction of a bridge or similar structure exceeding 50m in length;
- (c) any development or other activity which will change the character of a site-
  - (i) exceeding 5 000m<sup>2</sup> in extent; or
  - (ii) involving three or more existing erven or subdivisions thereof; or
  - (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
  - (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- (d) the re-zoning of a site exceeding 10 000m<sup>2</sup> in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development".

- (b) The impact on any national estate referred to in section 3(2), excluding the national estate contemplated in section 3(2)(i)(vi) and (vii), of the NHRA, must also be investigated, assessed and evaluated. Section 3(2) states the following: "3(2) Without limiting the generality of subsection (1), the national estate may include—
- (a) places, buildings, structures and equipment of cultural significance;
  - (b) places to which oral traditions are attached or which are associated with living heritage;
  - (c) historical settlements and townscapes;
  - (d) landscapes and natural features of cultural significance;
  - (e) geological sites of scientific or cultural importance;
  - (f) archaeological and palaeontological sites;
  - (g) graves and burial grounds, including—
    - (i) ancestral graves;
    - (ii) royal graves and graves of traditional leaders;
    - (iii) graves of victims of conflict;
    - (iv) graves of individuals designated by the Minister by notice in the Gazette;
    - (v) historical graves and cemeteries; and
    - (vi) other human remains which are not covered in terms of the Human Tissue Act, 1983 (Act No. 65 of 1983);
  - (h) sites of significance relating to the history of slavery in South Africa;
  - (i) movable objects, including—
    - (i) objects recovered from the soil or waters of South Africa, including archaeological and paleontological objects and material, meteorites and rare geological specimens;
    - (ii) objects to which oral traditions are attached or which are associated with living heritage;
    - (iii) ethnographic art and objects;
    - (iv) military objects;
    - (v) objects of decorative or fine art;
    - (vi) objects of scientific or technological interest; and
    - (vii) books, records, documents, photographic positives and negatives, graphic, film or video material or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996)".

Is Section 38 of the NHRA applicable to the proposed development?		YES	NO	UNCERTAIN
If YES or UNCERTAIN, explain:	Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999), is applicable to the proposed development as the re zoning of the site exceeds 10 000 m2 in extent. HWC NID submitted to HWC.			
Will the development impact on any national estate referred to in Section 3(2) of the NHRA?		YES	NO	UNCERTAIN
If YES or UNCERTAIN, explain:	The development will not impact on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 or impact on any building or structure older than 60 years in any way. HWC FINAL COMMENT ON HWC NID in Appendix E1.			
Will any building or structure older than 60 years be affected in any way?		YES	NO	UNCERTAIN
If YES or UNCERTAIN, explain:	NA			
Are there any signs of culturally or historically significant elements, as defined in section 2 of the NHRA, including Archaeological or paleontological sites, on or close (within 20m) to the site?		YES	NO	UNCERTAIN
If YES or UNCERTAIN, explain:	No archaeologically significant resources were found during the foot survey.			

**Note:** If uncertain, the Department may request that specialist input be provided **and** Heritage Western Cape must provide comment on this aspect of the proposal. (Please note that a copy of the comments obtained from the Heritage Resources Authority must be appended to this report as Appendix E1).



## 11. APPLICABLE LEGISLATION, POLICIES, CIRCULARS AND/OR GUIDELINES

- (a) Identify all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks, and instruments that are applicable to the development proposal and associated listed activity(ies) being applied for and that have been considered in the preparation of the BAR.

<b>LEGISLATION, POLICIES, PLANS, GUIDELINES, SPATIAL TOOLS, MUNICIPAL DEVELOPMENT PLANNING FRAMEWORKS, AND INSTRUMENTS</b>	<b>ADMINISTERING AUTHORITY and how it is relevant to this application</b>	<b>TYPE Permit/license/authorisation/comment / relevant consideration (e.g. rezoning or consent use, building plan approval, Water Use License and/or General Authorisation, License in terms of the SAHRA and CARA, coastal discharge permit, etc.)</b>	<b>DATE (if already obtained):</b>
Western Cape Land Use Planning Act, 2014 ("LUPA")	Swartland Municipality	Consent use	Application to be submitted
National Water Act, 1998 (Act No. 36 of 1998) [NWA] and relevant regulations	Berg River Catchment Management Agency	Water Use Authorization	Application to be submitted
National Environmental Management Act, 1998 (Act No. 107 of 1998) [NEMA] and relevant regulations	Western Cape Department of Environmental Affairs and Development Planning	Environmental Authorisation Application	NA
National Heritage Resources Act 25 of 1999 [NHRA]	Heritage Western Cape South African Heritage Resource Agency	NID Submission of a Heritage Impact Assessment	Final Comment Received
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) [NEMWA] and relevant regulations	Western Cape Department of Environmental Affairs and Development Planning	NA	NA
National Environmental Management: Biodiversity Act 10 of 2004 [NEMBA]	Western Cape Department of Environmental Affairs and Development Planning	NA	NA
National Environmental Management: Air Quality Act, 39 Of 2004 [NEMAQA] and Relevant Regulations	Western Cape Department of Environmental Affairs and Development Planning	NA	NA
Conservation of Agricultural Resources Act, 43 Of 1983 [CARA]	National Department of Agriculture, forestry and Fisheries Western Cape Department of Agriculture	Weeds and the tolerance thereof.	NA
National Health Act, 61 of 2003 [NHA]		Littering and causing a nuisance.	NA
Constitution of the Republic of South Africa, 1996		General application to individual rights of all on and adjacent to the sites.	NA
Fencing Act, 31 of 1963		NA	NA
National Building Regulations and Building Standards Act 103 of 1977 [NBRBSA] and relevant regulations		NA	NA
National Veld and Forest Fire Act 101 of 1998 [NVFFA]		NA	NA
Fertilizers, Farm Feeds, Agricultural Remedies And Stock Remedies Act, 36 Of 1947 [FFFARSRA] and Relevant Regulations	National Department of Agriculture, forestry and Fisheries Western Cape Department of Agriculture	NA	NA
<b>POLICY/ GUIDELINES</b>		<b>ADMINISTERING AUTHORITY</b>	
Guideline on Public Participation		Western Cape Department of Environmental Affairs and Development Planning	
Guidelines on Alternatives		Western Cape Department of Environmental Affairs and Development Planning	
Guideline on Need and desirability		Western Cape Department of Environmental Affairs and Development Planning	
Guideline for Environmental Management Plans (EMP's)		Western Cape Department of Environmental Affairs and Development Planning	

(b) Describe how the proposed development **complies with and responds** to the legislation and policy context, plans, guidelines, spatial tools, municipal development planning frameworks and instruments.

LEGISLATION / POLICY / GUIDELINE	DESCRIBE HOW THE LEGISLATION / POLICY / GUIDELINE WERE TAKEN INTO ACCOUNT (e.g. describe the extent to which it was adhered to, or deviated from, etc).
NEMA	Various general activities, including but not limited to, the control of emergency incidents and the care and remediation of environmental damage.
NEMWA	Listed waste management activities and the requirements for a license for usage of general waste.
NEMBA	The management and conservation of biological diversity and the sustainable use of indigenous biological resources.
NEMAQA	Activities that may affect the air quality on site and the environment surrounding it.
NWA	Impacts and pollution to ground and surface water. Assessed if a water use authorisation under section 21 is required.
CARA	Weeds and the tolerance thereof.
National Health Act	Littering and causing a nuisance.
Constitution of the RSA	General application to individual rights of all on and adjacent to the sites.
Fencing Act	The erection and maintenance of fences.
National Building Regulations and Building Standards Act	The erection of new buildings.
NHRA	Development of the site and dealing with graves and burial sites and any structures older than 60 years.
NVFFA	Any activities that could result in the start of veld fires.
FFFARSRA	<ul style="list-style-type: none"> <li>• Activities associated with pest control and the use of agricultural remedies.</li> <li>• Activities associated with providing / manufacturing fertiliser.</li> </ul>
Guideline on Public Participation	The public participation guideline was used to determine the best way to define and inform all relevant I&APs of the project. The guideline was also used to determine the most effective communication strategies for public participation.
Guidelines on Alternatives	The guidelines for alternatives assessment was used to develop a methodology for alternatives assessment. This methodology was applied to determine and assess the most viable alternatives to the project. The assessment was undertaken against the base environment (i.e. the no-go option).
Guideline on Need and desirability	The guideline was taken into account to determine whether the project complied according to the concept of Best Practicable Environmental Option as well as environmental and social sustainability.
Guideline for EMP's	The guideline for EMP's was taken into account to determine the most effective minimize, mitigation and management measures to minimise or prevent the impacts identified in the report

**Note:** Copies of any comments, permit(s) or licences received from any other Organ of State must be attached to this report as **Appendix E**.

## Section C: PUBLIC PARTICIPATION

The PPP must fulfil the requirements outlined in the NEMA, the EIA Regulations, 2014 (as amended) and if applicable, the NEM: WA and/or the NEM: AQA. This Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must also be taken into account.

1. Please highlight the appropriate box to indicate whether the specific requirement was undertaken or whether there was an exemption applied for.

In terms of Regulation 41 of the EIA Regulations, 2014 (as amended) -			
(a) fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of -			
(i) the site where the activity to which the application relates, is or is to be undertaken; and	YES	EXEMPTION	
(ii) any alternative site	YES	EXEMPTION	N/A
(b) giving written notice, in any manner provided for in Section 47D of the NEMA, to -			
(i) the occupiers of the site and, if the applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	YES	EXEMPTION	N/A
(ii) owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	YES	EXEMPTION	
(iii) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	YES	EXEMPTION	
(iv) the municipality (Local and District Municipality) which has jurisdiction in the area;	YES	EXEMPTION	
(v) any organ of state having jurisdiction in respect of any aspect of the activity; and	YES	EXEMPTION	
(vi) any other party as required by the Department;	YES	EXEMPTION	N/A
(c) placing an advertisement in -			
(i) one local newspaper; or	YES	EXEMPTION	
(ii) any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;	YES	EXEMPTION	N/A
(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken	YES	EXEMPTION	N/A
(e) using reasonable alternative methods, as agreed to by the Department, in those instances where a person is desirous of but unable to participate in the process due to— (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	YES	EXEMPTION	N/A
<b>If you have indicated that "EXEMPTION" is applicable to any of the above, proof of the exemption decision must be appended to this report.</b>			
Please note that for the NEM: WA and NEM: AQA, a notice must be placed in at least two newspapers circulating in the area where the activity applied for is proposed.			
If applicable, has/will an advertisement be placed in at least two newspapers?	YES	NO	
If "NO", then proof of the exemption decision must be appended to this report.			

2. Provide a list of all the State Departments and Organs of State that were consulted:

State Department / Organ of State	Date request was sent:	Date comment received:	Support / not in support
1. CapeNature	20/02/2018	09/03/2018	Support
2. Department of Agriculture	20/02/2018	Await	
3. Heritage Western Cape	20/02/2018	20/12/2017	Support
4. Department of Water Affairs	20/02/2018	30/01/2018 (on rezoning app)	Support with conditions
5. West Coast District Municipality	20/02/2018	23/03/2018	Support with condition
6. Swartland Municipality	20/02/2018	23/02/2018	

		(Acknowledge only)	
7. Department of Health	20/02/2018	20/03/2018	Support
8.DEA&DP-Waste Management	18/02/2018	19/03/2018	Support with conditions
9.DEA&DP-Pollution Management	18/02/2018	Await	
10. DEA&DP-Air Quality	18/02/2018	22/03/2018	Support with conditions
11.SANRAL	20/02/2018	26/01/2018 (on rezoning app)	Support
12.DEA&DP-Development Management-(deciding authority)	18/02/2018	23/03/2018	Support with conditions

3. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated, or the reasons for not including them.  
 (The detailed outcomes of this process, including copies of the supporting documents and inputs must be included in a Comments and Response Report to be attached to the BAR (see note below) as **Appendix F**).

#### DEADP (NID)

Since solid waste removal services will be provided by the municipality, you are requested to provide this office with written proof that the municipality has sufficient capacity to provide the necessary service to the proposed development. Confirmation of the availability of services from the service provider must be provided together with the Basic Assessment Report ("BAR").

#### HWC

You are hereby notified that, since there is no reason to believe that the proposed development will impact on heritage resources, no further action under Section 38 of the National Heritage Resources Act (Act 25 of 1999) is required.

However, should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the execution of the activities above, all works must be stopped immediately and Heritage Western Cape must be notified without delay.

#### DWS

This Department has perused the abovementioned documents for the proposed rezoning and has the following comments:

- No pollution of surface water or ground water resources may occur due to any activity on the property.
- No abstraction of surface or groundwater may be done without prior authorisation from this Department unless it is a Schedule 1 Use or an Existing Lawful Use.
- A water use authorisation and registration certificate must be applied for and obtained before commencing with the section 21 (e) "engaging in a controlled activity i.e. irrigation & 21 (g) disposing of waste which may detrimentally impact on a water resource" of the National Water Act, 1998 (Act 36 of 1998). These water uses are triggered by the use of treated sewerage for irrigation, and the storage of treated effluent in an evaporation pond.
- Confirmation of a water use registration certificate for the abstraction of borehole water must be submitted to this Department. If there is no water use registration certificate for the borehole water, this must be applied for and obtained before any abstraction of borehole water. Abstraction of borehole water constitute a water use in terms of section 21 (a) of the National Water Act, 1998.
- You are hereby advised to arrange for a pre-application meeting with the Department to advise on the water use authorisation process. Please note that as from January 2018, this Department ONLY accepts electronic water use applications.
- Water use applications can be submitted by following <http://www.dwa.gov.za/projects.aspx> and then click on e-wulaas. Storm-water runoff must be controlled to ensure that on-site activities do not culminate into off-site pollution. All the requirements of the National Water Act, 1998 (Act 36 of 1998) in terms of water use and pollution control management must be adhered to at all times.

#### SANRAL

The South African National Roads Agency SOC Limited (SANRAL) has no objection with regard to the Rezoning of a Portion of Portion 26 of Farm Leliefontein 817, Malmesbury to establish an Onion Dehydration Plant/Facility, indicated as Alternative 3, on the accompanied plan (Figure 2).

Although access is currently obtained from the N7, future access will be from a new service road constructed as part of the N7 dual carriageway upgrade. Once completed, access will be obtained from the service road and the direct access shall be permanently closed. No free-standing advertising signs will be allowed in terms of Regulations of Advertising on or visible from the National Road as published in Government Gazette no 6968 dated 22 December 2000. Any further development on the property will be subject to SANRAL's approval.

#### Cape Nature

1. Historically, the site was covered by Atlantis Sand Fynbos and Swartland Granite Renosterveld. However, the preferred site alternative has been completely transformed by agricultural activities and there is no natural vegetation remaining. The site is also further than 400m away from the nearest watercourse.

2. We note that the facility plans to use ground water for consumption and for washing. Has the availability of the required volume been determined and will this use affect other ground water users in the vicinity of the development?

3. We are pleased to note that the Environmental Management Programme (EMPr) includes a groundwater monitoring programme and stormwater management plan.

#### DEADP WASTE

2.1 Any event resulting in the spill or leak of fuels or any other hazardous solvents into the ground and/or water courses (e.g. that of hazardous substances used during the construction or operational phase), must be reported to all relevant authorities, including DEA&DP Directorate: Pollution and Chemicals Management, within 14 (fourteen) days. This requirement is in terms of Section 30 (10) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) that pertains to the control of emergency incidents and should include the reporting, containment and clean-up procedure of such incident and the remediation of the affected area. All necessary documentation must be completed and submitted within the prescribed timeframes. Containment, clean-up and remediation must commence immediately in the case of NEMA Section 30 incidents.

2.2. Please note all material used to clean hazardous material spills must be considered as hazardous waste, together with contaminated soil. Moreover, if hazardous waste is mixed with general waste, the entire content of waste must be seen as hazardous and therefore be disposed at a licenced hazardous disposal facility.

2.3. Kindly adhere to the NEM:WA National Norms and Standards for the Storage of Waste in terms of Government Notice (GN) No. 926 of 29 November 2013, if the volumes of waste stored exceeds 80m<sup>3</sup> for hazardous waste and/or 1 00m<sup>3</sup> for general waste.

2.4. The Department requests that the EMPr be strictly followed with regards to waste management.

#### DEADP: AIR QUALITY

##### 1. BOILER INFORMATION/ SPECIFICATIONS

1.1. As indicated in the pre-application draft BAR, a part of the development is to install a Coal Boiler.

1.2. The D: AQM require clarity on the name and model specifications of the boiler.

1.3. In addition to the above, the D: AQM require the following additional information:

1.3.1. The serial number (STB) of the boiler.

1.3.2. The manufacturer of the boiler.

1.3.3. Type of fuel to be used to operate the boiler.

1.3.4. Maximum steam capacity of the boiler.

1.3.5. The net heat input of Mega Watt (MW).

##### 2. DUST MANAGEMENT

2.1. It is foreseen that dust from all potential sources, during construction, operation activities and associated infrastructure would create dust emissions during various construction and operational phases. These impacts can be reduced significantly if various dust suppression measures are implemented to limit the emission of particulate matter from these and other sources. It is recommended that a proper dust suppression plan be developed and implemented.

2.2. Ensure that transported materials do not escape from the construction vehicles by providing adequate covering for all load beds.

2.3. It is recommended that exposed unconsolidated surfaces be surfaced, re-vegetated or stabilised as soon as it is practically possible e.g. after earthworks is completed.

2.4. Dust generated from the construction activities must comply with the NEM: AQA National Dust Control Regulation (GN No. R. 827) of 1 November 2013.

2.5. These regulations prohibit a person from conducting any activity in such a way as to give rise to dust in such quantities and concentrations the dust, or dust fall, has a detrimental effect on the environment including health.

### 3. NOISE AND ODOUR EMISSION IMPACT MANAGEMENT

- 3.1. All plant equipment, including vehicles, must be properly maintained in order to minimise noise generation.
- 3.2. Any complaints regarding noise must be investigated, sources identified and mitigation measures implemented. Feedback on resolution of the issue must be provided to the complainant.
- 3.3. Noise generated from the construction and operation of the proposed activity must comply with the Western Cape Noise Control Regulations P.N. 200/2013.
- 3.4. Combustion equipment and air pollution control equipment should be designed and operated to minimise the production and emission of air pollutants.
- 3.5. All necessary measures must be investigated to limit odour exposure of surrounding receptors.
- 3.6. In terms of Section 35 (2) of the NEM: AQA, the occupier/responsible person/s of the activity must take all reasonable steps to prevent the emission of any offensive odour caused by any activity on the site.

The Department would like to draw your attention to Section 28 of the NEMA, i.e. Duty of Care which states that: "Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorized by law or cannot reasonably be avoided or stopped, to minimize and rectify such pollution or degradation of the environment."

#### DEADP

Public Participation Process

Declarations by applicant, Environmental Assessment Practitioner ("EAP") and Specialist

You are reminded to include copies of the Notice of Intent to Develop to Heritage Western Cape and the Water Use License Application in the BAR.

It is indicated on pages 15 and 40 that steam from the boiler and smoke from the coal/HFO boiler will be emitted. Too little information was provided with regards to the boiler and the impacts thereof have not been adequately assessed.

#### WCDM

The West Coast District Municipality supports appropriately located agri-processing facilities, provided these do not result in detrimental effects on the environment.

Water efficiency during all phases of the development is essential.

The Environmental Health Officer of the Division Municipal Health Services of the WCDM does not wish to offer any comments at this stage of the application.

4. Provide a summary of any conditional aspects identified / highlighted by any Organs of State, which have jurisdiction in respect of any aspect of the relevant activity.

### HWC

Should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the execution of the activities above, all works must be stopped immediately and Heritage Western Cape must be notified without delay.

### DWS

This Department has perused the abovementioned documents for the proposed rezoning and has the following comments:

- No pollution of surface water or ground water resources may occur due to any activity on the property.
- No abstraction of surface or groundwater may be done without prior authorisation from this Department unless it is a Schedule 1 Use or an Existing Lawful Use.
- A water use authorisation and registration certificate must be applied for and obtained before commencing with the section 21 (e) "engaging in a controlled activity i.e. irrigation & 21 (g) disposing of waste which may detrimentally impact on a water resource" of the National Water Act, 1998 (Act 36 of 1998). These water uses are triggered by the use of treated sewerage for irrigation, and the storage of treated effluent in an evaporation pond.
- Confirmation of a water use registration certificate for the abstraction of borehole water must be submitted to this Department. If there is no water use registration certificate for the borehole water, this must be applied for and obtained before any abstraction of borehole water. Abstraction of borehole water constitute a water use in terms of section 21 (a) of the National Water Act, 1998.

### SANRAL

No free-standing advertising signs will be allowed in terms of Regulations of Advertising on or visible from the National Road as published in Government Gazette no 6968 dated 22 December 2000.

### WCDM

Water efficiency during all phases of the development is essential.

### **Note:**

Even if pre-application public participation is undertaken as allowed for by Regulation 40(3), it must be undertaken in accordance with the requirements set out in Regulations 3(3), 3(4), 3(8), 7(2), 7(5), 19, 40, 41, 42, 43 and 44.

If the "exemption" option is selected above and no proof of the exemption decision is attached to this BAR, the application will be refused.

A list of all the potential I&APs, including the Organs of State, notified and a list of all the registered I&APs must be submitted with the BAR. The list of registered I&APs must be opened, maintained and made available to any person requesting access to the register in writing.

The BAR must be submitted to the Department when being made available to I&APs, including the relevant Organs of State and State Departments which have jurisdiction with regard to any aspect of the activity, for a commenting period of at least 30 days. Unless agreement to the contrary has been reached between the Competent Authority and the EAP, the EAP will be responsible for the consultation with the relevant State Departments in terms of Section 24O and Regulation 7(2) – which consultation must happen simultaneously with the consultation with the I&APs and other Organs of State.

All the comments received from I&APs on the BAR must be recorded, responded to and included in the Comments and Responses Report included as **Appendix F** of the BAR. If necessary, any amendments made in response to comments received must be effected in the BAR itself. The Comments and Responses Report must also include a description of the PPP followed.

The minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded, must also be submitted as part of the public participation information to be attached to the final BAR as **Appendix F**.

Proof of all the notices given as indicated, as well as notice to I&APs of the availability of the Pre-Application BAR (if applicable), Draft BAR, and Revised BAR (if applicable) must be submitted as part of the public participation information to be attached to the BAR as **Appendix F**. In terms of the required "proof" the following must be submitted to the Department:

- a site map showing where the site notice was displayed, a dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
  - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);



- if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
- if a facsimile was sent, a copy of the facsimile report;
- if an electronic mail was sent, a copy of the electronic mail sent; and
- if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

## SECTION D: NEED AND DESIRABILITY

**Note:** Before completing this section, first consult this Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System" and the EIA Regulations, 2014 (as amended), any subsequent Circulars, and guidelines available on the Department's website: <http://www.westerncape.gov.za/eadp>. In this regard, it must be noted that the *Guideline on Need and Desirability in terms of the Environmental Impact Assessment (EIA) Regulations, 2010* published by the national Department of Environmental Affairs on 20 October 2014 (GN No. 891 on Government Gazette No. 38108 refers) (available at: [http://www.gov.za/sites/www.gov.za/files/38108\\_\\_891.pdf](http://www.gov.za/sites/www.gov.za/files/38108__891.pdf)) also applied to EIAs in terms of the EIA Regulations, 2014 (as amended).

1. Is the development permitted in terms of the property's existing land use rights?	YES	NO	Please explain
Rezoning from agriculture 1 to Agri-Industrial 2 required.			
2. Will the development be in line with the following?			
(a) Provincial Spatial Development Framework ("PSDF").	YES	NO	Please explain
Agri-Industrial activities on agricultural land to process onions that is produced in close proximity on surrounding agricultural land.			
(b) Urban edge / edge of <b>built environment</b> for the area.	YES	NO	Please explain
The area is outside the approved urban edge.			
(c) Integrated Development Plan and Spatial Development Framework of the Local Municipality (e.g., would the approval of this application compromise the integrity of the existing approved and credible municipal <b>IDP and SDF</b> ?).	YES	NO	Please explain
Agri-Industrial activities on agricultural land to process onions that is produced in close proximity on surrounding agricultural land.			
(d) An Environmental Management Framework ("EMF") adopted by this Department. (e.g., Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	NO	Please explain
No EMF adopted for the area.			
(e) Any <b>other</b> Plans (e.g., Integrated Waste Management Plan (for waste management activities), etc.)).	YES	NO	Please explain
NA			
3. Is the land use (associated with the project being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (in other words, is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES	NO	Please explain
Agri-Industrial activities on agricultural land to process onions that is produced in close proximity on surrounding agricultural land.			
4. Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) occur on the proposed site at this point in time?	YES	NO	Please explain
Agri-Industrial activities on agricultural land to process onions that is produced in close proximity on surrounding agricultural land.			
5. Does the community/area need the project and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g., development is a National Priority, but within a specific local context it could be inappropriate.)	YES	NO	Please explain
Agri-Industrial activities on agricultural land to process onions that is produced in close proximity on surrounding agricultural land.			
6. Are the necessary <b>services</b> available together with adequate unallocated municipal capacity (at the time of application), or must additional capacity be created to cater for the project? (Confirmation by the relevant municipality in this regard must be attached to the BAR as <b>Appendix E</b> .)	YES	NO	Please explain
<ul style="list-style-type: none"> <li>• Water from Boreholes</li> <li>• Power from Eskom</li> </ul>			

<p>The main Eskom substation in the area is situated at Kalbaskraal, approximately 6,0km to the south-east of the site. An 11kV feeder known as "Kalbaskraal Farmers 1" originates from Kalbaskraal and provides power to the irrigation pumps on the south-east corner of the site. The existing "Kalbaskraal Farmers 1"- feeder can provide a maximum 550kVA (0,55MVA) power supply without any upgrade of the overhead line. The transformer, 11kV switchgear, and metering equipment must be upgraded at the transformer on site.</p>			
7. Is this project provided for in the <b>infrastructure planning</b> 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 BAR as <b>Appendix E.</b> )	YES	NO	Please explain
<p>No services required other than ESKOM power supply:  The main Eskom substation in the area is situated at Kalbaskraal, approximately 6,0km to the south-east of the site. An 11kV feeder known as "Kalbaskraal Farmers 1" originates from Kalbaskraal and provides power to the irrigation pumps on the south-east corner of the site. The existing "Kalbaskraal Farmers 1"- feeder can provide a maximum 550kVA (0,55MVA) power supply without any upgrade of the overhead line. The transformer, 11kV switchgear, and metering equipment must be upgraded at the transformer on site.</p>			
8. Is this project part of a <b>national programme</b> to address an issue of national concern or importance?	YES	NO	Please explain
<p>Agri-Industrial activities on agricultural land to process onions that is produced in close proximity on surrounding agricultural land.</p>			
9. Do location factors favour this land use (associated with the development proposal and associated listed activity(ies) applied for) at this place? (This relates to the contextualisation of the proposed land use on the proposed site within its broader context.)	YES	NO	Please explain
<p>Agri-Industrial activities on agricultural land to process onions that are produced in close proximity on surrounding agricultural land.</p>			
10. Will the development proposal or the land use associated with the development proposal applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)?	YES	NO	Please explain
<p>Agri-Industrial activities on agricultural land to process onions that is produced in close proximity on surrounding agricultural land.  No sensitive natural/cultural areas on the proposed sites.</p>			
11. Will the development impact on people's health and well-being (e.g., in terms of noise, odours, visual character and 'sense of place', etc.)?	YES	NO	Please explain
<p>Odours will be emitted from the proposed onion processing facility. However, the closest residential area is 2km away (Abbotsdale).</p> <p>Visual character and 'sense of place' will be impacted on as vacant land is being transformed into a agri-Industrial site. However preferred alternative (3) is situated away from the N7 and the landscaping plan mitigates these impacts.</p> <p>Noise will be generated from the proposed agri-industrial activities. However, the closest residential area is 2km away (Abbotsdale).</p>			
12. Will the proposed development or the land use associated with the proposed development applied for, result in unacceptable opportunity costs?	YES	NO	Please explain
<ul style="list-style-type: none"> <li>• Water from Boreholes</li> <li>• Power from Eskom</li> </ul> <p>The main Eskom substation in the area is situated at Kalbaskraal, approximately 6,0km to the south-east of the site. An 11kV feeder known as "Kalbaskraal Farmers 1" originates from Kalbaskraal and provides power to the irrigation pumps on the south-east corner of the site. The existing "Kalbaskraal Farmers 1"- feeder can provide a maximum 550kVA (0,55MVA) power supply without any upgrade of the overhead line. The transformer, 11kV switchgear, and metering equipment must be upgraded at the transformer on site.</p>			
13. What will the <b>cumulative impacts</b> (positive and negative) of the proposed land use associated with the development proposal and associated listed activity(ies) applied for, be?			
<p>Positive:</p> <ul style="list-style-type: none"> <li>• Employment opportunities (construction and operational)</li> </ul> <p>Negative:</p> <ul style="list-style-type: none"> <li>• Disturbance to subsurface geological layers</li> </ul>			

<ul style="list-style-type: none"> <li>• Soil erosion and dust</li> <li>• Surface and ground water pollution</li> <li>• Emissions and air quality</li> <li>• Impact on sensitive environments (rivers, wetlands etc)</li> <li>• Increase in traffic</li> <li>• Impact on planning policies</li> <li>• Noise</li> <li>• Odours</li> <li>• Impact of the proposed development on archaeological, paleontological and heritage remains</li> <li>• Visual/sense of place</li> </ul>			
14. Is the development the <b>best practicable environmental option</b> for this land/site?	YES	NO	Please explain
Ploughed and areas disturbed as a result of previous agricultural.			
15. What will the benefits be to society in general and to the local communities?			Please explain
Provision of jobs.			
16. Any <b>other</b> need and desirability considerations related to the proposed development?			Please explain
None.			
17. Describe how the <b>general objectives of Integrated Environmental Management</b> as set out in Section 23 of the NEMA have been taken into account:			
<ul style="list-style-type: none"> <li>•The general principles as set out in Section 2 of NEMA are implemented as described below.</li> <li>•The potential impacts for both the construction and the operational phase have been identified in this report – this allows for the appropriate management and mitigation measures to be identified and implemented where and when necessary to prevent environmental degradation and promote sustainability.</li> <li>•All decisions during the planning and assessment by all involved for the activity promote the integration of the principles of environmental management set out in Section 2 to minimize and mitigate any significant effect on the environment. All these mitigations and management measures were included as proposed EA conditions and included in the EMP.</li> <li>•All involved in the planning and design identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage. The risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in Section 2 were taken in consideration and used in the assessments, mitigations and recommendations throughout this report.</li> <li>•Adequate and appropriate opportunity for public participation was provided and included in Appendix F as per the guidelines and regulations in decisions that may affect the environment. The consideration of environmental attributes in management and decision making which may have a significant effect on the environment was ensured. The modes of environmental management best suited to ensure that a particular activity is pursued in accordance with the principles of environmental management set out in Section 2, was identified and employed. Refer to section below.</li> </ul>			
18 Describe how the <b>principles of environmental management</b> as set out in Section 2 of the NEMA have been taken into account:			
A full public participation as described in the legislation and guidelines will be/ is followed. The proposed development will not have a significant impact on biodiversity. The proposed development is situated within an existing urban edge and will not disturb the landscape and sites that constitute the nation's cultural heritage. The proposed development will not exceed or exploit renewable resource to an extent that they reach a level beyond which their integrity is jeopardised. The proposed development will not have a significant environmental impact and it is recommended that the Environmental Management Programme be adhered to accordingly.			

## SECTION E: DETAILS OF ALL THE ALTERNATIVES CONSIDERED

**Note:** Before completing this section, first consult this Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System" and the EIA Regulations, 2014 (as amended), any subsequent Circulars, and guidelines available on the Department's website <http://www.westerncape.gov.za/eadp>.

The EIA Regulations, 2014 (as amended) defines "alternatives" as "in relation to a proposed activity, means different means of fulfilling the general purpose and requirements of the activity, which may include alternatives to the—

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

The NEMA (section 24(4)(a) and (b) of the NEMA, refers) prescribes that the procedures for the investigation, assessment and communication of the potential consequences or impacts of activities on the environment must, *inter alia*, with respect to every application for environmental authorisation –

- ensure that the general objectives of integrated environmental management laid down in the NEMA and the National Environmental Management Principles set out in the NEMA are taken into account; and
- include an investigation of the potential consequences or impacts of the alternatives to the activity on the environment and assessment of the significance of those potential consequences or impacts, including the option of not implementing the activity.

The general objective of integrated environmental management (section 23 of NEMA, refers) is, *inter alia*, to "identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management" set out in the NEMA.

The identification, evaluation, consideration and comparative assessment of alternatives directly relate to the management of impacts. Related to every identified impact, alternatives, modifications or changes to the activity must be identified, evaluated, considered and comparatively considered to:

- in terms of negative impacts, firstly avoid a negative impact altogether, or if avoidance is not possible alternatives to better mitigate, manage and remediate a negative impact and to compensate for/offset any impacts that remain after mitigation and remediation; and
- in terms of positive impacts, maximise impacts.

### 1. DETAILS OF THE IDENTIFIED AND CONSIDERED ALTERNATIVES AND INDICATE THOSE ALTERNATIVES THAT WERE FOUND TO BE FEASIBLE AND REASONABLE

**Note:** A full description of the investigation of alternatives must be provided and motivation if no reasonable or feasible alternatives exists.

- (a) Property and **location/site** alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

Site Alternative 1 –

Located in the northern corner of farm no 817 portion 26, Malmesbury along the N7.

Site Alternative 2 –

Located in the eastern corner of farm no 817 portion 26, Malmesbury along the N7.

Site Alternative 3 (Preferred) –

Located in the western corner of farm no 817 portion 26, Malmesbury.

- (b) **Activity** alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

No other activity alternatives were assessed as no feasible or reasonable activity alternative exists other than the no-go option. The surrounding land is agricultural land that produces onions. As such location factors favour agri-Industrial activities to process produce produced on the surrounding land.

- (c) **Design or layout** alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

The design took into consideration the volumes of onions to be processed. The layout has been informed by specialists and engineer inputs.

- (d) **Technology** alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

The only technological alternatives assessed and considered were the use of electricity and water wise technologies and green tips considered during the construction and operational phases.

Solar power as a supplement to the Eskom power was identified as an alternative to simply using Eskom power from the grid. Solar Panels will be installed on the roof as shown on the enclosed drawings. This system will be used to supplement the Eskom Power. The power generated by the PV panels will be linked to the main distribution board to effectively "slow down" the incoming power required from the Eskom grid. The PV power will be utilised as it is available during daylight hours. The Eskom power will be used during the night time shifts. The exact value of the PV generated power is unknown at this stage. The North aspect of the roof is ideally orientated for this application.

The use of boreholes was identified as an alternative to using municipal water. This groundwater will be filtered and harvested to a series of storage tanks. The stored groundwater will be treated with either a UV system or RO system to ensure that the water is suitable for human consumption. The water will be used for consumption as well as fresh product washing prior to dehydration.

Dual flush toilet systems and energy efficient lighting.

- (e) **Operational** alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

No operational alternatives were considered as the proposed activity is for the onion dehydration plant. Onions are grown on nearby surrounding farm lands.

- (f) The option of **not implementing** the activity (the 'No-Go' Option):

The No-Go option will result in the site remaining as is presently; vacant farm land. A look at the Need and Desirability as manifested in the local SDF supports the proposed development on the identified site due to provision of jobs. The proposed development will provide temporary jobs to the community during the construction phase and permanent jobs during the operational phase.

- (g) **Other** alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist:

No additional alternatives to avoid negative impacts were considered.

- (h) Provide a **summary** of all alternatives investigated and the outcome of each investigation:

**Location alternatives** – Site Alternative 1 – Located in the northern corner of farm no 817 portion 26, Malmesbury along the N7. Site Alternative 2 – Located in the eastern corner of farm no 817 portion 26, Malmesbury along the N7. Site Alternative 3 (Preferred) – Located in the western corner of farm no 817 portion 26, Malmesbury.

**Activity alternatives-** No other activity alternatives were assessed as no feasible or reasonable activity alternative exists other than the no-go option. The surrounding land is agricultural land that produces onions. As such location factors favour agri-Industrial activities to process produce produced on the surrounding land.

**Layout alternatives** – The design took into consideration the volumes of onions to be processed. The layout has been informed by specialists and engineer inputs.

**Technology alternatives** – The only technological alternatives assessed and considered were the use of electricity and water wise technologies and green tips considered during the construction and operational phases. Solar power as a supplement to the Eskom power was identified as an alternative to simply using Eskom power from the grid. Solar Panels will be installed on the roof as shown on the enclosed drawings. This system will be used to supplement the Eskom Power. The power generated by the PV panels will be linked to the main distribution board to effectively “slow down” the incoming power required from the Eskom grid. The PV power will be utilised as it is available during daylight hours. The Eskom power will be used during the night time shifts. The exact value of the PV generated power is unknown at this stage. The North aspect of the roof is ideally orientated for this application. The use of boreholes was identified as an alternative to using municipal water. This groundwater will be filtered and harvested to a series of storage tanks. The stored groundwater will be treated with either a UV system or RO system to ensure that the water is suitable for human consumption. The water will be used for consumption as well as fresh product washing prior to dehydration. Dual flush toilet systems and energy efficient lighting.

**Operational alternatives** – No operational alternatives were considered as the proposed activity is for the onion dehydration plant. Onions are grown on nearby surrounding farm lands.

**The No-Go Option-** The No-Go option will result in the site remaining as is presently; vacant farm land. A look at the Need and Desirability as manifested in the local SDF supports the proposed development on the identified site due to provision of jobs. The proposed development will provide temporary jobs to the community during the construction phase and permanent jobs during the operational phase.

- (i) Provide a detailed **motivation for not further considering** the alternatives that were found not feasible and reasonable, including a description and proof of the investigation of those alternatives:

#### Alternative 1 –

The site alternative 1 which is located in northern corner of farm no 817 portion 26, Malmesbury along the N7 is NOT the preferred alternative due to the following:

- The proximity to the non-perennial river
  - This site is located within 100m of a watercourse. The watercourse is declared as Ecological Support Areas (Res): Restore from other land use.
- The proximity to the N7
  - This site is located directly along the N7. Considering the viewpoint of road users, this site alternative has a medium-high visual impact.
- The distance to the boreholes
- From an electrical supply perspective, the Alternative 1 locations is NOT are preferable, because of the far distance to the existing overhead power supply on the site and to the Eskom substation at Kalbaskraal.

#### Alternative 2 –

The site alternative 1 which is located in eastern corner of farm no 817 portion 26, Malmesbury along the N7 is NOT the preferred alternative due to the following:

- The proximity to the non-perennial river
  - This site is located within 150m of a watercourse. The watercourse is declared as Ecological Support Areas (Res): Restore from other land use.
- The proximity to the N7
  - This site is located directly along the N7. Considering the viewpoint of road users, this site alternative has a medium-high visual impact.

## **2. PREFERRED ALTERNATIVE**

- (a) Provide a **concluding statement** indicating the preferred alternative(s), including preferred location, site, activity and technology for the development.

The site alternative 3 which is located in near the western corner of farm no 817 portion 26, Malmesbury is the preferred alternative due to the following:

- The distance to the non-perennial river
  - This site is located approximately 450m away from the watercourse. The watercourse is declared as Ecological Support Areas (Res): Restore from other land use.
- The proximity to the N7
  - This site is located away from the N7. Considering the viewpoint of road users, this site alternative has a low-medium visual impact.
- The distance to the boreholes
- From an electrical supply perspective, the Alternative 3 locations is preferable, because of the closeness to the existing overhead power supply on the site and to the Eskom substation at Kalbaskraal.

## SECTION F: ENVIRONMENTAL ASPECTS ASSOCIATED WITH THE ALTERNATIVES

**Note:** The information in this section must be DUPLICATED for all the feasible and reasonable ALTERNATIVES.

### 1. DESCRIBE THE ENVIRONMENTAL ASPECTS ASSOCIATED WITH THE PROPOSED DEVELOPMENT AND ITS ALTERNATIVES, FOCUSING ON THE FOLLOWING:

(a) Geographical, geological and physical aspects:

The proposed action will not have a significant adverse cumulative effect on topography, slopes, and soils, if operational and construction mitigation measures are implemented.

However, the proposed development will be a potential source of contamination to the underlying groundwater due to the effluent and sewage systems on site and disposal via irrigation and through overflow from the pond. Overflow from the pond will be managed via a suitably graded and profiled vegetated swale, which will discharge into the existing box culvert below the N7.

However, if operational mitigation measures are implemented and the quality standards of the water maintained in accordance with the Water Use licence (section 21 E, F, G and H), the proposed development should not have a significant adverse effect on ground water.

(b) Ecological aspects:

Will the proposed development and its alternatives have an impact on CBAs or ESAs? If yes, please explain: Also include a description of how the proposed development will influence the quantitative values (hectares/percentage) of the categories on the CBA/ESA map.	YES	NO
The proposed development will be situated on disturbed areas and not on any CBA or ESA area.		
Will the proposed development and its alternatives have an impact on terrestrial vegetation, or aquatic ecosystems (wetlands, estuaries or the coastline)? If yes, please explain:	YES	NO
Ploughed and areas disturbed as a result of previous agricultural.		
Will the proposed development and its alternatives have an impact on any populations of threatened plant or animal species, and/or on any habitat that may contain a unique signature of plant or animal species? If yes, please explain:	YES	NO
Over flow of effluent water may have any impact on the wetland that is located on the opposite side of the N7.		
Describe the manner in which any other biological aspects will be impacted:		
Not applicable. The proposed development will not impact of the ecological functioning of the area.		
Will the proposed development also trigger section 63 of the NEM: ICMA?	YES	NO



<p>If yes, describe the following:</p> <p>(i) the extent to which the applicant has in the past complied with similar authorisations;</p> <p>(ii) whether coastal public property, the coastal protection zone or coastal access land will be affected, and if so, the extent to which the proposed development proposal or listed activity is consistent with the purpose for establishing and protecting those areas;</p> <p>(iii) the estuarine management plans, coastal management programmes, coastal management lines and coastal management objectives applicable in the area;</p> <p>(iv) the likely socio-economic impact if the listed activity is authorised or is not authorised;</p> <p>(v) the likely impact of coastal environmental processes on the proposed development;</p> <p>(vi) whether the development proposal or listed activity—</p> <p>(a) is situated within coastal public property and is inconsistent with the objective of conserving and enhancing coastal public property for the benefit of current and future generations;</p> <p>(b) is situated within the coastal protection zone and is inconsistent with the purpose for which a coastal protection zone is established as set out in section 17 of NEM: ICMA;</p> <p>(c) is situated within coastal access land and is inconsistent with the purpose for which coastal access land is designated as set out in section 18 of NEM: ICMA;</p> <p>(d) is likely to cause irreversible or long-lasting adverse effects to any aspect of the coastal environment that cannot satisfactorily be mitigated;</p> <p>(e) is likely to be significantly damaged or prejudiced by dynamic coastal processes;</p> <p>(f) would substantially prejudice the achievement of any coastal management objective; or</p> <p>(g) would be contrary to the interests of the whole community;</p> <p>(vii) whether the very nature of the proposed activity or development requires it to be located within coastal public property, the coastal protection zone or coastal access land;</p> <p>(viii) whether the proposed development will provide important services to the public when using coastal public property, the coastal protection zone, coastal access land or a coastal protected area; and</p> <p>(ix) the objects of NEM: ICMA, where applicable.</p>
NA

(c) Social and Economic aspects:

What is the expected capital value of the project on completion?	R unknown
What is the expected yearly income or contribution to the economy that will be generated by or as a result of the project?	R unknown
Will the project contribute to service infrastructure?	YES NO
Is the project a public amenity?	YES NO
How many new employment opportunities will be created during the development phase?	unknown
What is the expected value of the employment opportunities during the development phase?	R unknown
What percentage of this will accrue to previously disadvantaged individuals?	90%
How will this be ensured and monitored (please explain):	
unknown	
How many permanent new employment opportunities will be created during the operational phase of the project?	unknown
What is the expected current value of the employment opportunities during the first 10 years?	R unknown
What percentage of this will accrue to previously disadvantaged individuals?	unknown %
How will this be ensured and monitored (please explain):	
unknown	
Any other information related to the manner in which the socio-economic aspects will be impacted:	
-	

(d) Heritage and Cultural aspects:

<p>Notice of Intent to Develop has been submitted to Heritage Western Cape to determine impacts and specialist studies required in terms of cultural and historical aspects potentially to be impacted upon. HWC has comment:</p> <p>“You are hereby notified that since there is no reason to believe that the proposed development will impact on heritage resources, no further action under section 38 of the National Heritage Resources Act (act 25 of 1999) is required. However, should any heritage resources, including evidence of graves and human burials, archaeological material and paleontological material be discovered during the excavation of the activities above, all works must be stopped immediately and Heritage Western cape must be notified without delay.”</p>
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## 2. WASTE AND EMISSIONS

### (a) Waste (including effluent) management

Will the development proposal produce waste (including rubble) during the development phase?	YES	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	10m <sup>3</sup>	
Construction waste will be generated. Construction waste will consist of inert waste, possible contaminated soil as result of leaking or re-fuelling of construction vehicles and waste generated when the buildings are painted. Inert and access soil waste will be recycled where possible on site for the levelling of the building foundations. Contaminated soil and other construction waste will be disposed at a licensed waste disposal facility.		

Will the development proposal produce waste during its operational phase?	YES	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type?	m <sup>3</sup>	
Onions Poor quality onions are manually removed and collected in waste bins. Poor quality onions will be returned to the suppliers on neighbouring farms.	Unknown dependent on quality	
Effluent/Waste water	The anticipated flow of treated effluent water into the detention pond from the abovementioned systems will be in the order of 1200 litres per hour.	

Will the development proposal require waste to be treated / disposed of on-site?	YES	NO
If yes, indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type per phase of the proposed development to be treated/disposed of?	m <sup>3</sup>	
If no, where and how will the waste be treated / disposed of? Please explain. Indicate the types of waste (actual type of waste, e.g. oil, and whether hazardous or not) and estimated quantity per type per phase of the proposed development to be treated/disposed of?	m <sup>3</sup>	
<u>SEWAGE</u> There will be a sewer system for black/grey sewage. Black and grey sewer from the staff ablutions, kitchens etc., will be reticulated via an underground piped system to a <b>Scarab package treatment plant</b> situated on the southern boundary. This plant will process the raw sewerage into a state that is suitable for irrigation. The purified outflow from the package plant will be conveyed through a dedicated open vegetated swale into the detention pond. The vegetated swale will further purify and aerate the treated outflow.	The anticipated flow of treated effluent water into the detention pond from the abovementioned systems will be in the order of 1200 litres per hour.	
<u>PROCESS EFFLUENT</u> The internal wash-down water and the liquid extracted from the dehydration process will discharge via an underground piped system to a small <b>aeration pond</b> . This effluent will be aerated by a pump and fountain to provide a degree of purification before passing through the vegetated open swale into the detention pond.		
Has the municipality or relevant authority confirmed that sufficient capacity exists for treating / disposing of the waste to be generated by the development proposal? If yes, provide written confirmation from the municipality or relevant authority.	YES	NO

Will the development proposal produce waste that will be treated and/or disposed of at another facility other than into a municipal waste stream?	YES	NO
If yes, has this facility confirmed that sufficient capacity exists for treating / disposing of the waste to be generated by the development proposal? Provide written confirmation from the facility.	YES	NO
Does the facility have an operating license? (If yes, please attach a copy of the licence.)	YES	NO
Facility name:		
Contact person:		
Cell:	Postal address:	
Telephone:	Postal code:	
Fax:	E-mail:	

Describe the measures that will be taken to reduce, reuse or recycle waste:

The stored volume (effluent and stormwater) in the detention facility will also be utilised for re-irrigation of the landscaped zones around and within the new facility.

(b) Emissions into the atmosphere

Will the development proposal produce emissions that will be released into the atmosphere?	YES	NO
If yes, does this require approval in terms of relevant legislation?	YES	NO
If yes, what is the approximate volume(s) of emissions released into the atmosphere?	Unknown m <sup>3</sup>	
Describe the emissions in terms of type and concentration and how these will be avoided/managed/treated/mitigated:		
<p>Emissions from the process are:</p> <ul style="list-style-type: none"> <li>• Steam (excess) from the boiler.</li> <li>• Smoke from the coal / HFO boiler. <ul style="list-style-type: none"> <li>○ These emissions will be controlled with filters to reduce the contaminants.</li> </ul> </li> </ul> <p><b>Note on the boilers:</b></p> <ul style="list-style-type: none"> <li>▪ Boiler type: John Thompson 391 or 491, or similar.</li> <li>▪ Manufacturer: John Thompson Africa, or Cochrane Engineering, or Zozen</li> <li>▪ Fuel use: &gt; 90% of steam to be generated from coal (grade A peas), &lt;10% to be generated from HFO (standby boiler)</li> <li>▪ Net heat input: Maximum of 7.5 MW</li> </ul> <ul style="list-style-type: none"> <li>• Dust from the incoming products. This will be controlled by cyclones.</li> <li>• Dust from the cutting and milling. This will be controlled by cyclones.</li> <li>• Onion fumes from the peeling and drying process. <ul style="list-style-type: none"> <li>○ The added washing steps will keep this to a minimum.</li> </ul> </li> </ul>		

### 3. WATER USE

(a) Indicate the source(s) of water for the development proposal by highlighting the appropriate box(es).

Municipal	<del>Water board</del>	Groundwater	<del>River, Stream, Dam or Lake</del>	<del>Other</del>	The project will not use water
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**Note:** Provide proof of assurance of water supply (e.g. Letter of confirmation from the municipality / water user associations, yield of borehole)

(b) If water is to be extracted from a groundwater source, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:	± 1662	m <sup>3</sup>
<p>The volume that will be extracted per month: There is no mains supply of potable water to the site. However, the site has two boreholes currently in use, both of which are producing groundwater for irrigation purposes. This groundwater will be filtered and harvested to a series of storage tanks. The stored groundwater will be treated with either</p>		

a UV system or RO system to ensure that the water is suitable for human consumption. The water will be used for consumption as well as fresh product washing prior to dehydration.

The required volume of borehole water would be:

Domestic potable water

- 400 litres per day

Boiler

- 10 000 litres per day

Process equipment

- 90 000 litres per day of which 50% will be recycled. Therefore, 45 000 litres will be required per day.

**Total borehole water required:** 55 400 litres per day

(c) Does the development proposal require a water use permit / license from DWS?	YES	NO
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If yes, please submit the necessary application to the DWS and attach proof thereof to this application as an Appendix.

Please note that proof of pre-application meeting with DWS will be submitted with the application as per the SOP and "one environmental system" requirements.

The proposed development will trigger a number of water uses under the National Water Act. The following will need authorisation:

1. Section 21. A. The taking of water from a water resource (2 boreholes)
2. Section 21. B. The storage of water (water storage tanks & fire tanks & storm water detention pond)
3. Section 21. E. Irrigation with treated effluent water (re-irrigation of the landscaped zones)
4. Section 21. F. Discharging water containing waste into a water resource through a pipe, canal, sewer or other conduit (Overflow from the pond)
5. Section 21. G. Disposing of waste in a manner which may detrimentally impact on a water resource (Overflow from the pond)
6. Section 21. H. Disposing in any manner of water which contains waste from, or which has been heated in, any industrial process (Overflow from the pond)

(d) Describe the measures that will be taken to reduce water demand, and measures to reuse or recycle water:

100 400 litres of water are required per day to run the proposed facility. 90 % of this water is required for the process equipment. 50% of all water used in the process equipment will be recycled. Therefore, 45 000 litres will be saved per day.

The stored treated effluent in the detention facility will also be utilised for re-irrigation of the landscaped zones around and within the new facility.

#### 4. POWER SUPPLY

(a) Describe the source of power e.g. municipality / Eskom / renewable energy source.

ESKOM. The main Eskom substation in the area is situated at Kalbaskraal, approximately 6,0km to the south-east of the site. An 11kV feeder known as "Kalbaskraal Farmers 1" originates from Kalbaskraal and provides power to the irrigation pumps on the south-east corner of the site. The existing "Kalbaskraal Farmers 1"- feeder can provide a maximum 550kVA (0,55MVA) power supply without any upgrade of the overhead line. The transformer, 11kV switchgear, and metering equipment must be upgraded at the transformer on site.

(b) If power supply is not available, where will power be sourced?

Solar Panels will be installed on the roof as shown on the enclosed drawings. This system will be used to supplement the Eskom Power. The power generated by the PV panels will be linked to the main distribution board to effectively "slow down" the incoming power required from the Eskom grid. The PV power will be utilised as it is available during daylight hours. The Eskom power will be used during

the night time shifts. The exact value of the PV generated power is unknown at this stage. The North aspect of the roof is ideally orientated for this application.

## 5. ENERGY EFFICIENCY

- (a) Describe the design measures, if any, that have been taken to ensure that the development proposal will be energy efficient:

Solar Panels will be installed on the roof as shown on the enclosed drawings. This system will be used to supplement the Eskom Power. The power generated by the PV panels will be linked to the main distribution board to effectively "slow down" the incoming power required from the Eskom grid. The PV power will be utilised as it is available during daylight hours. The Eskom power will be used during the night time shifts. The exact value of the PV generated power is unknown at this stage. The North aspect of the roof is ideally orientated for this application.

- (b) Describe how alternative energy sources have been taken into account or been built into the design of the project, if any:

Solar Panels will be installed on the roof as shown on the enclosed drawings. This system will be used to supplement the Eskom Power. The power generated by the PV panels will be linked to the main distribution board to effectively "slow down" the incoming power required from the Eskom grid. The PV power will be utilised as it is available during daylight hours. The Eskom power will be used during the night time shifts. The exact value of the PV generated power is unknown at this stage. The North aspect of the roof is ideally orientated for this application.

## 6. TRANSPORT, TRAFFIC AND ACCESS

Describe the impacts in terms of transport, traffic and access.

The access to the Onion Dehydration Facility on Portion 26 will be taken northwards off the new Du Toit farm entrance, within the farm property, and the access road will be aligned northwards and then westwards around existing onion plantations to the proposed site, approximately 900m from the main entrance. The internal access road to the facility is anticipated to be an 8m wide road, either paved or surfaced, and vehicles would circulate through the new facility before exiting via the same internal access. The new access road would be on farm no 817 portion 15.

The additional capacity of the N7 offered by the dual carriageway upgrade, and the limited traffic volumes exiting or entering the N7 to the Du Toit farm and Rainbow Chicken facility, are not expected to have any capacity consequence at this intersection.

The bulk of this fresh product, approximately 30% will be delivered internally from onion plantations within the farm. This traffic will remain within the farm boundary and will have no effect on N7 traffic. Approximately 70% of fresh produce will be delivered to the facility via the N7. This fresh product, and the distribution of the dehydrated product, will generate on average a maximum of 3 truck movements per day. These trucks do not necessarily deliver during peak N7 traffic hours. These trucks would be either articulated or interlink.

## 7. NUISANCE FACTOR (NOISE, ODOUR, etc.)

Describe the potential nuisance factor or impacts in terms of noise and odours.

### Noise

- o Noise due to construction machinery during the construction/development phase. Construction machinery may cause noise disturbance to the directly adjacent land users/

owners. It is not anticipated that the noise will be considerable and will only be temporary. Noise due to construction activities is unlikely to cause a nuisance to adjacent residential areas (approximately 2km away).

- o Noise due to industrial activities on site during operational phase (boiler, process equipment, trucks etc.). Noise due to operational activities is unlikely to cause a nuisance to adjacent residential areas (approximately 2km away).

Odour

Odours will be emitted from the proposed onion processing facility. The odour producing process would be the actual drying operations. Odours emitted from food processing plants are becoming more of a concern as food plants and residential areas grow closer in proximity. However, in this case, the closest residential area is 2km away (Abbotsdale). The objectionable odours in the food industry are generally a result of the physical processing of foods in which biological or chemical reactions form volatile organic compounds (VOC). These reactions are often precipitated by processes such as heating and drying.

**Note:** Include impacts that the surrounding environment will have on the proposed development.

**8. OTHER**

Emissions from the process are:

- Steam (excess) from the boiler.
- Smoke from the coal / HFO boiler.
  - o These emissions will be controlled with filters to reduce the contaminants.

**Note on the boilers:**

- Boiler type: John Thompson 391 or 491, or similar.
  - Manufacturer: John Thompson Africa, or Cochrane Engineering, or Zozen
  - Fuel use: > 90% of steam to be generated from coal (grade A peas), <10% to be generated from HFO (standby boiler)
  - Net heat input: Maximum of 7.5 MW
- Dust from the incoming products. This will be controlled by cyclones.
  - Dust from the cutting and milling. This will be controlled by cyclones.
  - Onion fumes from the peeling and drying process.
    - o The added washing steps will keep this to a minimum.

**SECTION G: IMPACT ASSESSMENT, IMPACT AVOIDANCE, MANAGEMENT, MITIGATION AND MONITORING MEASURES**

**1. METHODOLOGY USED IN DETERMINING AND RANKING ENVIRONMENTAL IMPACTS AND RISKS ASSOCIATED WITH THE ALTERNATIVES**

- (a) Describe the **methodology** used in determining and ranking the nature, significance consequences, extent, duration and probability of potential environmental impacts and risks associated with the proposed development and alternatives.

The assessment criteria were developed based on the Department of Environmental Affairs's Integrated Environmental Management Series guideline documents.

Criteria	Description		
Nature	a description of what causes the effect, what will be affected, and how it will be affected.		
Extent (E)	Type	Score	Description
	None (No)	1	Footprint
	Site (S)	2	On site or within 100 m of the site
	Local (L)	3	Within a 20 km radius of the centre of the site



- The scope of this investigation is to assess the direct and cumulative environmental impacts associated with the development; and
- Should the proposed project be authorised, the applicant will incorporate the recommendations and mitigation measures outlined in this BAR, the EMP and the EA into the detailed design and construction contract specifications and operational management system for the proposed project.

(d) Please describe the uncertainties.

None at this stage.

(e) Describe adequacy of the assessment methods used.

Based on the EAP's assessment information was provided to address the concerns and assess the impacts of the proposed development on the environment. Information as provided by the applicant and as collected by the EAP during site surveys etc. has been used to inform the current development proposals.

## 2. IDENTIFICATION, ASSESSMENT AND RANKING OF IMPACTS TO REACH THE PROPOSED ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE WITHIN THE SITE

**Note:** In this section the focus is on the identified issues, impacts and risks that influenced the identification of the alternatives. This includes how aspects of the receiving environment have influenced the selection.

(a) List the identified impacts and risks for each alternative.

Alternative 1:	<p><b><u>DEVELOPMENT PHASE- ALTERNATIVE 1</u></b></p> <ul style="list-style-type: none"> <li>• Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);</li> <li>• Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);</li> <li>• Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);</li> <li>• Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);</li> <li>• Increase in jobs (positive)</li> <li>• Increase in traffic (low impact before mitigation and low impact with mitigation measures);</li> <li>• Impact on planning policies (low impact before mitigation and low impact with mitigation measures);</li> <li>• Noise (low impact before mitigation and low impact with mitigation measures);</li> <li>• Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);</li> <li>• Visual/sense of place (medium impact before mitigation and medium impact with mitigation measures);</li> </ul> <p><b><u>OPERATIONAL PHASE- ALTERNATIVE 1</u></b></p> <ul style="list-style-type: none"> <li>• Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);</li> <li>• Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);</li> <li>• Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);</li> </ul>
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	<ul style="list-style-type: none"> <li>• Emissions and air quality (medium impact before mitigation and low impact with mitigation measures);</li> <li>• Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);</li> <li>• Increase in jobs (positive)</li> <li>• Increase in traffic (low impact before mitigation and low impact with mitigation measures);</li> <li>• Impact on planning policies (low impact before mitigation and low impact with mitigation measures);</li> <li>• Noise (low impact before mitigation and low impact with mitigation measures);</li> <li>• Odours (medium impact before mitigation and low impact with mitigation measures);</li> <li>• Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);</li> <li>• Visual/sense of place (High impact before mitigation and medium impact with mitigation measures);</li> </ul> <p><b><u>DECOMMISSIONING AND CLOSURE PHASE- ALTERNATIVE 1</u></b></p> <ul style="list-style-type: none"> <li>• Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);</li> <li>• Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);</li> <li>• Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);</li> <li>• Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);</li> <li>• Increase in jobs (positive)</li> <li>• Increase in traffic (low impact before mitigation and low impact with mitigation measures);</li> <li>• Noise (low impact before mitigation and low impact with mitigation measures);</li> <li>• Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);</li> <li>• Visual/sense of place (medium impact before mitigation and medium impact with mitigation measures);</li> </ul>
Alternative 2:	<p><b><u>DEVELOPMENT PHASE- ALTERNATIVE 2</u></b></p> <ul style="list-style-type: none"> <li>• Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);</li> <li>• Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);</li> <li>• Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);</li> <li>• Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);</li> <li>• Increase in jobs (positive)</li> <li>• Increase in traffic (low impact before mitigation and low impact with mitigation measures);</li> </ul>

- Impact on planning policies (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (medium impact before mitigation and medium impact with mitigation measures);

**OPERATIONAL PHASE- ALTERNATIVE 2**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);
- Emissions and air quality (medium impact before mitigation and low impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Impact on planning policies (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Odours (medium impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (High impact before mitigation and medium impact with mitigation measures);

**DECOMMISSIONING AND CLOSURE PHASE- ALTERNATIVE 2**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);

	<ul style="list-style-type: none"> <li>• Visual/sense of place (medium impact before mitigation and medium impact with mitigation measures);</li> </ul>
<p>Alternative 3: <b>PREFERRED</b></p>	<p><b><u>DEVELOPMENT PHASE- ALTERNATIVE 3 – PREFERRED</u></b></p> <ul style="list-style-type: none"> <li>• Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);</li> <li>• Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);</li> <li>• Surface and ground water pollution (low impact before mitigation and low impact with mitigation measures);</li> <li>• Impact on sensitive environments (rivers, wetlands etc) (low impact before mitigation and low impact with mitigation measures);</li> <li>• Increase in jobs (positive)</li> <li>• Increase in traffic (low impact before mitigation and low impact with mitigation measures);</li> <li>• Impact on planning policies (low impact before mitigation and low impact with mitigation measures);</li> <li>• Noise (low impact before mitigation and low impact with mitigation measures);</li> <li>• Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);</li> <li>• Visual/sense of place (low impact before mitigation and low impact with mitigation measures);</li> </ul> <p><b><u>OPERATIONAL PHASE- ALTERNATIVE 3 – PREFERRED</u></b></p> <ul style="list-style-type: none"> <li>• Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);</li> <li>• Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);</li> <li>• Surface and ground water pollution (low impact before mitigation and low impact with mitigation measures);</li> <li>• Emissions and air quality (medium impact before mitigation and low impact with mitigation measures);</li> <li>• Impact on sensitive environments (rivers, wetlands etc) (low impact before mitigation and low impact with mitigation measures);</li> <li>• Increase in jobs (positive)</li> <li>• Increase in traffic (low impact before mitigation and low impact with mitigation measures);</li> <li>• Impact on planning policies (low impact before mitigation and low impact with mitigation measures);</li> <li>• Noise (low impact before mitigation and low impact with mitigation measures);</li> <li>• Odours (medium impact before mitigation and low impact with mitigation measures);</li> <li>• Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);</li> <li>• Visual/sense of place (medium impact before mitigation and low impact with mitigation measures);</li> </ul> <p><b><u>DECOMMISSIONING AND CLOSURE PHASE- ALTERNATIVE 3 – PREFERRED</u></b></p>

	<ul style="list-style-type: none"> <li>• Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);</li> <li>• Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);</li> <li>• Surface and ground water pollution (low impact before mitigation and low impact with mitigation measures);</li> <li>• Impact on sensitive environments (rivers, wetlands etc) (low impact before mitigation and low impact with mitigation measures);</li> <li>• Increase in jobs (positive)</li> <li>• Increase in traffic (low impact before mitigation and low impact with mitigation measures);</li> <li>• Noise (low impact before mitigation and low impact with mitigation measures);</li> <li>• Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);</li> <li>• Visual/sense of place (low impact before mitigation and low impact with mitigation measures);</li> </ul>
No-go Alternative:	The No-Go option will result in the site remaining as is presently.

(b) Describe the impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts can be reversed; may cause irreplaceable loss of resources; and can be avoided, managed or mitigated.

The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. (The EAP has to select the relevant impacts identified in blue in the table below for each alternative and repeat the table for each impact and risk).

**Note:** The EAP may decide to include this section as Appendix J to the BAR.

**PLEASE SEE – APPENDIX J.**

(c) Provide a summary of the site selection matrix.

<p><u>Alternative 1 –</u> The site alternative 1 which is located in northern corner of farm no 817 portion 26, Malmesbury along the N7 is NOT the preferred alternative due to the following:</p> <ul style="list-style-type: none"> <li>• The proximity to the non-perennial river <ul style="list-style-type: none"> <li>○ This site is located within 100m of a watercourse. The watercourse is declared as Ecological Support Areas (Res): Restore from other land use.</li> </ul> </li> <li>• The proximity to the N7 <ul style="list-style-type: none"> <li>○ This site is located directly along the N7. Considering the viewpoint of road users, this site alternative has a medium-high visual impact.</li> </ul> </li> <li>• The distance to the boreholes</li> <li>• From an electrical supply perspective, the Alternative 1 locations is NOT are preferable, because of the far distance to the existing overhead power supply on the site and to the Eskom substation at Kalbaskraal.</li> </ul> <p>Alternative 2 – The site alternative 1 which is located in eastern corner of farm no 817 portion 26, Malmesbury along the N7 is NOT the preferred alternative due to the following:</p> <ul style="list-style-type: none"> <li>• The proximity to the non-perennial river <ul style="list-style-type: none"> <li>○ This site is located within 150m of a watercourse. The watercourse is declared as Ecological Support Areas (Res): Restore from other land use.</li> </ul> </li> <li>• The proximity to the N7</li> </ul>
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- This site is located directly along the N7. Considering the viewpoint of road users, this site alternative has a medium-high visual impact.

(d) Outcome of the site selection matrix.

The site alternative 3 which is located in near the western corner of farm no 817 portion 26, Malmesbury is the preferred alternative due to the following:

- The distance to the non-perennial river
  - This site is located approximately 450m away from the watercourse. The watercourse is declared as Ecological Support Areas (Res): Restore from other land use.
- The proximity to the N7
  - This site is located away from the N7. Considering the viewpoint of road users, this site alternative has a low-medium visual impact.
- The distance to the boreholes
- From an electrical supply perspective, the Alternative 3 locations is preferable, because of the closeness to the existing overhead power supply on the site and to the Eskom substation at Kalbaskraal.

### 3. SPECIALIST INPUTS/STUDIES, FINDINGS AND RECOMMENDATIONS

**Note:** Specialist inputs/studies must be attached to this report as **Appendix G** and must comply with the content requirements set out in Appendix 6 of the EIA Regulations, 2014 (as amended). Also take into account the Department's Circular EADP 0028/2014 (dated 9 December 2014) on the "One Environmental Management System" and the EIA Regulations, 2014, any subsequent Circulars, and guidelines available on the Department's website (<http://www.westerncape.gov.za/eadp>).

Provide a summary of the findings and impact management measures identified in any specialist report and an indication of how these findings and recommendations have been included in the BAR.

No specialist studies available at this stage.

### 4. ENVIRONMENTAL IMPACT STATEMENT

Provide an environmental impact statement of the following:

(i) A summary of the key findings of the EIA.

Positive:

- Employment opportunities (construction and operational)

Negative:

- Disturbance to subsurface geological layers
- Soil erosion and dust
- Surface and ground water pollution
- Emissions and air quality
- Impact on sensitive environments (rivers, wetlands etc)
- Increase in traffic
- Impact on planning policies
- Noise
- Odours
- Impact of the proposed development on archaeological, paleontological and heritage remains
- Visual/sense of place

The No-Go option will result in the site remaining as is presently.

(ii) Has a map of appropriate scale been provided, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers?	YES	NO
(iii) A summary of the positive and negative impacts that the proposed development and alternatives will cause in the environment and community.		

**ALTERNATIVE 1**

**DEVELOPMENT PHASE- ALTERNATIVE 1**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Impact on planning policies (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (medium impact before mitigation and medium impact with mitigation measures);

**OPERATIONAL PHASE- ALTERNATIVE 1**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);
- Emissions and air quality (medium impact before mitigation and low impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Impact on planning policies (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Odours (medium impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (High impact before mitigation and medium impact with mitigation measures);

**DECOMMISSIONING AND CLOSURE PHASE- ALTERNATIVE 1**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);

- Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (medium impact before mitigation and medium impact with mitigation measures);

## **ALTERNATIVE 2**

### **DEVELOPMENT PHASE- ALTERNATIVE 2**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Impact on planning policies (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (medium impact before mitigation and medium impact with mitigation measures);

### **OPERATIONAL PHASE- ALTERNATIVE 2**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);
- Emissions and air quality (medium impact before mitigation and low impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Impact on planning policies (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Odours (medium impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);

- Visual/sense of place (High impact before mitigation and medium impact with mitigation measures);

**DECOMMISSIONING AND CLOSURE PHASE- ALTERNATIVE 2**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (High impact before mitigation and medium impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (High impact before mitigation and medium impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (medium impact before mitigation and medium impact with mitigation measures);

**ALTERNATIVE 3 – PREFERRED**

**DEVELOPMENT PHASE- ALTERNATIVE 3 – PREFERRED**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (low impact before mitigation and low impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (low impact before mitigation and low impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Impact on planning policies (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (low impact before mitigation and low impact with mitigation measures);

**OPERATIONAL PHASE- ALTERNATIVE 3 – PREFERRED**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (low impact before mitigation and low impact with mitigation measures);
- Emissions and air quality (medium impact before mitigation and low impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (low impact before mitigation and low impact with mitigation measures);
- Increase in jobs (positive)



- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Impact on planning policies (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Odours (medium impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (medium impact before mitigation and low impact with mitigation measures);

#### **DECOMMISSIONING AND CLOSURE PHASE- ALTERNATIVE 3 – PREFERRED**

- Disturbance to subsurface geological layers (low impact before mitigation and low impact with mitigation measures);
- Soil erosion and dust (low impact before mitigation and low impact with mitigation measures);
- Surface and ground water pollution (low impact before mitigation and low impact with mitigation measures);
- Impact on sensitive environments (rivers, wetlands etc) (low impact before mitigation and low impact with mitigation measures);
- Increase in jobs (positive)
- Increase in traffic (low impact before mitigation and low impact with mitigation measures);
- Noise (low impact before mitigation and low impact with mitigation measures);
- Impact of the proposed development on archaeological, paleontological and heritage remains (low impact before mitigation and low impact with mitigation measures);
- Visual/sense of place (low impact before mitigation and low impact with mitigation measures);

### **5. IMPACT MANAGEMENT, MITIGATION AND MONITORING MEASURES**

- (a) Based on the assessment, describe the impact management, mitigation and monitoring measures as well as the impact management objectives and impact management outcomes included in the EMPr. The EMPr must be attached to this report as Appendix H.

The key mitigation measure is impact avoidance. Where adverse impacts cannot reasonably be prevented, construction should be managed through the effective implementation of the Construction EMP with a strong emphasis on post-construction rehabilitation. Please refer to the EMP for more details on the mitigation and management measures.

Water – quality testing

Odour – monitoring and complaints register

Soil erosion and dust – dust suppression as required

\*See specifics in EMP

- (b) Describe any provisions for the adherence to requirements that are prescribed in a Specific Environmental Management Act relevant to the listed activity or specified activity in question.

Also note that the following activities trigger water uses in terms of the National Water Act, 1998 (Act 36 of 1998):

1. Section 21. A. The taking of water from a water resource (2 boreholes)
2. Section 21. B. The storage of water (water storage tanks & fire tanks & storm water detention pond)
3. Section 21. E. Irrigation with treated effluent water (re-irrigation of the landscaped zones)
4. Section 21. F. Discharging water containing waste into a water resource through a pipe, canal, sewer or other conduit (Overflow from the pond)

5. Section 21. G. Disposing of waste in a manner which may detrimentally impact on a water resource (Overflow from the pond)
6. Section 21. H. Disposing in any manner of water which contains waste from, or which has been heated in, any industrial process (Overflow from the pond)

A pre-water use license application meeting must be arranged with the department of water and sanitation before submitting an application for authorization

- (c) Describe the ability of the applicant to implement the management, mitigation and monitoring measures.

The applicant is ultimately responsible for the implementation of the EMP and the financial cost of all environmental control measures. In accordance with the requirements of the EMP, the applicant must ensure that any person acting on their behalf complies with the conditions / specifications contained in this EMP. In addition, an Environmental Control Officer would be appointed as the on-site implementing agent and would have the responsibility to ensure that their responsibilities are executed in compliance with the EMP. Thus, the applicant has the ability to implement the recommended management, mitigation, and monitoring measures, as appropriate.

- (d) Provide the details of any financial provisions for the management of negative environmental impacts, rehabilitation and closure of the proposed development.

Not applicable

- (e) Provide the details of any financial provisions for the management of negative environmental impacts, rehabilitation and closure of the proposed development.

Not applicable

- (f) Describe any assumptions, uncertainties, and gaps in knowledge which relate to the impact management, mitigation and monitoring measures proposed.

EAP is only knowledgeable with regards to the environmental impacts, biodiversity and ecosystems aspects.

GAPs include scientific consensus on emissions and odours emitted.

In undertaking the investigation and compiling this report, the following has been assumed:

- The information provided by the client is accurate and unbiased;
- The scope of this investigation is to assess the direct and cumulative environmental impacts associated with the development; and
- Should the proposed project be authorised, the applicant will incorporate the recommendations and mitigation measures outlined in this BAR, the EMP and the EA into the detailed design and construction contract specifications and operational management system for the proposed project.

## SECTION H: RECOMMENDATIONS OF THE EAP AND SPECIALISTS

(a) In my view as the appointed EAP, the information contained in this BAR and the documentation attached hereto is sufficient to make a decision in respect of the listed activity(ies) applied for.		YES	NO
(b) If the documentation attached hereto is sufficient to make a decision, please indicate below whether, in your opinion, the listed activity(ies) should or should not be authorised:			
Listed activity(ies) should be authorised:		YES	NO
Provide reasons for your opinion			
All possible impacts on the environment have been assessed and can be mitigated and managed. The assessment did not lead to any fatal flaws if the development is approved, provided that the facility is operated in terms of all relevant applicable legislation and the EMPr management activities implemented.			
(c) Provide a description of any aspects that were conditional to the findings of the assessment by the EAP and Specialists which are to be included as conditions of authorisation.			
<ul style="list-style-type: none"> <li>The relevant water use licences must be obtained from the department of water and sanitation.</li> <li>The monitoring and management requirements that will be captured in the Water Use Authorization issued by the Department of Water and Sanitation to protect water resource as well as the consent use conditions issued by Swartland Municipality in terms of the land use change application must be adhered to.</li> </ul>			
(d) If you are of the opinion that the activity should be authorised, please provide any conditions, including mitigation measures that should in your view be considered for inclusion in an environmental authorisation.			
Recommended that the EA prescribe that:			
<ul style="list-style-type: none"> <li>Should any heritage artefacts be exposed during construction that all activities be stopped, and Heritage Western Cape contacted before any further action being permitted.</li> <li>The project implementation process should be subject to standard Environmental Management Programme prescripts and conditions under supervision of a competent and diligent ECO, during its construction and decommissioning phases. That the facility be audited on yearly bases by an external environmental auditor during operations.</li> <li>The relevant water use licences must be obtained from the department of water and sanitation.</li> <li>The EMPr be strictly followed with regards to waste management.</li> </ul>			
(e) Please indicate the recommended periods in terms of the following periods that should be specified in the environmental authorisation:			
i.	the period within which commencement must occur;	5 years	
ii.	the period for which the environmental authorisation is granted and the date on which the development proposal will have been concluded, where the environmental authorisation does not include operational aspects;	10 years	
iii.	the period for which the portion of the environmental authorisation that deals with non-operational aspects is granted; and	10 years	
iv.	the period for which the portion of the environmental authorisation that deals with operational aspects is granted.	Unlimited	

## SECTION I: APPENDICES

The following appendices must be attached to this report:

APPENDIX		Confirm that Appendix is attached
Appendix A:	Locality map	X
Appendix B:	Site development plan(s)	X
	A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;	X
Appendix C:	Photographs	X
Appendix D:	Biodiversity overlay map	X
Appendix E:	Permit(s) / license(s) from any other Organ of State, including service letters from the municipality.	X
	Appendix E1: Copy of comment from HWC.	X
Appendix F:	Public participation information: including a copy of the register of I&APs, the comments and responses report, proof of notices, advertisements and any other public participation information as is required in Section C above.	X
Appendix G:	Specialist Report(s)	NA
Appendix H:	EMPr	X
Appendix I:	Additional information related to listed waste management activities (if applicable)	NA
Appendix J:	If applicable, description of the impact assessment process followed to reach the proposed preferred alternative within the site.	X
Appendix K:	Any Other (if applicable).	X

## SECTION J: DECLARATIONS

To be provided with final BAR